Εθνικο Μετσοβιο Πολυτεχνειο
Σχολη Ηλεκτρολογων Μηχανικων
και Μηχανικων Υπολογιστων
Τομεας Επικοινωνιων, Ηλεκτρονικης και
Συστηματων Πληροφορικης

Τεχνολογίες έξυπνων διασυνδεδεμένων αντικειμένων

ΔΙΠΛΩΜΑΤΙΚΗ ΕΡΓΑΣΙΑ

Χριστιάννα Μαρτίνου

Επιβλέπων :   Θεοδώρα Βαρβαρίγου
             Καθηγήτρια Ε.Μ.Π.

Αθήνα, Οκτώβριος 2017

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Εγκρίθηκε από την τριμελή εξεταστική επιτροπή την 30^{η} Οκτωβρίου 2017

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Θεοδώρα Βαρβαρίγου   Εμμανουήλ Βαρβαρίγος   Δημήτριος Ασκούνης
Καθηγήτρια Ε.Μ.Π.   Καθηγητής Ε.Μ.Π.   Καθηγητής Ε.Μ.Π.

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Χριστιάννα Μαρτίνου

Διπλωματούχος Ηλεκτρολόγος Μηχανικός και Μηχανικός Υπολογιστών Ε.Μ.Π.

Περίληψη

Τα τελευταία χρόνια αναπτύσσονται συνεχώς τεχνολογίες στον τομέα του Διαδικτύου των Πραγμάτων(ΔτΠ), υπάρχει μεγάλη εξέλιξη στο πλαίσιο των Έξυπνων Πόλεων, καθώς και όσον αφορά το πλήθος των υπηρεσιών που δημιουργούνται και παρέχονται ασταμάτητα στις μέρες μας. Απόρροια αυτών των εξελίξεων είναι η ακατάπαυστη παραγωγή τεραστίου όγκου δεδομένων, πολλά από αυτά ελεύθερα διαθέσιμα(Ανοιχτά Δεδομένα), και η ανάγκη αξιοποίησης αυτών.

Εντασσόμενη στο πλαίσιο των τεχνολογιών του Διαδικτύου των Πραγμάτων, η διπλωματική εργασία ακολουθεί μια λογική κατά την οποία λαμβάνουμε δεδομένα από πηγές Ανοιχτών Δεδομένων, τα επεξεργαζόμαστε και τα αναλύουμε, ώστε να προκύψουν πληροφορίες, που θα είναι χρήσιμες για κάποιους φορείς, εταιρείες ή και οργανισμούς, και θα μπορέσουν έτσι να αξιοποιηθούν για ξεχωριστούς σκοπούς και εφαρμογές. Μέσα από αυτή τη διαδικασία, στόχος είναι να εξαχθεί αποδοτική γνώση και να επιτευχθούν ωφέλιμα αποτελέσματα.

Αρχικά, η εργασία προβαίνει σε βιβλιογραφική έρευνα προκειμένου να εντοπίσει διαθέσιμες πηγές Ανοιχτών Δεδομένων. Έπειτα, ασχολείται με δύο τομείς. Τα θέματα τα οποία πραγματεύεται είναι ο καιρός και τα γεγονότα. Στο ένα προσδιορίζεται η ωριαία κατάσταση του καιρού στο διάστημα μιας ημέρας και στο άλλο πραγματοποιείται η παραγωγή δομημένης και συγκεκριμένης πληροφορίας σχετικά με συμβάντα, εκδηλώσεις και διοργανώσεις που διεξάγονται σε συγκεκριμένους χώρους και κτίρια. Τέλος, διερευνάται ένας ενδεχόμενος συνδυασμός αυτών των λειτουργιών και των αποτελεσμάτων τους, ούτως ώστε να παραχθεί κάποιο άλλο ωφέλιμο αποτέλεσμα.

Όλα αυτά ενσωματώνονται στην εργασία, όπου γίνεται προσπάθεια οργανωμένης παρουσίασης αυτών, ακολουθώντας μια δομή επεξήγησης των βημάτων, από την έρευνα πηγών, την επεξήγηση της ροής εργασίας του κάθε τομέα, καθώς και την προσέγγιση των σεναρίων χρήσης των αποτελεσμάτων που προκύπτουν, έως την παρουσίαση του σταδίου υλοποίησης του καθενός, την πρόταση κάποιας συνδυαστικής λογικής και ολοκληρώνεται με την παράθεση του κώδικα των συγκεκριμένων υλοποιήσεων-ροών.

Λέξεις κλειδιά : Διαδίκτυο των Πραγμάτων, IoT, Ανοιχτά Δεδομένα, πηγές Ανοιχτών Δεδομένων, καιρός, γεγονότα, εκδηλώσεις, JSON, REST, Node-RED, JavaScript, IoT Analytics

Abstract

The technological development in the field of Internet of Things(IoT), is continuously rising. There has also been a significant evolution in Smart Cities frameworks, as well as the number of services which are being created and provided incessantly. The aftereffect of these developments is the constant production of a massive volume of data, the majority of which is freely available(Open Data). Therefore, the need of utilisation of this large volume of data is arisen.

Within the framework of Internet of Things technologies, this diploma thesis is aiming to explore the logic with which data from Open Data sources are being received, processed, and analysed. Therefore, information is being generated which may be useful to relevant companies and organisations, and will thus be able to be exploited for separate purposes and applications. The final goal through that process is to extract efficient knowledge and achieve beneficial results.

Initially, in this thesis a literature search is being conducted in order to identify available sources of Open Data. Subsequently, the thesis is dealing with the two following topics: weather and events. The former, aims to define the hourly weather state during a 24 hour period and the latter describes the process of the production of specific and well organised information, relevant with events which are being held in specific venues. Finally, a possible combination of these functions and their results is being investigated, in order to produce another beneficial effect.

In conclusion, all of the above are integrated in this thesis where a structural presentation is made of the following steps: searching the sources, explaining the workflow of each sector as well as approaching various use-scenarios for each result, presenting the stages of implementation of each topic and formulating a combinational logic proposal. Finally, this thesis is completed with quoting a code of the already specified implementation-flows.

Keywords : Internet of Things, IoT, Open Data, Open data sources, weather, events, JSON, REST, Node-RED, JavaScript, IoT Analytics

Ευχαριστίες

Αρχικά, θα ήθελα να ευχαριστήσω ιδιαίτερα την καθηγήτρια κα Θεοδώρα Βαρβαρίγου για την εμπιστοσύνη που μου έδειξε, για τη δυνατότητα που μου έδωσε να εκπονήσω τη διπλωματική μου κάτω από την επίβλεψή της, για την ευκαιρία που μου έδωσε να δουλέψω πάνω στο συγκεκριμένο πολύ ενδιαφέρον θέμα και να μάθω περισσότερα για τις τεχνολογικές εξελίξεις, καθώς επίσης και τα μέλη της επιτροπής, τον καθηγητή κ. Εμμανουήλ Βαρβαρίγο και τον καθηγητή κ. Δημήτριο Ασκούνη.

Ακόμα, θα ήθελα να ευχαριστήσω τον διδάκτορα κ. Γεώργιο Κουσιουρή για την προθυμία του για συζήτηση οποιαδήποτε στιγμή χρειαζόταν, για τον σημαντικό χρόνο που αφιέρωσε για τα θέματα που προέκυπταν και για την βοήθεια και για την καθοδήγηση στην εκπόνηση αυτής της διπλωματικής εργασίας.

Επίσης, θα ήθελα να ευχαριστήσω την αδερφή μου Ειρήνη Μαρτίνου για τη βοήθειά της στην απόδοση της περίληψης αυτής της διπλωματικής εργασίας στην αγγλική γλώσσα, κατά τη συγγραφή του Abstract.

Τέλος, θα ήθελα να ευχαριστήσω τους γονείς μου και την αδερφή μου για την υποστήριξή τους τόσο κατά τη διάρκεια εκπόνησης της παρούσας εργασίας όσο και κατά τη διάρκεια των σπουδών μου στο Δημοκρίτειο και στο Εθνικό Μετσόβιο Πολυτεχνείο.

Πίνακας Περιεχομένων

Κατάλογος Εικόνων

Κατάλογος Πινάκων

Κατάλογος Κώδικα

1.Εισαγωγή

Στις μέρες μας είναι αισθητό το φαινόμενο κατά το οποίο κάποια δεδομένα είναι ελεύθερα διαθέσιμα σε όλους ώστε να τα χρησιμοποιούν και να τα αναδημοσιεύουν χωρίς περιορισμούς από πνευματικά δικαιώματα, διπλώματα ευρεσιτεχνίας ή άλλους μηχανισμούς ελέγχου.[1] Πρόκειται για πληροφορίες ή περιεχόμενο που είναι ελεύθερα διαθέσιμο για χρήση και αναδιανομή, με την προϋπόθεση μόνο απόδοσής του στην πηγή.[2] Όλα αυτά ορίζουν την έννοια «Ανοιχτά Δεδομένα(Open Data)»,.τα οποία μπορούν να προέρχονται από οποιαδήποτε πηγή[1] και είναι προσπελάσιμα από το κοινό μέσω μιας ποικιλίας τεχνολογιών πρόσβασης[3].

Από την άλλη οι απαιτήσεις στις πόλεις αυξάνονται παντού. Η ανάγκη αντιμετώπισης αυτών των απαιτήσεων μας οδηγεί στο να προσεγγίζουμε συνεχώς τη λεγόμενη έννοια των «Έξυπνων Πόλεων» (Smart City concept).Ο τελικός στόχος αυτής της έννοιας είναι να αξιοποιηθούν καλύτερα οι δημόσιοι πόροι, να αυξηθεί η ποιότητα των υπηρεσιών που προσφέρονται στους πολίτες, μειώνοντας παράλληλα τις δαπάνες λειτουργίας των δημόσιων διοικήσεων.[4] Για να επιτευχθεί αυτό χρειάζεται τα κύρια χαρακτηριστικά μιας έξυπνης πόλης να περιλαμβάνουν έναν υψηλό βαθμό ενοποίησης των τεχνολογιών της πληροφορίας και μια ολοκληρωμένη εφαρμογή των πληροφοριακών πόρων.[5]

Άλλη μία έννοια που έχει εισαχθεί τελευταία είναι το «Διαδίκτυο των Πραγμάτων (Internet of Things)».Το διαδίκτυο των πραγμάτων(IoT) είναι ένα δίκτυο φυσικών αντικειμένων που περιέχουν ενσωματωμένη τεχνολογία για να επικοινωνούν και να αντιλαμβάνονται ή να αλληλεπιδρούν με τις εσωτερικές τους καταστάσεις ή το εξωτερικό περιβάλλον.[6] Το διαδίκτυο των πραγμάτων είναι δηλαδή ένα σύστημα από «πράγματα» ("things"), όπως αλληλένδετες υπολογιστικές συσκευές, μηχανικές και ψηφιακές μηχανές, αντικείμενα, ζώα ή πρόσωπα που διαθέτουν μοναδικά αναγνωριστικά στοιχεία και τη δυνατότητα μεταφοράς δεδομένων μέσω ενός δικτύου χωρίς να απαιτείται ανθρώπινη αλληλεπίδραση ή αλληλεπίδραση ανθρώπου με υπολογιστή.[7] Με αυτή τη διαδικασία ένα πράγμα, ένα αντικείμενο μπορεί και εκπροσωπεί τον εαυτό του ψηφιακά με αποτέλεσμα να καθίσταται ως κάτι πιο σπουδαίο από το αντικείμενο από μόνο του.[8] Σε αυτό το πλαίσιο του διαδικτύου των πραγμάτων υπάρχει ένα ευρύ φάσμα από τεχνολογίες, κάποιες από τις πιο σημαντικές είναι η Ασφάλεια IoT, η Διαχείριση IoT Συσκευών (Thing), τα χαμηλής κατανάλωσης δίκτυα IoT μικρής εμβέλειας, τα χαμηλής κατανάλωσης δίκτυα ευρείας περιοχής, οι επεξεργαστές IoT, τα λειτουργικά συστήματα IoT, η επεξεργασία ροής γεγονότων, οι πλατφόρμες IoT και τα IoT πρότυπα και οικοσυστήματα,[9] ,καθώς είναι απαραίτητες

για τη σωστή θεμελίωση, υλοποίηση και διαχείριση του διαδικτύου των πραγμάτων(IoT).

Διευρύνοντας την αντίληψή μας συνειδητοποιούμε πώς αυτές οι έννοιες συνδέονται μεταξύ τους.

Το διαδίκτυο των πραγμάτων(IoT) επιτρέπει την εύκολη πρόσβαση και αλληλεπίδραση με μια μεγάλη ποικιλία συσκευών, όπως για παράδειγμα οικιακές συσκευές, κάμερες παρακολούθησης, αισθητήρες παρακολούθησης, ενεργοποιητές, οθόνες, οχήματα και πολλές άλλες.[4] Κάθε συσκευή, κάθε «πράγμα»("thing") δημιουργεί ακατάπαυστα δεδομένα, τα οποία μπορούν να είναι ελεύθερα διαθέσιμα(Open Data). Ως επακόλουθο το διαδίκτυο των πραγμάτων προωθεί την ανάπτυξη εφαρμογών που αξιοποιούν τη δυνητικά τεράστια ποσότητα και ποικιλία των δεδομένων που παράγονται από τέτοια αντικείμενα[4] , οι οποίες συμβάλλουν με τη σειρά τους στην παραγωγή δεδομένων, ιδίως των ανοιχτών δεδομένων(Open Data). Με αυτόν τον τρόπο στοχεύει να παρέχει νέες υπηρεσίες στους πολίτες, τις επιχειρήσεις και τις δημόσιες διοικήσεις. Αυτό το πρότυπο πράγματι βρίσκει εφαρμογή σε πολλούς διαφορετικούς τομείς, όπως ο αυτοματισμός στο σπίτι, ο βιομηχανικός αυτοματισμός, τα ιατρικά βοηθήματα, η κινητή υγειονομική περίθαλψη, η ευφυής διαχείριση ενέργειας και τα έξυπνα δίκτυα, η αυτοκινητοβιομηχανία, η διαχείριση της κυκλοφορίας και πολλά άλλα.[4]
Επίσης, οι τεχνολογίες του διαδικτύου των πραγμάτων[9] στηρίζονται στα ανοιχτά δεδομένα(Open Data). Κάποιες τα χρησιμοποιούν, κάποιες είτε τα επεξεργάζονται είτε τα αναλύουν, κάποιες άλλες τα χειρίζονται, ενώ άλλες καλούνται να υποστηρίξουν λειτουργίες που βασίζονται στο διαμοιρασμό αυτών των ανοιχτών δεδομένων μεταξύ των συσκευών ή και οργανισμών. Συνεπώς διαπιστώνουμε πώς σχετίζεται το διαδίκτυο των πραγμάτων(IoT) με τα ανοιχτά δεδομένα(Open Data), καθώς στηρίζεται σε αυτά και συμβάλλει ακόμα περισσότερο στην παραγωγή τους.

Οι τομείς στους οποίους βρίσκει εφαρμογή το διαδίκτυο των πραγμάτων(IoT),μερικοί από τους οποίους προαναφέρθηκαν, αποτελούν κάποια από τα πιο βασικά πεδία που απασχολούν μια «Έξυπνη Πόλη»("Smart City"). Οι έξυπνες πόλεις χρησιμοποιούν τις τεχνολογίες του διαδικτύου των πραγμάτων και όλες αυτές οι συσκευές, οι εφαρμογές και οι υπηρεσίες που το διαδίκτυο των πραγμάτων εισάγει, αναπτύσσει και παρέχει είναι αναγκαίες για τη λειτουργία μιας έξυπνης πόλης. Μια έξυπνη πόλη προκειμένου να μπορέσει να είναι πόλη «με όργανα», «διασυνδεδεμένη» και «ευφυής» χρειάζεται να υποστηρίζεται τεχνικά από το διαδίκτυο των πραγμάτων[5] και γενικότερα τα οφέλη του διαδικτύου των πραγμάτων(IoT) στη διαχείριση και την υποδομή της είναι πολύ σημαντικά.

Σε συμφωνία με τα ανωτέρω, χαρακτηριστικά αναφέρονται:

«Μια έξυπνη πόλη είναι ένα όραμα αστικής ανάπτυξης που θα ενοποιεί την τεχνολογία της πληροφορίας και των επικοινωνιών(ICT) με την τεχνολογία του διαδικτύου των πραγμάτων(IoT) με ασφαλή τρόπο για τη διαχείριση των πόρων της πόλης.»
-Smart city,Wikipedia[10]

«Η έξυπνη πόλη είναι το προϊόν της επιταχυνόμενης ανάπτυξης της νέα γενιάς της τεχνολογίας της πληροφορίας και της οικονομίας της γνώσης, βασισμένης στο συνδυασμό δικτύων του Διαδικτύου, του τηλεπικοινωνιακού δικτύου, του δικτύου εκπομπών, του ασύρματου ευρυζωνικού δικτύου και άλλων δικτύων αισθητήρων όπου η τεχνολογία του Διαδικτύου των Πραγμάτων(IoT) αποτελεί τον πυρήνα της»
-Special Issue on Smart City and Internet of Things, Elsevier[5]

«...,η επιτυχής υλοποίηση των έργων των έξυπνων πόλεων εξαρτάται σε μεγάλο βαθμό από τις τεχνολογίες-επικοινωνίες δεδομένων, τα υπολογιστικά νέφη, την ικανότητα μετάδοσης κίνησης, και τους αισθητήρες που συγκροτούν συνολικά το IoT οικοσύστημα.
Αυτές οι τεχνολογίες θέτουν τα θεμέλια για τα έργα των έξυπνων πόλεων.
Οι ταχείες εξελίξεις σε αυτούς τους τομείς, τα τελευταία χρόνια, επέτρεψαν την καλύτερη σύνδεση των αντικειμένων με αποτέλεσμα την πλήρη ανάπτυξη πιο έξυπνων οικοσυστημάτων.»
-Smart Cities Market worth 1,201.69 Billion USD by 2022, MarketsAndMarkets[11]

Καθώς, λοιπόν, εξελίσσεται το διαδίκτυο των πραγμάτων(IoT) και αναπτύσσονται έξυπνες πόλεις(Smart Cities), όπου γίνεται χρήση των IoT τεχνολογιών και στις οποίες εφαρμόζεται η έννοια του διαδικτύου των πραγμάτων(IoT), τόσο πολλαπλασιάζονται οι συσκευές, οι υπηρεσίες και οι εφαρμογές του, με αποτέλεσμα να υπάρχει μία συνεχώς αυξανόμενη ποσότητα δεδομένων και κυρίως των δεδομένων ελεύθερης πρόσβασης(Open Data).

Μπορούμε να πάρουμε μια ένδειξη της κατάστασης συμβουλευόμενοι τις μελλοντικές εκτιμήσεις κάποιων επίσημων και έγκυρων φορέων.

Σχετικά με το Διαδίκτυο των Πραγμάτων(IoT), ο Dave Evans, ο οποίος είναι ο CTO της Stringify προσδοκά ότι θα δει 30 δισεκατομμύρια συνδεδεμένες συσκευές μέχρι το 2020. Παρόμοιες απόψεις έχουν υιοθετήσει εταιρείες, όπως η IHS Markit που προσχεδιάζει 30.7 δισεκατομμύρια συσκευές IoT για το 2020, η Gartner η οποία προβλέπει 20.4 δισεκατομμύρια μέχρι τότε (εξαιρουμένων των smartphones, των

tablet και των υπολογιστών) και η IDC που εκτιμά τα 28.1 δισεκατομμύρια (χωρίς να υπολογίζει ούτε εκείνη τις συσκευές αυτές).[12] [13]

Όσον αφορά τις Έξυπνες Πόλεις(Smart Cities), όπως δηλώνεται σε επίσημη έκθεση το μέγεθος της παγκόσμιας αγοράς των έξυπνων πόλεων προβλέπεται να αυξηθεί από 424.68 δισεκατομμύρια δολάρια το 2017 σε 1,201.69 δισεκατομμύρια δολάρια μέχρι το 2022, με ετήσιο συντελεστή ανάπτυξης (CAGR) 23.1% κατά την περίοδο πρόβλεψης[11] [14] και μια πρόσφατα δημοσιευμένη έκθεση από την Persistence Market Research προσδιορίζει ότι η παγκόσμια αγορά έξυπνων πόλεων θα αυξηθεί από τα τρέχοντα 622 δισεκατομμύρια δολάρια, θα περάσει την αγορά του ενός τρισεκατομμυρίου δολαρίων το 2019 για να φτάσει τελικά σε 3.48 τρισεκατομμύρια δολάρια μέχρι το 2026[15] [16] [17] με ταυτόχρονη επίδραση στα ελεύθερα διαθέσιμα δεδομένα(Open Data) [18] [19].

Μέσα από αυτές τις προβλέψεις διακρίνουμε τις προοπτικές του τομέα του Διαδικτύου των Πραγμάτων(Internet of Things-IoT), την επέκταση των Έξυπνων Πόλεων(Smart Cities) και αναμένουμε μια έκρηξη παραγόμενων δεδομένων και ιδιαίτερα των ελεύθερα προσβάσιμων δεδομένων, των Ανοιχτών Δεδομένων(Open Data).

2. Έρευνα Πηγών

Αρχικό στάδιο της διπλωματικής εργασίας ήταν η εύρεση διαθέσιμων πηγών Ανοιχτών Δεδομένων (open data sources), δηλαδή η έρευνα για υπάρχουσες πηγές που να επιτρέπουν την ελεύθερη πρόσβαση στα δεδομένα που διαθέτουν.

Η έρευνα επικεντρώθηκε στην εύρεση πηγών Ανοιχτών Δεδομένων που να διαθέτουν τα δεδομένα τους κυρίως με το μορφότυπο JSON, XML ή και CSV. Μέσα σε αυτό το πλήθος συνδέσμων (βλ. Πίνακας 1) συναντώνται διαφόρου είδους πηγές, όπως πύλες(Portals), αποθετήρια δεδομένων(Repositories), ιστοσελίδες που περιέχουν περισσότερους χρήσιμους συνδέσμους(links), ιστοσελίδες που αναφέρουν πηγές υπό τη μορφή κειμένου και πολλές άλλες, που διαθέτουν ελεύθερα ποικίλα δεδομένα διαφόρων ειδών (πχ. δεδομένα πραγματικού χρόνου(real-time data), ιστορικά δεδομένα(historical data), στατιστικά στοιχεία(statistics), σύνολα δεδομένων(datasets) και άλλα) μέσω διαφόρων τρόπων πρόσβασης είτε ακολουθώντας κάποιο πρωτόκολλο, είτε ως υπηρεσίες API, ακόμα ως σύνδεσμοι για λήψη αρχείων ή ως δημοσιευμένη πληροφορία σε πίνακες(tables), σε χάρτες ή σε άλλη μορφή που να μπορεί να αντληθεί με τη χρήση κάποιου εργαλείου.(βλ. Παράρτημα Α)

Μέσα από την πληθώρα πηγών ανοιχτών δεδομένων που βρέθηκαν και που παρουσιάζονται στον παρακάτω πίνακα(βλ. Πίνακας 1), αξιοποιήθηκαν δύο συγκεκριμένες πηγές ανοιχτών δεδομένων.

Η πηγή Ανοιχτών Δεδομένων στο θέμα του καιρού είναι η υπηρεσία Dark Sky API [23][24] που διαθέτει τα δεδομένα υπό το μορφότυπο JSON[24][25][27] μέσω του πρωτοκόλλου REST[27] (βλ. Παράρτημα Α). Πιο λεπτομερώς, στην εργασία πραγματοποιήθηκε αίτηση API τύπου Time Machine Request που επιστρέφει τον παρατηρούμενο (στο παρελθόν) ή τον προβλεπόμενο (μελλοντικά) καιρό και τις καιρικές συνθήκες για μια συγκεκριμένη ημερομηνία[26].

Το θέμα των γεγονότων-εκδηλώσεων βασίστηκε στην πηγή Ανοιχτών Δεδομένων Eventbrite[28][29][31], η οποία είναι επίσης μία REST-based υπηρεσία API[29][30] με απόκριση κλήσεων σύμφωνα με το μορφότυπο JSON[30]. Ειδικότερα, στο πλαίσιο της εργασίας πραγματοποιήθηκαν αιτήσεις για έρευνα γεγονότων-εκδηλώσεων(events)[32], για προσδιορισμό των κατηγοριών(categories) και των υποκατηγοριών(subcategories) των εκδηλώσεων[33] καθώς και για τις μορφές-τύπους(formats) των εκδηλώσεων[34] έχοντας η κάθε μία την αντίστοιχη απόκριση[35].

Πίνακας 1 : Πηγές Ανοιχτών Δεδομένων(Open Data Sources)

	TITLE	URL	SUB	format	protocol
sport	Πρόγραμμα αγώνων ποδοσφαίρου σεζόν 2016-2017 | Super League Ελλάδα	http://www.superleaguegreece.net/el/schedule			
sport	eScore.gr: live scores, αποτελέσματα αγώνων ποδοσφαίρου, livescore	http://www.escore.gr/			
sport	Αποτελέσματα Super League Ελλάδα - ΠΟΔΟΣΦΑΙΡΟ/Ελλάδα		http://www.escore.gr/football/greece/super-league/results/		
sport	Πρόγραμμα Super League Ελλάδα - ΠΟΔΟΣΦΑΙΡΟ/Ελλάδα		http://www.escore.gr/football/greece/super-league/fixtures/		
sport	Πρόγραμμα Champions League 2016/2017 - ΠΟΔΟΣΦΑΙΡΟ/Ευρώπη		http://www.escore.gr/football/europe/champions-league/fixtures/		
sport	Πρόγραμμα Europa League 2016/2017 - ΠΟΔΟΣΦΑΙΡΟ/Ευρώπη		http://www.escore.gr/football/europe/europa-league/fixtures/		
sport	Πρόγραμμα Euro 2016	http://www.betarades.gr/programma-euro-2016/			
sport	Αποτελέσματα EURO 2016, ΠΟΔΟΣΦΑΙΡΟ Ευρώπη - eScore.gr	http://www.escore.gr/football/europe/euro/			
sport	Basketball Statistics and History | Basketball-Reference.com	http://www.basketball-reference.com/			

sport	NBA Games Played on June 19, 2016 | Basketball-Reference.com	http://www.basketball-reference.com/boxscores/			
sport	NFL Boxscores | Pro-Football-Reference.com	http://www.pro-football-reference.com/boxscores/			
Weather	Weather in London, GB-OpenWeatherMap	http://openweathermap.org/		JSON	
Weather	Athens, Greece Travel Weather Averages (Weatherbase)	http://www.weatherbase.com/weather/weather.php3?s=61761&cityname=Athens-Greece		HTML	
?Weather	meteo.gr: Ο Καιρός - Μετεωρολογικές προγνώσεις για την Ελλάδα	http://www.meteo.gr/meteoplus/index.cfm			
Weather	The Dark Sky Forecast API	https://developer.forecast.io/			
Weather	Weather Forecast & Reports - Long Range & Local | Wunderground | Weather Underground	https://www.wunderground.com/			
traffic	BASt - Automatic road traffic census	http://www.bast.de/DE/Verkehrstechnik/Fachthemen/v2-verkehrszaehlung/zaehl_node.html		CSV	
	Transportation	http://feeds.bikesharetoronto.com/stations/stations.xml		XML	

general !	Welcome - Open Data DK	http://www.portal.opendata.dk/		JSON , CSV, XLSX, ++	
	Routes bicycle - Bicycle routes - Open Data DK		http://www.portal.opendata.dk/dataset /ruter-cykel/resource/de1be094-0e75- 426c-89b0- 26ad3c7915d4?inner_span=True	JSON	
general !!!	Open Data - More Portals - Transparency Portal Hamburg	http://transparenz.hamburg.de/mehr- portale/			
general !	Open Data Austria | data.gv.at	https://www.data.gv.at/		JSON, CSV, XML	RSS
general !	GovData | Data Portal for Germany - GovData	https://www.govdata.de/		JSON, CSV	RSS
general !	London Datastore – Greater London Authority	http://data.london.gov.uk/		CSV	
general ?	Open Data platform Rheinland-Pfalz: Home	http://www.daten.rlp.de/		XML, CSV	
general !	OpenData.HRO - Welcome	http://www.opendata-hro.de/		JSON, CSV,++	RSS
general !	Open Data Cologne	https://www.offenedaten-koeln.de/		JSON, CSV, XML	RSS
	City Moers - Organizations - Offenesdatenportal.de	https://www.offenesdatenportal.de/organization/moers		JSON, CSV, XML	
	Open Data Bonn	https://opendata.bonn.de/			

	Linz_Open Data	https://www.data.gv.at/suche/?search-term=&top10Filter_Stadt+Linz=on&publisherFilter_Stadt+Linz=on&search-data-only=search-data-only&hideFilters		CSV	RSS
general !!!	About | Open Data Portal	https://data.europa.eu/euodp/de/about		CSV, XML, JSON , ++	
general !	NYC Open Data	https://data.cityofnewyork.us/		tables HTML, JSON (light blue icon,data lens page)	RSS
	Real-Time Traffic Speed Data | NYC Open Data		https://data.cityofnewyork.us/Transportation/Real-Time-Traffic-Speed-Data/xsat-x5sa	XML	
	Data Service of the City of Barcelona Open	http://opendata.bcn.cat/opendata/ca/catalog		XML	
general !	Data from the UK Government	https://data.gov.uk/			RSS
	GB Road Traffic Counts - Datasets	https://data.gov.uk/dataset/gb-road-traffic-counts			

general !	The home of the U.S. Government's open data	https://www.data.gov/			
	Home | data.gov.hr	http://data.gov.hr/			
	Open Government	http://open.canada.ca/en			RSS
general !	Open Data Portal - Open Data	http://open.canada.ca/data/en/dataset		JSON, ++	RSS
general !	Statistics Canada: Canada's national statistical agency	http://www.statcan.gc.ca/eng/start		HTML, CSV	
	Culture, Tourism and the Centre for Education Statistics: Research Papers: Tables	http://www.statcan.gc.ca/pub/81-595-m/2012097/tablesectlist-listetableauxsect-eng.htm		HTML, CSV	
	Culture Services Trade: Data Tables: Statistical tables	http://www.statcan.gc.ca/pub/87-213-x/2012000/part-partie1-eng.htm		HTML, CSV	
	Education Indicators in Canada: Fact Sheets Interrupting High School and Returning to Education	http://www.statcan.gc.ca/pub/81-599-x/81-599-x2010005-eng.htm		HTML, CSV	
	Table D.2.9 Number of college degrees/diplomas/certificates granted, by sex and field of study, Canada and jurisdictions, 2004/2005	http://www.statcan.gc.ca/pub/81-582-x/2009002/tbl/d.2.9-eng.htm		HTML, CSV	
general ?	Culture, Tourism and the Centre for Education Statistics: Research Papers: Related products	http://www.statcan.gc.ca/pub/81-595-m/2012097/related-connexes-eng.htm		HTML, CSV	

	Travel and tourism - General - Information for analysts and researchers	http://www5.statcan.gc.ca/subject-sujet/result-resultat?pid=4007&id=-4007&lang=eng&type=STUDIES&pageNum=1&more=0		HTML, CSV	
general ?	Statistics by subject: Travel and tourism	http://www5.statcan.gc.ca/subject-sujet/theme-theme.action?pid=4007&lang=eng&more=0&HPA=1		HTML, CSV	
	Tourism employment		http://www.statcan.gc.ca/pub/13-605-x/2013005/article/11865-eng.htm	HTML, CSV	
general !!!	30 Places to Find Open Data on the Web - ScribbleLive	http://www.scribblelive.com/blog/2012/03/30/data-sources/			
	GraphHopper Open Traffic Collection	https://github.com/graphhopper/open-traffic-collection			
	My Favorite Public Data Sources - Business Intelligence & Advanced Analytics	http://www.jenunderwood.com/2016/01/14/my-favorite-public-data-sources/			
	GitHub - caesar0301/awesome-public-datasets: An awesome list of high-quality open datasets in public domains (on-going).	https://github.com/caesar0301/awesome-public-datasets			
	AIS API Services | AIS Marine Traffic	http://www.marinetraffic.com/de/ais-api-services	http://www.marinetraffic.com/de/ais-api-services/documentation	JSON, XML	
	ASTRA - Monthly and annual results	http://www.astra.admin.ch/verkehrsdaten/00299/00301/05582/index.html?lang=de		XLSX	

	Open Data Communities | Housing Market	http://opendatacommunities.org/def/concept/folders/themes/housing-market		
	The Free 'Big Data' Sources Everyone Should Know - Data Science Central	http://www.datasciencecentral.com/profiles/blogs/the-free-big-data-sources-everyone-should-know		
	Some Excellent Open Data Sources – The ShiSh List	https://blogs.msdn.microsoft.com/shishirs/2012/03/17/some-excellent-open-data-sources/		
	Big Data: 33 Brilliant And Free Data Sources For 2016	http://www.forbes.com/sites/bernardmarr/2016/02/12/big-data-35-brilliant-and-free-data-sources-for-2016/#4d5357d36796		
	20 Free Big Data Sources Everyone Should Know | SmartData Collective	http://www.smartdatacollective.com/bernardmarr/235366/big-data-20-free-big-data-sources-everyone-should-know		
	Data Feeds : Network Rail	https://datafeeds.networkrail.co.uk/ntrod/login;jsessionid=E006444B93E7B5A4B07C1D79A027052C		
	Some Excellent Open Data Sources – The ShiSh List	https://blogs.msdn.microsoft.com/shishirs/2012/03/17/some-excellent-open-data-sources/		
	Azure Marketplace | Microsoft Azure	https://azure.microsoft.com/en-us/marketplace/?source=datamarket		RSS
	FAQ: Microsoft Open Government + Open Data (Part III) – Public Sector Developer Weblog	https://blogs.msdn.microsoft.com/publicsector/2012/01/26/faq-microsoft-open-government-open-data-part-iii/		RSS
	Open data @ OurAirports	http://ourairports.com/data/	CSV	RSS
	20 Big Data Repositories You Should Check Out - Data Science Central	http://www.datasciencecentral.com/profiles/blogs/20-free-big-data-sources-everyone-should-check-out		

	70+ websites to get large data repositories for free	http://bigdata-madesimple.com/70-websites-to-get-large-data-repositories-for-free/		
	Socrata	https://opendata.socrata.com/		
	Open Government Data Initiative	http://ogdifrance.cloudapp.net/		
general !!!	Data repositories - Open Access Directory	http://oad.simmons.edu/oadwiki/Data_repositories		
	Dryad Digital Repository - Dryad	http://datadryad.org/		
general !!!	Where can I find large datasets open to the public? - Quora	https://www.quora.com/Where-can-I-find-large-datasets-open-to-the-public		
	Data, Data, Data: Thousands of Public Data Sources	The Official Blog of BigML.com	https://blog.bigml.com/2013/02/28/data-data-data-thousands-of-public-data-sources/		
	List of Public Data Sources Fit for Machine Learning	The Official Blog of BigML.com	https://blog.bigml.com/list-of-public-data-sources-fit-for-machine-learning/		
	Datasets for Data Mining and Data Science	http://www.kdnuggets.com/datasets/index.html		
	Metro Bus & Rail Real-time Arrivals	Metro Developer	http://developer.metro.net/portfolio-item/real-time-arrivals/	XML, JSON	REST
	Metro Developer	Metro's Official Blog on Transit Data and Technology	http://developer.metro.net/		

	Datasets - Open Data Portal	http://datos.madrid.es/portal/site/egob/menuitem.9e1e2f6404558187cf35cf3584f1a5a0/?vgnextoid=374512b9ace9f310VgnVCM100000171f5a0aRCRD			
general !	City of Amsterdam - Amsterdam Open Data Catalogue	http://data.amsterdam.nl/		CSV, JSON, XML	
	Real-Time Traffic Speed Data | NYC Open Data	https://nycopendata.socrata.com/Transportation/Real-Time-Traffic-Speed-Data/xsat-x5sa/data		XML	
	Live Traffic NSW	https://www.livetraffic.com/desktop.html			
	MCTS | Real-Time	http://realtime.ridemcts.com/bustime/home.jsp			
	Capital Metro	https://data.texas.gov/capital-metro			
	Open Data - Accessing City Hall | City of Toronto	http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=9e56e03bb8d1e310VgnVCM10000071d60f89RCRD			
general !	Data catalogue - Open Data - Accessing City Hall | City of Toronto	http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=1a66e03bb8d1e310VgnVCM10000071d60f89RCRD			
	Parking Violations Issued - Fiscal Year 2016 | NYC Open Data	https://data.cityofnewyork.us/City-Government/Parking-Violations-Issued-Fiscal-Year-2016/kiv2-tbus/data			
general !!!	Great IoT, Sensor and other Data Sets Repositories - Data Science Central	http://www.datasciencecentral.com/profiles/blogs/great-sensor-datasets-to-prepare-your-next-career-move-in-iot-int			
general !	State of Texas | Open Data Portal	https://data.texas.gov/			

	Search for a Dataset - the Datahub	https://datahub.io/dataset		
	Edmonton - Open Data Portal	https://data.edmonton.ca/		
	SF OpenData	https://data.sfgov.org/		
	Raleigh | Open Data	https://data.raleighnc.gov/		
	Home | Open Raleigh GIS Data	http://data.ral.opendata.arcgis.com/		
	Datasets | CivicApps.org	http://civicapps.org/datasets		
	Welcome - OpenDataPhilly	https://www.opendataphilly.org/		
	City of Madison | Open Data	https://data.cityofmadison.com/		
	Honolulu - Open Data Portal	https://data.honolulu.gov/		
	Home | the DC GIS Open Data Site	http://opendata.dc.gov/		
	Welcome -	http://data.opencolorado.org/		
	Denver Open Data Catalog	https://www.denvergov.org/opendata		
	Search & Browse | Data | Cook County, Illinois	https://datacatalog.cookcountyil.gov/browse?utf8=%E2%9C%93		
	City of Chicago | Data Portal	https://data.cityofchicago.org/		
	Data | City of Boston	https://data.cityofboston.gov/		
	Baltimore | Open Data	https://data.baltimorecity.gov/		
	Open Data | City of Austin Texas	https://data.austintexas.gov/		
	OpenColorado	http://opencolorado.org/		
	Singapore's Public Data	https://data.gov.sg/		
	FRB: Data Download Program (DDP)	https://www.federalreserve.gov/feeds/datadownload.html		
	UK Data Service Discover	https://discover.ukdataservice.ac.uk/?sf=Data%20catalogue&df=DataTypeFacet_UK%20Survey%20data		

	UK Data Service » Open access data	https://www.ukdataservice.ac.uk/get-data/open-data			
	Datasets	https://www.reddit.com/r/datasets/			
	What are some good toy problems in data science? - Quora	https://www.quora.com/Programming-Challenges-1/What-are-some-good-toy-problems-in-data-science			
	Open Data Catalog | The World Bank	http://datacatalog.worldbank.org/			
	Quandl Financial and Economic Data	https://www.quandl.com/			
	Browse Databases | Quandl Financial and Economic Data	https://www.quandl.com/browse			
	My top ten data.gov.uk datasets - a guest post by Simon Rogers | Data in government	https://data.blog.gov.uk/2010/10/07/my-top-ten-data-gov-uk-datasets-a-guest-post-by-simon-rogers/			
	Where can I find large datasets open to the public? - Quora	https://www.quora.com/Data/Where-can-I-find-large-datasets-open-to-the-public			
	Wolfram|Alpha: Computational Knowledge Engine	http://www.wolframalpha.com/			
	What's your favorite free data source? - Quora	https://www.quora.com/Data-Analysis/Whats-your-favorite-free-data-source			
	What are some publicly available market data feeds? - Quora	https://www.quora.com/What-are-some-publicly-available-market-data-feeds			
	Open Data	https://www.reddit.com/r/opendata/			
	Free, Public Data Sets | Hacker News	https://news.ycombinator.com/item?id=2165497			

	GeoJSON files for real-time Virginia transportation data.	https://gist.github.com/waldoj/5053946		
	Seattle | Open Data	https://data.seattle.gov/		
	Open Data @ CTIC	http://datos.fundacionctic.org/		
	Harvest sources - PublicData.eu	http://publicdata.eu/harvest.html		
	Data Catalog API – World Bank Data Help Desk	https://datahelpdesk.worldbank.org/knowledgebase/articles/902049		
	Data | The World Bank	http://data.worldbank.org/		
	Statistics - GOV.UK	https://www.gov.uk/government/statistics		
	Find statistics and data by department or agency - Canada.ca	https://www.canada.ca/en/government/statistics/dept.html		
	Open Data Communities | Themes	http://opendatacommunities.org/def/concept/folders/themes		
	Open Data Communities | Browse Data	http://opendatacommunities.org/		
	NASA Open APIs	https://api.nasa.gov/#getting-started		
	Data catalog - NASA	https://data.nasa.gov/data		
	Welcome - data.gov.au	https://www.data.gov.au/		
	toddmotto/public-apis: A collective list of public JSON APIs for use in web development.	https://github.com/toddmotto/public-apis		
	SMHI Open Data API Documentation	http://opendata.smhi.se/apidocs/		
	Home | Wake County Open Data	http://data.wake.opendata.arcgis.com/		

	Home | State of Michigan GIS Open Data	http://gis.michigan.opendata.arcgis.com/		
	Search & Browse | Data | San Francisco	https://data.sfgov.org/browse		
	City of Surrey Open Data API - City of Surrey Open Data Catalogue	http://data.surrey.ca/pages/city-of-surrey-open-data-api		
	Datasets - GEODATA.gov.gr	http://geodata.gov.gr/en/dataset		
	10 Open Data APIs Built By Brands To Use In Your Content Campaigns - State of Digital	http://www.stateofdigital.com/10-open-data-apis-content-campaigns/		
	Transport For London Unified API	https://api.tfl.gov.uk/		
	Our open data - Transport for London	https://tfl.gov.uk/info-for/open-data-users/our-open-data		
	U.S. Department of Commerce - Data Hub	https://data.commerce.gov/		
	OECD Data	https://data.oecd.org/searchresults/?hf=20&b=0&l=en&s=score		
	Categories - European Data Portal	http://www.europeandataportal.eu/data/en/group		
	Datasets - European Data Portal	http://www.europeandataportal.eu/data/en/dataset		
	Traffic counts - Transport statistics - Department for Transport	http://www.dft.gov.uk/traffic-counts/cp.php		
	Get Data	http://browse.ceda.ac.uk/browse/badc		

	Google Maps	https://www.google.gr/maps			
	foursquare for Developers	https://developer.foursquare.com/			
	API Endpoints	https://developer.foursquare.com/docs/			
	Eventbrite - Discover Great Events or Create Your Own & Sell Tickets	https://www.eventbrite.com/			
	Eventbrite APIv3 Developer Documentation - Eventbrite Developer Center	https://www.eventbrite.com/developer/v3/			
	Extend your community | Meetup	https://www.meetup.com/meetup_api/docs/			
	Documentation - Eventful API	https://api.eventful.com/docs			
	Facebook for Developers	https://developers.facebook.com/			
	Graph API	https://developers.facebook.com/docs/graph-api			
	50 Most Useful APIs for Developers - Computer Science Zone	http://www.computersciencezone.org/50-most-useful-apis-for-developers/			
	Most Popular APIs: At Least One Will Surprise You | ProgrammableWeb	https://www.programmableweb.com/news/most-popular-apis-least-one-will-surprise-you/2014/01/23			
	All Events in City API | Developers Resource	https://allevents.in/pages/api			

3.Σενάριο χρήσης πηγών και ανίχνευσης δεδομένων

Στη συνέχεια, έγινε επεξεργασία και ανάλυση των δεδομένων αυτών των συγκεκριμένων πηγών ανοιχτών δεδομένων, σύμφωνα με τις αφαιρετικές ροές εργασιών 3.1.1 και 3.2.1, ώστε να προκύψει κάποια ουσιαστικής σημασίας πληροφορία, η οποία θα μας βοηθήσει στο να προβλέπουμε και να προλαμβάνουμε μείζων καταστάσεις, καθώς και να ανταποκρινόμαστε καλύτερα στις ανάγκες που προκύπτουν σε διάφορους τομείς (3.1.2 και 3.2.2).

3.1 Καιρός
3.1.1 Ροή εργασίας

Σε αυτό το διάγραμμα ροής εμφανίζονται τα βήματα της εργασίας στο θέμα του καιρού.
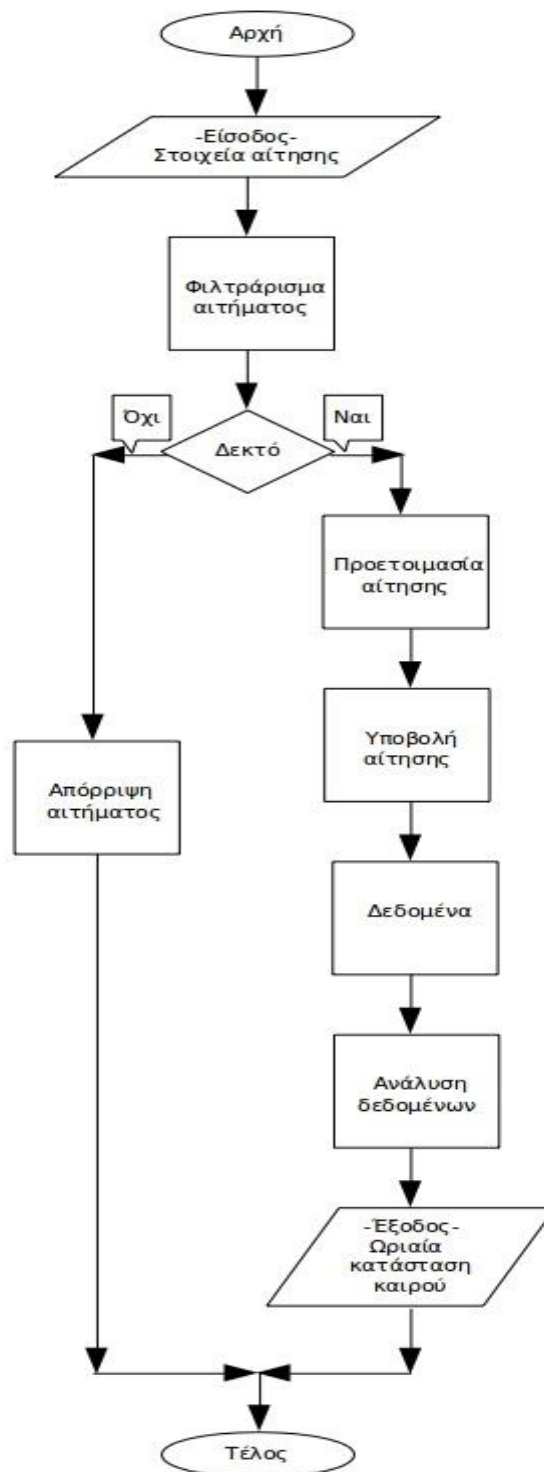
Εικόνα 1 : Ροή εργασίας καιρού

3.1.2 Σενάρια χρήσης

Οι πληροφορίες που εξάγονται από τη χρήση της εφαρμογής της διπλωματικής εργασίας στο θέμα του καιρού είναι :

1   Χρονικοί περίοδοι εύρεσης κατάστασης καιρού

   Εύρεση κατάστασης καιρού σε δεδομένα :

   - Ιστορικά(historical)

   - Παρελθοντικά(yesterday-previous days-past)

   - Σημερινά(today)

   - Αυριανά(tomorrow-next days-next weeks)

   - Μελλοντικά(future) με πρόβλεψη ενός χρόνου(1 year forecast)

2   Εύρεση της **κατάστασης** του καιρού με τις διακριτές τιμές

   - good

   - normal

   - bad

3   Εύρεση για μία **ημέρα** της ωριαία κατάστασης του καιρού

4   Εύρεση για κάθε **ώρα** μίας ημέρας της κατάστασης του καιρού

5   Εύρεση για την πόλη της **Αθήνας** της ωριαίας κατάστασης του καιρού

Από τη γνώση της κατάστασης του καιρού μπορούμε να διαπιστώσουμε εάν οι καιρικές συνθήκες διαμορφώνουν το φυσιολογικό, για κάθε εποχή, κλίμα που διακρίνει μία εύκρατη περιοχή, όπως η Αθήνα. Σε μία εύκρατη περιοχή υπάρχουν τέσσερις εποχές σε ένα έτος που δημιουργούν έναν κύκλο εμφάνισης, τον κύκλο των εποχών(Φθινόπωρο, Χειμώνας, Άνοιξη, Καλοκαίρι) και η κάθε μία χαρακτηρίζεται από το δικό της εύρος καιρικών συνθηκών.
Με μία τέτοια ανάλυση μπορούν να προκύψουν οι εξής χρήσιμες πληροφορίες :

- Εάν εμφανίζονται κατά τη διάρκεια του έτους **όλες** οι εποχές,

- Εάν υπάρχει **κυκλική εναλλαγή** των τεσσάρων εποχών,

- Εάν διαδέχονται η μία την άλλη με τη συγκεκριμένη **φυσιολογική σειρά**

- Και εάν η εμφάνιση της κάθε μίας γίνεται την **κατάλληλη για την περιοχή περίοδο**

Αυτό επιβεβαιώνεται από την επικράτηση της τιμής normal στην κατάσταση του καιρού.

Κάθε άλλη περίπτωση όπου υπερισχύει η κατάσταση καιρού good ή bad είναι μη φυσιολογική για αυτή την εύκρατη περιοχή, την Αθήνα, είτε πρόκειται για κατάσταση καιρού άνετη για τον άνθρωπο, είτε για κατάσταση που οφείλεται σε επιδείνωση των καιρικών συνθηκών, καθώς η ύπαρξη μιας τέτοιας απόκλισης μπορεί να αποδειχθεί ανησυχητική.

Μία τέτοια πληροφορία μπορεί να ανακαλυφθεί ύστερα από έρευνα που βασίζεται σε παρελθοντική και ιστορική κατάσταση του καιρού(κλήση υπορροής-subflow για ιστορικό(historical) χρόνο), χρήσιμη για επιστημονική έρευνα(scientific research) που μπορεί να αφορά την Επιστήμη του περιβάλλοντος(Environmental science) ή την Κλιματολογία(Climatology-climate science), μπορεί να παρατηρηθεί μέσα από έλεγχο προσφάτων στοιχείων(κλήση υπορροής-subflow για παρελθοντικά,σημερινά και αυριανά δεδομένα(past, today, next days)) με χρήση αυτής της πληροφορίας από κλιματικές εφαρμογές(climate apps), είτε μπορεί να ληφθεί ως αίσθηση για το επερχόμενο διάστημα του ενός χρόνου με την πρόβλεψη της κατάστασης του καιρού(κλήση υπορροής-subflow για μελλονικά δεδομένα(future-1 year forecast)), αποκτώντας μια γενικότερη αντίληψη των περιστάσεων που θα ακολουθήσουν σε τομείς επηρεαζόμενους από την κατάσταση του καιρού σε τοπικό επίπεδο, στην πόλη της Αθήνας.

Η εφαρμογή της εργασίας στο θέμα του καιρού μπορεί να χρησιμοποιηθεί και στον τομέα της υγείας.

Σε περίπτωση που, υπάρχει επίδραση του καιρού στην κατάσταση της υγείας ορισμένων ανθρώπων, να μπορεί μία εφαρμογή, όπως μια εφαρμογή για την υγεία(health app), να τους ειδοποιεί, προκειμένου να κάνουν τις απαραίτητες ενέργειες, ώστε να προληφθούν οι ανεπιθύμητες συνέπειες που μπορεί να υπάρξουν από μία τέτοια κατάσταση καιρού(κατάσταση bad), βασιζόμενη σε αυριανά και μελλοντικά δεδομένα(tomorrow-next days-next weeks, future).

Ακόμα, συνδυάζοντας την κατάσταση του καιρού σε παρελθοντικό και τωρινό χρόνο(yesterday, today) με μια εφαρμογή παρακολούθησης υγείας(health monitoring app) μπορεί να γίνει ανάλυση και παρακολούθηση της πορείας της υγείας(βελτίωση,επιδείνωση ή μέτρια κατάσταση) σε σχέση με τον καιρό.

Άλλη μια χρήση της εφαρμογής αυτής, και συγκεκριμένα της γνώσης της κατάστασης του καιρού για μελλοντικό χρονικό διάστημα, είναι να επιλεγεί το χρονικό διάστημα ενός γεγονότος-μιας εκδήλωσης που θα διεξαχθεί στην Αθήνα, είτε πρόκειται για επιλογή ημερών ή ωρών σε μία ημέρα, ή να επιλεγεί ο χώρος-κτίριο της εκδήλωσης, εάν θα είναι κλειστός ή ανοιχτός, γνωρίζοντας την ακριβή ώρα και χρόνο διεξαγωγής, με βάση την προβλεπόμενη κατάσταση του καιρού.

Μία επιπλέον χρησιμότητα της εφαρμογής μπορεί να προκύψει σε συνδυασμό με analytics, παράγοντας περισσότερες πληροφορίες, όπως στον τομέα αθλητισμού, εάν υπάρχει κάποια εποχή όπου η κάθε αθλητική ομάδα αποδίδει καλύτερα ή ειδικότερα, σε κάθε εποχή, εάν υπάρχει κάποια κατάσταση καιρού στην οποία η κάθε αθλητική ομάδα να έχει τις περισσότερες επιτυχίες, όταν ο αγώνας πραγματοποιείται στην Αθήνα και σε ανοιχτό χώρο διεξαγωγής.

Συνοψίζοντας, η πληροφορία που παράγεται από την εφαρμογή της διπλωματικής εργασίας στο θέμα του καιρού μπορεί να διαχειρισθεί με ποικίλους τρόπους, να αποδειχθεί χρήσιμη και να αξιοποιηθεί από πολλούς διαφορετικούς τομείς.

3.2 Γεγονότα - Εκδηλώσεις
3.2.1 Ροή εργασίας

Η διαδικασία που ακολούθησε η διπλωματική εργασία στο θέμα των γεγονότων–εκδηλώσεων αναπαρίσταται στο παρακάτω διάγραμμα ροής.
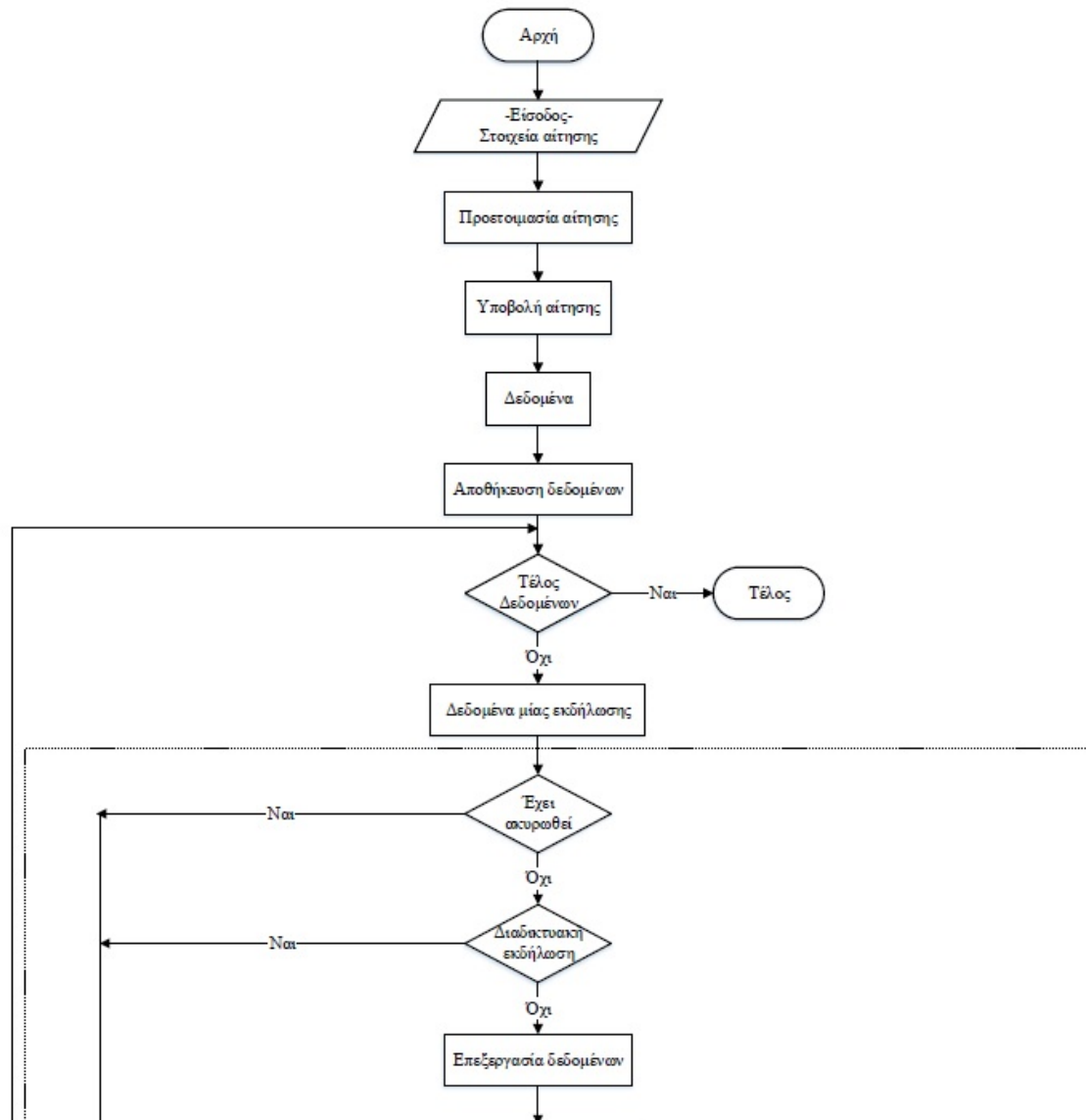
Εικόνα 2 : Ροή εργασίας εκδηλώσεων (μέρος1)
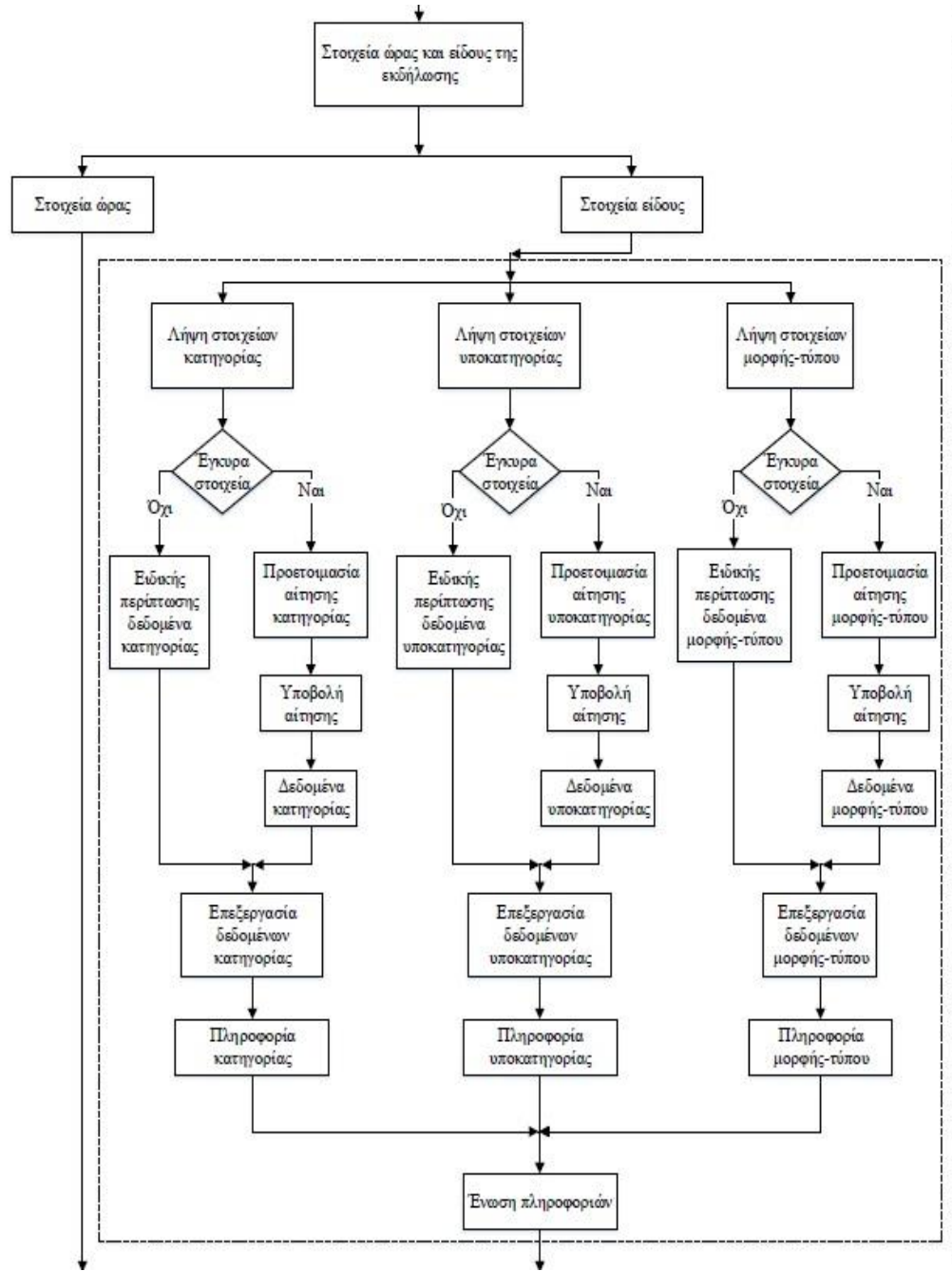
Εικόνα 3 : Ροή εργασίας εκδηλώσεων (μέρος2)
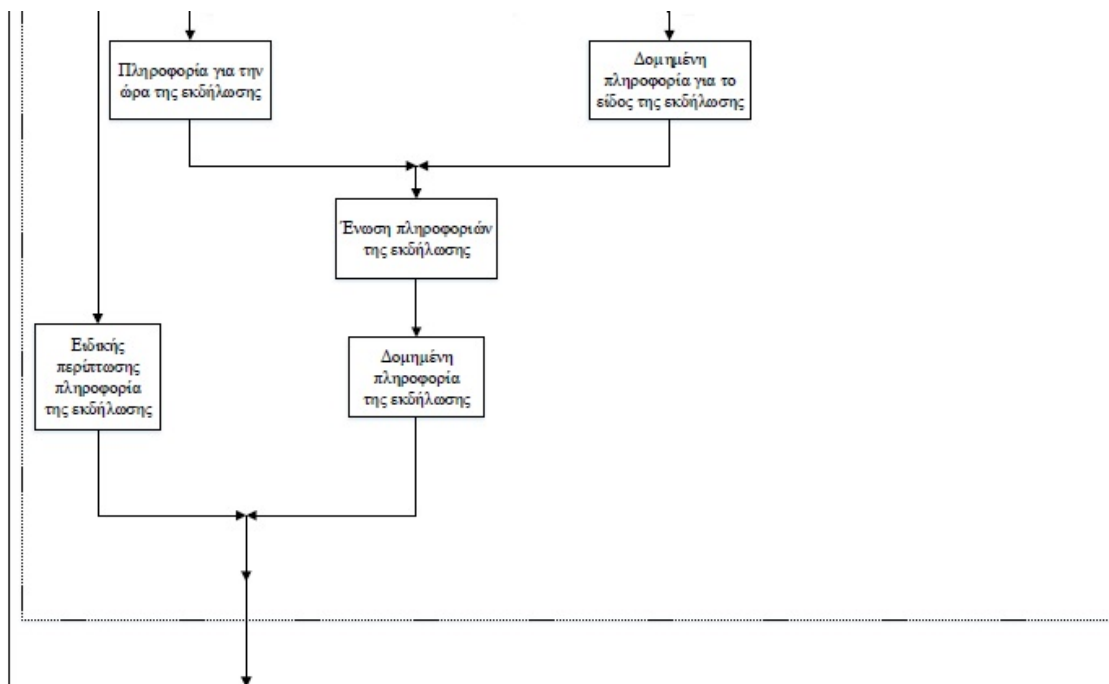
Εικόνα 4 : Ροή εργασίας εκδηλώσεων (μέρος3)
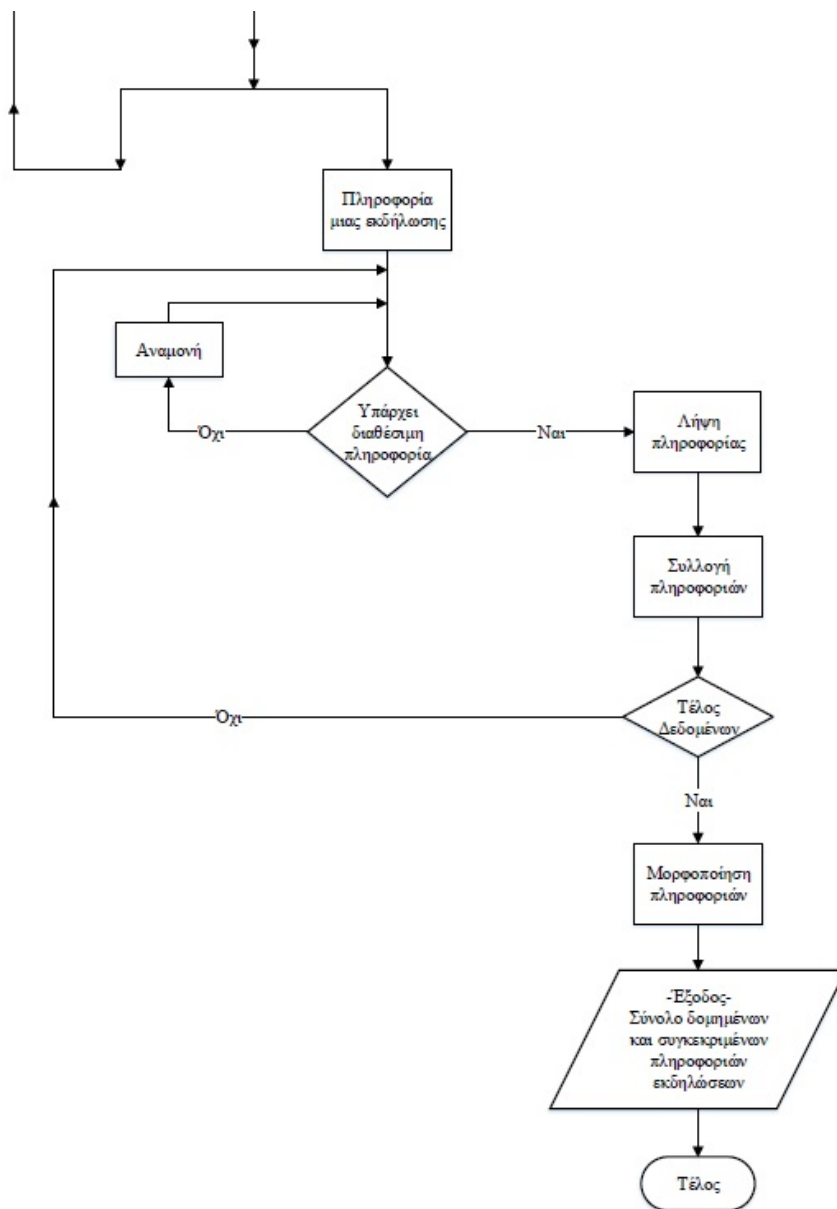
Εικόνα 5 : Ροή εργασίας εκδηλώσεων (μέρος4)

3.2.2 Σενάρια Χρήσης

Οι εξαγώμενες πληροφορίες που προκύπτουν από την εφαρμογή της διπλωματικής εργασίας στο θέμα των γεγονότων-εκδηλώσεων είναι :

1. Εάν αυτή τη στιγμή σε συγκεκριμένους χώρους-κτίρια λαμβάνει χώρα κάποια εκδήλωση.

2. Ποιες εκδηλώσεις είναι προγραμματισμένες να πραγματοποιηθούν στους συγκεκριμένους χώρους-κτίρια σε οποιοδήποτε χρονικό διάστημα.

3. Ποιο είναι το ακριβές χρονικό διάστημα(έναρξη-λήξη) πραγματοποίησης της κάθε εκδήλωσης.

4. Ποιο είναι το είδος της εκδήλωσης λεπτομερώς.
   Σε ποια κατηγορία κατατάσσεται, δηλαδή με ποιο τομέα ασχολείται το θέμα της εκδήλωσης(πχ. τεχνολογία, μουσική, επιστήμη), σε τι υποκατηγορία συμπεριλαμβάνεται, όπου ορίζεται η ειδική κατεύθυνση του θέματος της εκδήλωσης και ποιος είναι ο τύπος, δηλαδή το είδος της παρουσίασης, της εκδήλωσης(διάσκεψη, σεμινάριο, συναυλία και άλλα).

Ουσιαστικά με αυτή την εφαρμογή πραγματοποιείται ενημέρωση γεγονότων-εκδηλώσεων, μια πληροφορία που μπορεί να έχει ποικίλες χρήσεις.

Η ενημέρωση των γεγονότων-εκδηλώσεων καθίσταται χρήσιμη για προσέλευση. Με βάση αυτήν, μπορούν οι συμμετέχοντες να επιλέγουν εκδηλώσεις που τους ενδιαφέρουν να τις παρακολουθήσουν, να παραμένουν ενημερωμένοι σχετικά με τις εξελίξεις στο θέμα των εκδηλώσεων και να μπορούν να οργανώνουν το προσωπικό τους πρόγραμμα.

Η πληροφορία αυτή μπορεί να χρησιμοποιηθεί από εφαρμογές που να ειδοποιούν τους ιδιοκτήτες των καταστημάτων της περιφέρειας, ώστε να αναμένουν προσέλευση κόσμου, ως ενημέρωση για εταιρείες marketing, που αποσκοπούν στην προώθηση προϊόντων, ή για επιχειρήσεις, ώστε να προβούν σε ενέργειες διαφήμισης.

Η χρήση της ενημέρωσης γεγονότων-εκδηλώσεων μπορεί να είναι ωφέλιμη είτε για μια εφαρμογή πλοήγησης(navigation app), που να προειδοποιεί για πιθανή αυξημένη κίνηση όσους κατευθύνονται προς εκείνη την περιοχή, είτε για μια εφαρμογή σχετικά με τους χώρους στάθμευσης στην περιοχή, που να προειδοποιεί σε περίπτωση εκδήλωσης για την κατάσταση μη εύρεσης ή της ύπαρξης ελαχίστων διαθέσιμων θέσεων στάθμευσης.

Ακόμα, η εφαρμογή μπορεί να λειτουργήσει ως μια μελλοντική εποπτεία της κατάστασης της περιοχής.
Μια τέτοια προειδοποιητική ματιά της περιοχής μπορεί να αφορά τη δημόσια ασφάλεια είτε πρόκειται για το γεγονός της συσσώρευσης κόσμου στην περιοχή είτε ανάλογα το είδος της εκδήλωσης, ενδεχομένως, να χρειάζεται περισσότερη προσοχή ένας αθλητικός αγώνας ή μία συναυλία σε σχέση με ένα επιστημονικό συνέδριο.
Η πληροφορία της διεξαγωγής εκδηλώσεων μπορεί να είναι χρήσιμη και για το σύστημα δημοσίων συγκοινωνιών, το οποίο ίσως να δρομολογήσει τις συγκοινωνίες σε πιο τακτά διαστήματα για την εξυπηρέτηση αυτής της μεγαλύτερης προσέλευσης κόσμου τις συγκεκριμένες ημέρες και ώρες(πριν-μετά) της εκδήλωσης.
Επίσης, αυτή η μεγάλη προσέλευση κόσμου και η κίνηση που μπορεί να προκύψει λόγω της εκδήλωσης μπορούν να επισημάνουν την αναγκαιότητα για λήψη αναγκαίων μέτρων για την ασφαλή κίνηση των τροχοφόρων και των πεζών(τροχονόμοι-Τροχαία).

Η μελλοντική επισκόπηση που η εφαρμογή παρέχει μπορεί να χρησιμεύσει ώστε να καθορισθεί ο προγραμματισμός της κλήσης άλλων πιο εξειδικευμένων εφαρμογών(IoT artefacts, Events, Services), που θα παράγουν μια πιο συγκεκριμένη και ειδική πληροφορία, χρήσιμη στους παραπάνω αλλά και σε άλλους τομείς, για τη συγκεκριμένη περιοχή και για τα χρονικά διαστήματα που αφορούν την εκδήλωση.

Με αποθήκευση των αποτελεσμάτων της εφαρμογής και με χρησιμοποίηση των πληροφοριών που αυτή προσφέρει μπορούν, επιπλέον, να πραγματοποιηθούν analytics, παράγοντας χρήσιμες πληροφορίες.

Μέσα από analytics που βασίζονται στο είδος των εκδηλώσεων μπορεί να προταθεί ένας συγκεκριμένος χώρος-κτίριο για τη διεξαγωγή κάποιου είδους ή τύπου εκδήλωσης με αξιοποίηση από εφαρμογές που προτείνουν χώρους-κτίρια για εκδηλώσεις(event managers, event management).

Από την εφαρμογή analytics, όπου πιθανόν να χρειάζεται να προηγηθεί ένας συνδυασμός με άλλες εφαρμογές, μπορούν να προκύψουν πληροφορίες που ίσως να ενδιαφέρουν το Δήμο της περιοχής στον οποίο ανήκει ο χώρος-κτίριο, όπως πληροφορίες σχετικά με τα είδη των εκδηλώσεων που ελκύουν περισσότερο κόσμο ή τα είδη των εκδηλώσεων που αυξάνουν την κινητικότητα στα καταστήματα της περιοχής, για μελλοντική διεξαγωγή περισσότερων τέτοιων εκδηλώσεων και εάν υπάρχει κάποιο κατάλληλο ωράριο ώστε να επωφελείται η περιοχή. Επιπροσθέτως, μια χρήσιμη πληροφορία μπορεί να είναι εάν υπάρχει κάποιο είδος εκδήλωσης που συνήθως διοργανώνεται ή επρόκειτο να διεξαχθεί μελλοντικά περισσότερο σε αυτό τον χώρο-κτίριο, ώστε να αναπτυχθεί η περιοχή με καταστήματα, επιχειρήσεις, καλλιτεχνικούς, πολιτισμικούς και περιβαλλοντικούς χώρους ή χώρους ψυχαγωγίας, που να ενδιαφέρουν και να ευχαριστούν τον κόσμο που έρχεται στην περιοχή για αυτό το είδος εκδηλώσεων με αποτέλεσμα να προτιμήσουν την περιοχή για κάποια επόμενη έξοδό τους.

Άλλη μία χρησιμότητα που μπορεί να προκύψει είναι μια εφαρμογή που βασίζεται σε μια συνδυαστική λειτουργία των δύο θεμάτων της διπλωματικής εργασίας. Μια τέτοια εφαρμογή μπορεί να είναι χρήσιμη σε ανθρώπους που θέλουν να παρευρεθούν σε μια εκδήλωση, αλλά, ενδεχομένως, η υγεία τους να επηρεάζεται από την κατάσταση του καιρού. Σε αυτή την περίπτωση, οι άνθρωποι αυτοί μπορούν να είναι εγγεγραμμένοι σε μια υπηρεσία, η οποία χρησιμοποιώντας αυτή την συνδυαστική λειτουργία να ελέγχει την κατάσταση του καιρού που θα επικρατεί σε χρονικό διάστημα που αφορά την εκδήλωση, στην οποία ο κάθε χρήστης επιθυμεί να παραστεί, και θα αποφασίζει εάν είναι κρίσιμη η κατάσταση, προειδοποιώντας, τότε, τον κάθε χρήστη ξεχωριστά.

Συνεπώς, η εφαρμογή της διπλωματικής εργασίας στο θέμα των γεγονότων-εκδηλώσεων μπορεί να χρησιμοποιηθεί είτε για περαιτέρω ανάλυση, είτε για συνδυασμό με άλλες εφαρμογές ή να προσφέρει μια αφαιρετική πληροφορία, στην οποία μπορεί να βασιστεί η δημιουργία άλλων εφαρμογών που να κατευθύνουν την αξιοποίησή της σε διαφορετικά σενάρια χρήσης.

4.Υλοποίηση

Τέλος, στο κεφάλαιο αυτό, γίνεται αναλυτική προσέγγιση της εκάστοτε επεξεργασίας των δεδομένων των συγκεκριμένων πηγών ανοιχτών δεδομένων, όπου επεξηγείται η κάθε εφαρμογή (4.1.1 και 4.2.1), παρουσιάζεται το αποτέλεσμα με κάποια γραφική προσομοίωση (4.1.2) και διατυπώνεται μια πιθανή συνδυαστική λογική αυτών των δύο αποτελεσμάτων (4.3) προκειμένου να προκύψει κάποιο άλλο ωφέλιμο αποτέλεσμα.

Κατά την υλοποίηση της διπλωματικής εργασίας πραγματοποιήθηκε η δημιουργία υπορροών(subflows)-κόμβων (βλ. Εικόνα 6 : Υπορροές(subflows)) καθένας από τους οποίους επιτελεί μια ορισμένη λειτουργία και δεχόμενος κατάλληλη είσοδο μπορεί να χρησιμοποιηθεί για να παράγει μια συγκεκριμένη έξοδο.
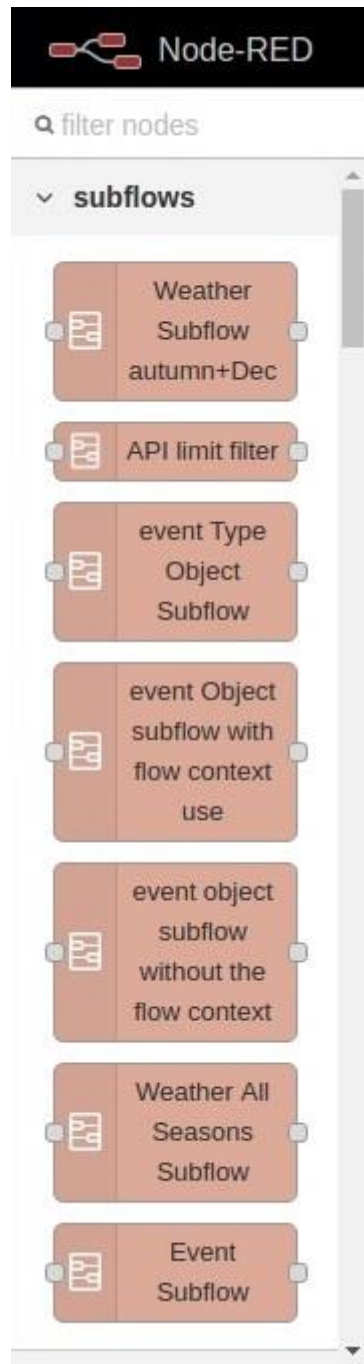
Εικόνα 6 : Υπορροές(subflows)

4.1 Καιρός

4.1.1 Ροές – υπορροές – κόμβοι

Αρχικά δημιουργήθηκε η υπορροή «Weather Subflow autumn+Dec».
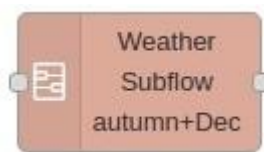
Εικόνα 7 : Κόμβος της υπορροής «Weather Subflow autumn+Dec»

Η υπορροή «Weather Subflow autumn+Dec» δέχεται ως είσοδο ένα εισερχόμενο μήνυμα που διαθέτει δηλωμένες τις παραμέτρους msg.time.year, msg.time.month, msg.time.day και παράγει ως έξοδο έναν πίνακα από ωριαία αντικείμενα της μορφής

```
{

  time:{
     epoch : time,
     date : dateStringLocal
  },
  hour : hour,
  state : weatherState

},
```

είτε έναν άδειο πίνακα.

Ο κόμβος αυτός αποτελείται από τη παρακάτω ροή.
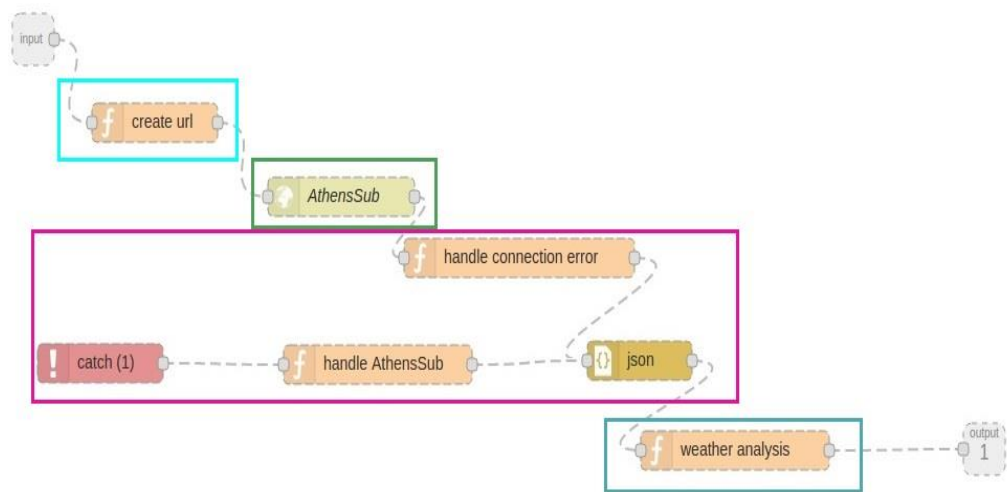
Εικόνα 8 : Ροή της υπορροής Weather Subflow autumn+Dec

 : Προετοιμασία κλήσης API.

Σε αυτό το πλαίσιο, ελέγχουμε την είσοδο των δεδομένων στην υπορροή(subflow), εάν, δηλαδή, έχουν οριστεί όλες οι ζητούμενες παράμετροι που χρειάζονται ώστε να μπορέσει να πραγματοποιηθεί η αίτηση στην υπηρεσία(API), δημιουργούμε το κατάλληλο URL και προετοιμάζουμε την αίτηση στην υπηρεσία, αφού φτιάξουμε το μήνυμα με τις απαραίτητες παραμέτρους.

 : Κλήση API

Με αυτόν τον κόμβο καλείται η υπηρεσία API, ώστε να προσκομίσουμε τα δεδομένα που χρειάζονται.

 : Χειρισμός σφαλμάτων

Με τους κόμβους αυτού του πλαισίου, χειριζόμαστε τα πιθανά σφάλματα του δικτύου, μερικά από αυτά συναντήθηκαν κατά τη διάρκεια της εργασίας, όπως "Error: connect ETIMEDOUT" και "Error getaddrinfo EAI_AGAIN", αλλά και οποιοδήποτε σφάλμα που μπορεί να προκύψει κατά την κλήση API επιστρέφοντας μια μη επιθυμητή έξοδο είτε σφάλμα που να διαταράσσει την ομαλή λειτουργία της ροής(flow).Κάθε τέτοια περίπτωση αναγνωρίζεται και χειρίζεται αναλόγως.

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 : Ανάλυση δεδομένων

Στον κόμβο αυτό αναλύονται τα δεδομένα του καιρού που λήφθηκαν από την υπηρεσία API, λαμβάνοντας υπ'όψιν τη μορφοποίησή τους, και παράγεται η προσδοκώμενη έξοδος.

Επόμενη υπορροή(subflow) είναι η «API limit filter».

Εικόνα 9 : Κόμβος της υπορροής API limit filter

Η υπορροή «API limit filter» δέχεται ως είσοδο ένα μήνυμα και η έξοδός της είναι το εισερχόμενο μήνυμα ή τίποτα.

Το περιεχόμενο αυτής της υπορροής(subflow) είναι μόνο ένας κόμβος στον οποίο λαμβάνεται υπόψη το όριο των αιτήσεων που επιτρέπει η πηγή «Dark Sky API», δηλαδή «1.000 αιτήσεις API προς την Υπηρεσία ανά ημέρα δωρεάν»[21].

Εικόνα 10 : Ροή της υπορροής API limit filter

Με τη χρήση αυτής της υπορροής, στόχος είναι να μπορέσουμε να παραμείνουμε μέσα σε αυτό το όριο της συγκεκριμένης υπηρεσίας API.

Στο θέμα του καιρού μία ακόμα υπορροή(subflow) δημιουργήθηκε, η «Weather All Seasons Subflow».
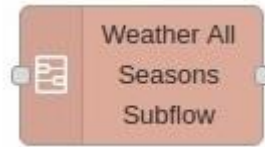
Εικόνα 11 : Κόμβος της υπορροής Weather All Seasons Subflow

Η υπορροή(subflow) «Weather All Seasons Subflow» συμπεριφέρεται ακριβώς όπως η υπορροή «Weather Subflow autumn+Dec». Ένα παράδειγμα της παραγόμενης εξόδου της υπορροής «Weather All Seasons Subflow» είναι το ακόλουθο.

```
[
  {
    "time":{
      "epoch":1453327200,
      "date":"1/21/2016, 12:00:00 AM"
    },
    "hour":0,
    "state":"good"
  },
  {
    "time":{
      "epoch":1453330800,
      "date":"1/21/2016, 1:00:00 AM"
    },
    "hour":1,
    "state":"good"
  },
  {
    "time":{
      "epoch":1453334400,
      "date":"1/21/2016, 2:00:00 AM"
    },
    "hour":2,
    "state":"normal"
  },
  {
    "time":{
      "epoch":1453338000,
      "date":"1/21/2016, 3:00:00 AM"
    },
    "hour":3,
    "state":"good"
  },
```

```
      •••,
    {
      "time":{
        "epoch":1453402800,
        "date":"1/21/2016, 9:00:00 PM"
      },
      "hour":21,
      "state":"good"
    },
    {
      "time":{
        "epoch":1453406400,
        "date":"1/21/2016, 10:00:00 PM"
      },
      "hour":22,
      "state":"bad"
    },
    {
      "time":{
        "epoch":1453410000,
        "date":"1/21/2016, 11:00:00 PM"
      },
      "hour":23,
      "state":"bad"
    }
  ]
```

Ο κόμβος αυτός αποτελείται από τη ροή που φαίνεται στην επόμενη εικόνα.
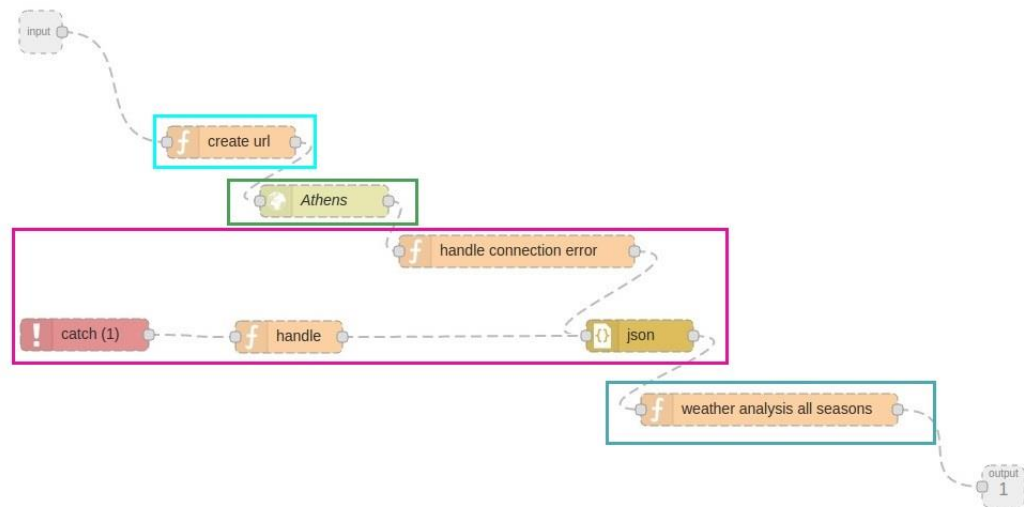
Εικόνα 12 : Ροή της υπορροής Weather All Seasons Subflow

 : Προετοιμασία κλήσης API.

 : Κλήση API

Η απόκριση αυτής της κλήσης έχει την παρακάτω μορφή.

```
{
  "latitude":37.9838,
  "longitude":23.7275,
  "timezone":"Europe/Athens",
  "offset":3,
  "hourly":{
    "summary":"Clear throughout the day.",
    "icon":"clear-day",
    "data":[
      {
        "time":1469394000,
        "summary":"Clear",
        "icon":"clear-night",
        "precipType":"rain",
        "temperature":27.93,
        "apparentTemperature":27.22,
        "dewPoint":10.43,
        "humidity":0.34,
        "windSpeed":2.57,
        "windBearing":359,
        "visibility":9.98,
```

```json
      "cloudCover":0.16,
      "pressure":1010.98
    },


          • • • ,


    {
      "time":1469404800,
      "summary":"Partly Cloudy",
      "icon":"partly-cloudy-night",
      "precipType":"rain",
      "temperature":27.64,
      "apparentTemperature":27.15,
      "dewPoint":11.32,
      "humidity":0.36,
      "windSpeed":3.84,
      "windBearing":14,
      "visibility":9.98,
      "cloudCover":0.31,
      "pressure":1010.22
    },


          • • • ,


    {
      "time":1469476800,
      "summary":"Clear",
      "icon":"clear-night",
      "precipType":"rain",
      "temperature":27.65,
      "apparentTemperature":27.16,
      "dewPoint":11.37,
      "humidity":0.36,
      "windSpeed":3.88,
      "windBearing":2,
      "visibility":9.98
    }
  ]
},
"daily":{
  "data":[
    {
      "time":1469394000,
      "summary":"Clear throughout the day.",
      "icon":"clear-day",
      "sunriseTime":1469417015,
      "sunsetTime":1469468514,
      "moonPhase":0.69,
```

```json
          "precipType":"rain",
          "temperatureMin":26.01,
          "temperatureMinTime":1469412000,
          "temperatureMax":32.28,
          "temperatureMaxTime":1469448000,
          "apparentTemperatureMin":26.01,
          "apparentTemperatureMinTime":1469412000,
          "apparentTemperatureMax":31.14,
          "apparentTemperatureMaxTime":1469448000,
          "dewPoint":12.03,
          "humidity":0.35,
          "windSpeed":4.92,
          "windBearing":6,
          "visibility":9.99,
          "cloudCover":0.21,
          "pressure":1010.43
        }
    ]
  },
  "flags":{
    "sources":[
      "isd"
    ],
    "isd-stations":[
      "166421-99999",
      "166650-99999",
      "166653-99999",
      "166750-99999",
      "166840-99999",
      "166990-99999",
      "167100-99999",
      "167131-99999",
      "167150-99999",
      "167160-99999",
      "167161-99999",
      "167180-99999",
      "167263-99999",
      "167264-99999",
      "167380-99999",
      "167410-99999"
    ],
    "units":"si"
  }
}
```

 : Χειρισμός σφαλμάτων

 : Ανάλυση δεδομένων

Παρατηρούμε πως η ροή της «Weather All Seasons Subflow» είναι όμοια με τη ροή της υπορροής «Weather Subflow autumn+Dec». Το μόνο σημείο στο οποίο διαφέρει είναι ο κόμβος «weather analysis all seasons». Εκεί πραγματοποιείται η ανάλυση των δεδομένων του καιρού για όλες τις εποχές. Η ανάλυση αυτή είναι εμπνευσμένη και βασισμένη στα δημοσιοποιημένα δεδομένα του WeatherSpark[22] και παρουσιάζεται στους επόμενους πίνακες.

	Month	<	Normal	>
temperature ^{o}C	Sep	good until $16^{o}C$ else bad	19 – 28	good until $39^{o}C$ else bad
	Oct		15-22	
	Nov	bad	10-18	
	Dec		8-16	
cloudCover %	Sep		35-50	good until 53% else bad
		good		
	Oct		50-60	
	Nov		60-68	bad
	Dec		68-72	
humidity %	Sep	good until 20% else bad	35-75	bad
	Oct		45-82	
	Nov		52-85	
	Dec		56-85	
dewpoint ^{o}C	Sep	good until $5^{o}C$ else bad	8-15	good until $17^{o}C$ else bad
	Oct		7-15	
	Nov		6-11	
	Dec	bad	2-10	
	Comfortable $5\text{-}17^{o}C \rightarrow$ good			
windspeed m/s	Sep	good	4-8	bad
	Oct		3-7	
	Nov		3-6	
	Dec		3-7	

Πίνακας 2 : Ανάλυση καιρού Φθινόπωρο&Δεκέμβριος

	Month	<	Normal	>
temperature ^oC	Jan		5-12	good
	Feb	bad	5-12	until 39^oC else bad
cloudCover %	Jan	good	73-77	bad
	Feb		71-75	
humidity %	Jan	good	55-85	
	Feb	until 20% else bad	52-85	bad
dewpoint ^oC	Jan		2-6	good
	Feb	bad	0-5	until 17^oC else bad
	Comfortable 5-17^oC → good			
windspeed m/s	Jan	good	3-8	bad
	Feb		3-7	

Πίνακας 3 : Ανάλυση καιρού Χειμώνας

	Month	<	Normal	>
temperature ^oC	Mar		7-16	good
	Apr	bad	10-20	until 39^oC
	May		12-25	else bad
cloudCover %	Mar		65-72	
	Apr	good	60-65	bad
	May		45-58	
humidity %	Mar	good	45-83	
	Apr	until 20%	40-80	bad
	May	else bad	35-77	
dewpoint ^oC	Mar		3-7	good
	Apr	bad	4-9	until 17^oC
	May		5-11	else bad
	Comfortable 5-17^oC → good			
windspeed m/s	Mar		4-7	
	Apr	good	4-7	bad
	May		3-7	

Πίνακας 4 : Ανάλυση καιρού Άνοιξη

	Month	<	Normal	>
Temperature ^oC	Jun	good	17-28	good
	Jul	until $16\,^oC$	23-32	until $39\,^oC$
	Aug	else bad	21-33	else bad
cloudCover %	Jun		33-45	good
	Jul	good	29-33	until 53%
	Aug		28-35	else bad
Humidity %	Jun	good	30-68	
	Jul	until 20%	28-59	bad
	Aug	else bad	29-63	
dewpoint ^oC	Jun	good	7-15	good
	Jul	until $5\,^oC$	9-16	until $17\,^oC$
	Aug	else bad	11-17	else bad
	Comfortable $5\text{-}17\,^oC \rightarrow$ good			
windspeed m/s	Jun		3-7	
	Jul	good	5-9	bad
	Aug		5-9	

Πίνακας 5 : Ανάλυση καιρού Καλοκαίρι

Όλα τα παραπάνω συνθέτουν μια ροή που αναπαρίσταται στην Εικόνα 13.
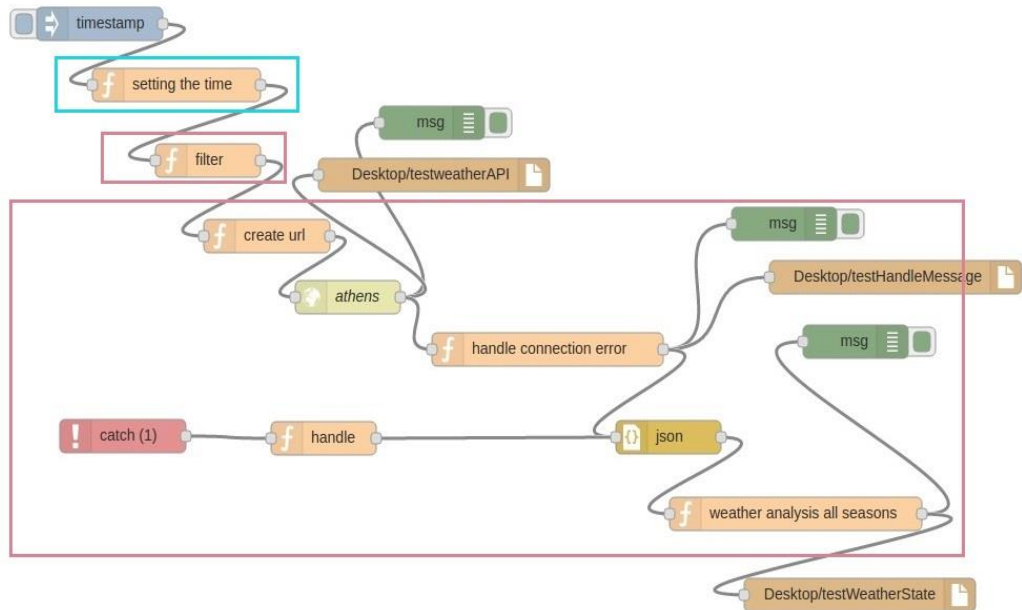
Εικόνα 13 : Τελική ροή καιρού

■ : Είσοδος υπορροής(subflow)

■ : Υπορροή(Subflow)

Αυτή η σύνθεση παρουσιάζεται και με τη χρήση πλέον της δομής των υπορροών(subflows).
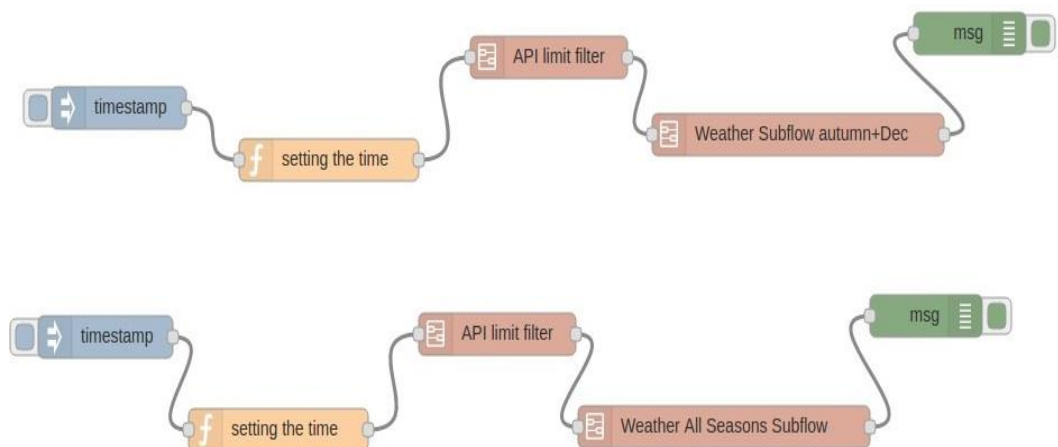
Εικόνα 14 : Σύνθεση ροής με χρήση των υπορροών(subflows) καιρού

4.1.2 Πείραμα – Γραφική Παράσταση

Στο σημείο αυτό παρατίθεται μια γραφική παράσταση στην οποία προσομοιώνεται ένα πείραμα σε διάστημα πέντε ημερών που έχει βασιστεί στην υλοποίηση που αφορά το θέμα του καιρού. Στο «Διάγραμμα Κατάστασης Καιρού» (βλ. Εικόνα 15), είναι εμφανής η εναλλαγή της κατάστασης του καιρού στο διάστημα αυτό, όπου διακρίνονται οι υπάρχουσες διαφορετικές του καταστάσεις (good, normal, bad) στις αντίστοιχες τιμές (1, 0, -1).
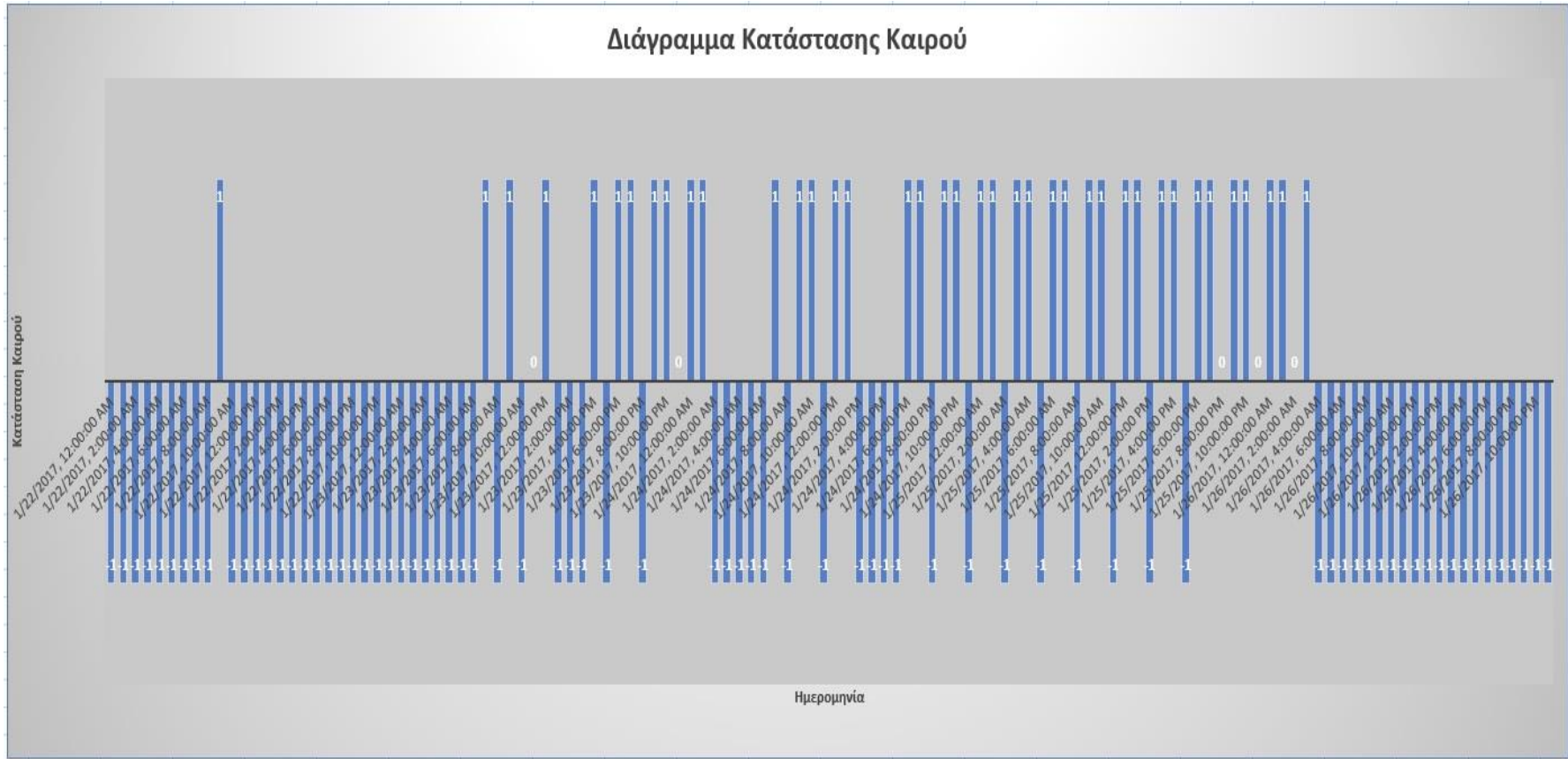
Εικόνα 15 : Διάγραμμα κατάστασης καιρού

4.2 Γεγονότα – Εκδηλώσεις

4.2.1 Ροές – υπορροές – κόμβοι

Έχοντας λάβει γνώση σχετικά με τη διαδικασία της εργασίας στο θέμα των γεγονότων–εκδηλώσεων (βλ. υποκεφάλαιο 3.2.1), μπορούμε να προχωρήσουμε στην επεξήγηση της υλοποίησης αυτού του θέματος με μία bottom-up προσέγγιση.

Το χαμηλότερο επίπεδο(lower-level) της εφαρμογής αποτελείται από την υπορροή «event Type Object Subflow».
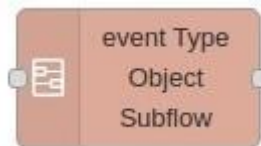
Εικόνα 16 : Κόμβος της υπορροής «event Type Object Subflow»

Η υπορροή «event Type Object Subflow» δέχεται ως είσοδο ένα εισερχόμενο μήνυμα που διαθέτει δηλωμένες τις παραμέτρους msg.categoryId, msg.subcategoryId, msg.formatId είτε ως αριθμούς είτε ως null και δημιουργεί ένα αντικείμενο(object) εξόδου με πληροφορίες που αφορούν το είδος της εκδήλωσης έχοντας την εξής μορφή :

eventType:{

   category : categoryName,
   subcategory : subcategoryName,
   format : formatName

}

Ένα παράδειγμα συνήθης εξόδου αυτής της υπορροής είναι

```
{
  "eventType":{
    "category":"Health & Wellness",
    "subcategory":"Medical",
    "format":"Convention"
  }
},
```

ενώ σε ένα παράδειγμα ειδικής περίπτωσης,όπου όλες οι δηλωμένες παράμετροι είναι null, η έξοδος έχει την ακόλουθη μορφή :

```
{
  "eventType":{
    "category":"",
    "subcategory":"",
    "format":""
  }
}.
```

Τα στοιχεία που απαρτίζουν την υπορροή «event Type Object Subflow» εμφανίζονται στην Εικόνα 17.
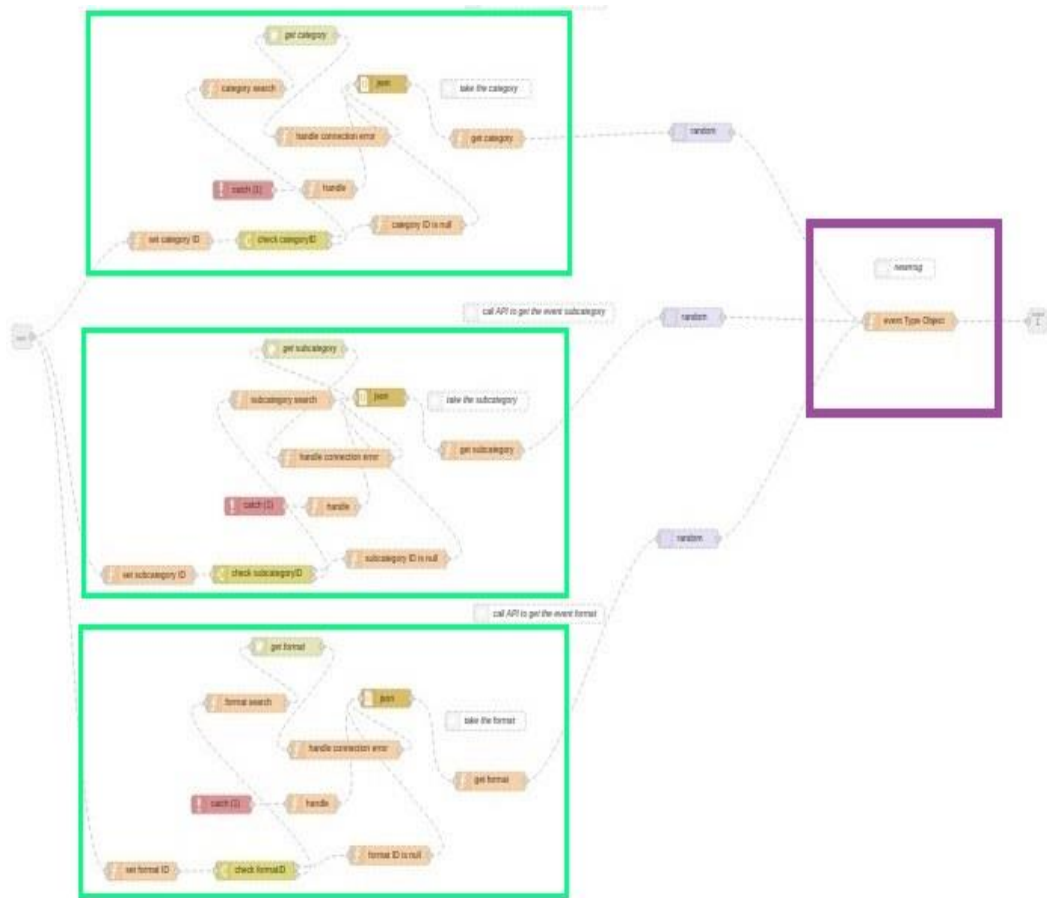
Εικόνα 17 : Ροή της υπορροής «event Type Object Subflow»

 : Διεργασία

Παρατηρείται πως υφίστανται τρείς όμοιες διεργασίες οι οποίες εκτελούνται παράλληλα για την εξαγωγή πληροφοριών κατηγορίας, υποκατηγορίας και μορφής–τύπου της εκδήλωσης.

 : Ένωση πληροφοριών

Σε αυτό το πλαίσιο εισέρχονται οι πληροφορίες που προέκυψαν από τις τρεις διεργασίες, ύστερα κατηγοριοποιούνται ανά θέμα και ενώνονται παράγοντας μια δομημένη πληροφορία για το είδος της εκδήλωσης ως έξοδο της υπορροής.

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Ας εστιάσουμε σε μία από τις παράλληλες διεργασίες και στα μέρη από τα οποία αποτελείται.
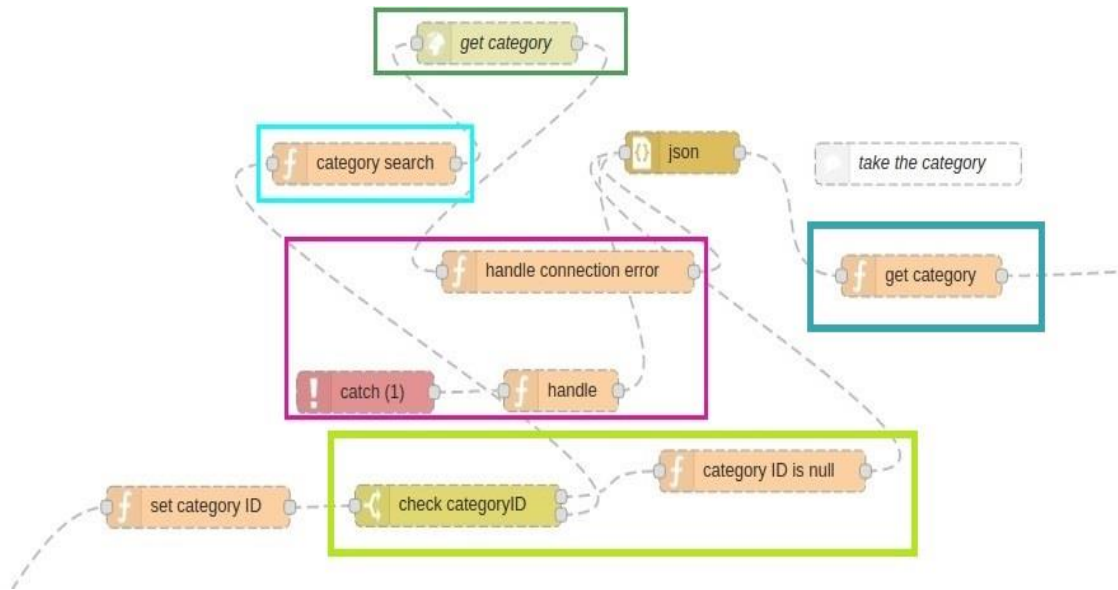
Εικόνα 18 : Ροή διεργασίας (κατηγορία εκδήλωσης)

: Έλεγχος ειδικής περίπτωσης

Στο πλαίσιο αυτό, ελέγχεται το ενδεχόμενο κατά το οποίο στο αντικείμενο(object) που εξετάζεται, από τα δεδομένα που λήφθηκαν από την υπηρεσία API σχετικά με τις εκδηλώσεις, να είναι προαιρετικό το πεδίο για το οποίο ζητείται περαιτέρω πληροφορία. Σε μια τέτοια περίπτωση, η είσοδος στην υπορροή «event Type Object Subflow» θα έχει την τιμή null στο συγκεκριμένο πεδίο, οπότε δε θα μπορεί να πραγματοποιηθεί η επόμενη κλήση API. Έτσι, με το πλαίσιο αυτό, εξετάζεται εάν υπάρχει τέτοιο ζήτημα ώστε να χειρισθεί με ειδικό τρόπο.

: Προετοιμασία κλήσης API.

Σε αυτό το πλαίσιο, δημιουργούμε το κατάλληλο URL και προετοιμάζουμε την αίτηση στην υπηρεσία API αφού φτιάξουμε το μήνυμα με τις απαραίτητες παραμέτρους.

 : Κλήση API

Με αυτόν τον κόμβο καλείται η υπηρεσία API, ώστε να προσκομίσουμε τα δεδομένα που χρειάζονται.
Ακολουθεί ένα παράδειγμα της απόκρισης της κλήσης API σχετικά με την κατηγορία μίας εκδήλωσης.

```json
{
  "resource_uri":"https://www.eventbriteapi.com/v3/categories/107/",
  "id":"107",
  "name":"Health & Wellness",
  "name_localized":"Health & Wellness",
  "short_name":"Health",
  "short_name_localized":"Health",
  "subcategories":[
    {
      "resource_uri":"https://www.eventbriteapi.com/v3/subcategories/7001/",
      "id":"7001",
      "name":"Personal health"
    },
    {
      "resource_uri":"https://www.eventbriteapi.com/v3/subcategories/7002/",
      "id":"7002",
      "name":"Mental health"
    },
    {
      "resource_uri":"https://www.eventbriteapi.com/v3/subcategories/7003/",
      "id":"7003",
      "name":"Medical"
    },
    {
      "resource_uri":"https://www.eventbriteapi.com/v3/subcategories/7004/",
      "id":"7004",
      "name":"Spa"
    },
    {
      "resource_uri":"https://www.eventbriteapi.com/v3/subcategories/7005/",
      "id":"7005",
      "name":"Yoga"
    },
    {
      "resource_uri":"https://www.eventbriteapi.com/v3/subcategories/7999/",
      "id":"7999",
      "name":"Other"
    }
  ],
  "locale":"en_US"
}
```

Η απόκριση της κλήσης για την υποκατηγορία μίας εκδήλωσης έχει την παρακάτω μορφή.

```
{
  "resource_uri":"https://www.eventbriteapi.com/v3/subcategories/7003/",
  "id":"7003",
  "name":"Medical",
  "parent_category":{
    "resource_uri":"https://www.eventbriteapi.com/v3/categories/107/",
    "id":"107",
    "name":"Health & Wellness",
    "name_localized":"Health & Wellness",
    "short_name":"Health",
    "short_name_localized":"Health"
  }
}
```

Παρατίθεται παράδειγμα για τη μορφή-τύπο μίας εκδήλωσης έτσι όπως προκύπτει από τη συγκεκριμένη κλήση API.

```
{
  "resource_uri":"https://www.eventbriteapi.com/v3/formats/4/",
  "id":"4",
  "name":"Convention",
  "name_localized":"Convention",
  "short_name":"Convention",
  "short_name_localized":"Convention"
}
```

 : Χειρισμός σφαλμάτων

Με τους κόμβους αυτού του πλαισίου, χειριζόμαστε τα πιθανά σφάλματα του δικτύου, μερικά από αυτά συναντήθηκαν κατά τη διάρκεια της εργασίας, όπως "Error: connect ETIMEDOUT" και "Error getaddrinfo EAI_AGAIN", αλλά και οποιοδήποτε σφάλμα που μπορεί να προκύψει κατά την κλήση API επιστρέφοντας μια μη επιθυμητή έξοδο είτε σφάλμα που να διαταράσσει την ομαλή λειτουργία της ροής(flow).Κάθε τέτοια περίπτωση αναγνωρίζεται και χειρίζεται αναλόγως.

 : Επεξεργασία δεδομένων

Στον κόμβο αυτό, εισέρχονται δεδομένα, που, είτε προέρχονται από την υπηρεσία API, είτε μετά από ειδικό χειρισμό ή χειρισμό σφάλματος. Επεξεργάζονται, στη συνέχεια, ανάλογα την περίπτωση με σκοπό να προκύψει η ζητούμενη πληροφορία για την οποία κλήθηκε για εκτέλεση η συγκεκριμένη διεργασία.

Στο επόμενο επίπεδο συναντάται η υπορροή «event Object subflow with flow context use» που χρησιμοποιεί και περιέχει την υπορροή «event Type Object Subflow», η οποία παρέχει τις υπηρεσίες της στην ανώτερή της χωρίς να αποκαλύπτει τον τρόπο που τις υλοποιεί.
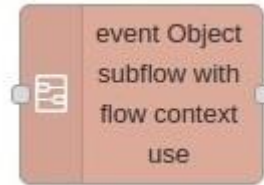
Εικόνα 19 : Κόμβος της υπορροής «event Object subflow with flow context use»

Στον κόμβο της υπορροής «event Object subflow with flow context use» εισέρχεται ένα μήνυμα το οποίο περιλαμβάνει μόνο ένα αντικείμενο(object) με τα δεδομένα μίας εκδήλωσης.
Η έξοδος της υπορροής «event Object subflow with flow context use» είναι ένα μήνυμα που περικλείει τις πληροφορίες της εκδήλωσης με τη μορφή του παρακάτω αντικειμένου.

```
eventObject : {

   start : datetime,
   end : datetime
   eventType : {
      category: string
      subcategory: string
      format : string
   }

}
```

Ο κόμβος αυτός αποτελείται από την παρακάτω ροή.
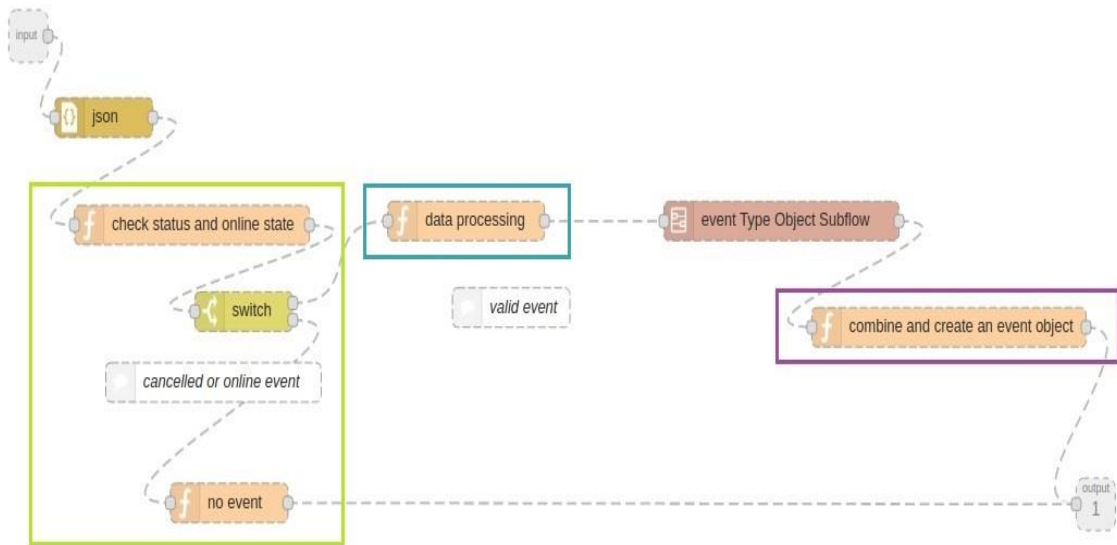
Εικόνα 20 : Ροή της υπορροής «event Object subflow with flow context use»

[ΕΙΚΟΝΙΔΙΟ] : Έλεγχος ειδικής περίπτωσης

Στο πλαίσιο αυτό γίνεται έλεγχος εάν το γεγονός-εκδήλωση όντως διεξάγεται στο επιλεγμένο κτίριο-χώρο, δηλαδή δεν είναι διαδικτυακή εκδήλωση (online_event πεδίο) και ότι σίγουρα θα πραγματοποιηθεί όπως είχε προγραμματιστεί (status πεδίο). Διαφορετικά χειρίζεται ως ειδική περίπτωση.

[ΕΙΚΟΝΙΔΙΟ] : Επεξεργασία δεδομένων

Σε αυτό τον κόμβο επεξεργάζονται τα δεδομένα της εκδήλωσης. Διατηρούνται τα χρονικά δεδομένα της εκδήλωσης σε μια δομή(flow context), η οποία είναι προσπελάσιμη μόνο από τους κόμβους της συγκεκριμένης υπορροής, καθορίζονται τα στοιχεία του είδους της εκδήλωσης είτε προέρχονται από υπάρχοντα είτε από προαιρετικά πεδία και διαμορφώνεται η κατάλληλη είσοδος για την επερχόμενη κλήση της υπορροής «event Type Object Subflow».

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 : Ένωση πληροφοριών

Ο κόμβος αυτού του πλαισίου δέχεται ως είσοδο το αποτέλεσμα της κλήσης του κόμβου «event Type Object Subflow» σχετικά με την πληροφορία για το είδος της εκδήλωσης και λαμβάνει από τη δομή αποθήκευσης(flow context) της υπορροής τις χρονικές πληροφορίες της συγκεκριμένης εκδήλωσης ώστε να τις ενώσει με το εν λόγω αποτέλεσμα και να προκύψει η ζητούμενη έξοδος της υπορροής.

Η ίδια λειτουργικότητα υλοποιήθηκε με μία διαφορετική τεχνική στην υπορροή «event object subflow without the flow context». Η συγκεκριμένη υπορροή είναι αυτή που χρησιμοποιήθηκε τελικά σε αυτό επίπεδο υλοποίησης και περιέχει, επίσης, στη ροή της τον κόμβο της υπορροής «event Type Object Subflow».
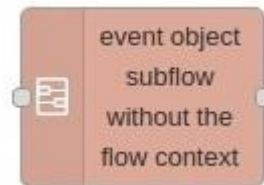
Εικόνα 21 : Κόμβος της υπορροής «event object subflow without the flow context»

Η υπορροή «event object subflow without the flow context» συμπεριφέρεται ακριβώς όπως η υπορροή «event Object subflow with flow context use».
Ένα παράδειγμα της εξόδου της υπορροής «event object subflow without the flow context» είναι το ακόλουθο.

```
{
  "eventObject":{
    "ID":"30218431141",
    "start":{
      "timezone":"Europe/Athens",
      "local":"2017-03-03T08:30:00",
      "utc":"2017-03-03T06:30:00Z"
    },
    "end":{
      "timezone":"Europe/Athens",
      "local":"2017-03-05T14:30:00",
      "utc":"2017-03-05T12:30:00Z"
    },
    "eventType":{
      "category":"Health & Wellness",
      "subcategory":"Medical",
      "format":"Convention"
    }
  }
}
```

Το περιεχόμενο αυτής της υπορροής απεικονίζεται στην επόμενη εικόνα (βλ.Εικόνα 22).
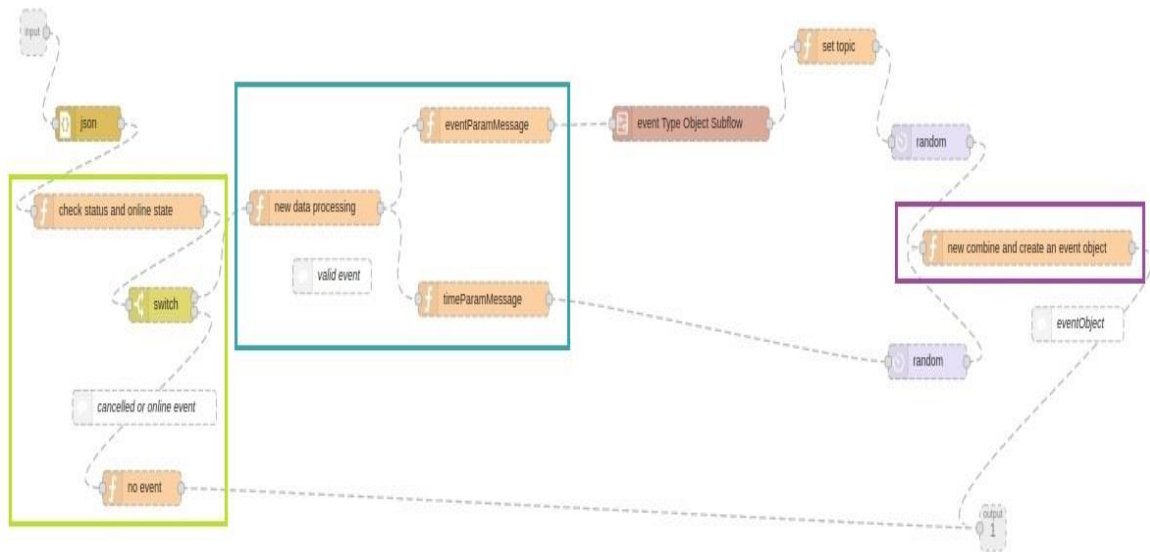
Εικόνα 22 : Ροή της υπορροής «event object subflow without the flow context»

 : Έλεγχος ειδικής περίπτωσης

 : Επεξεργασία δεδομένων

Πραγματοποιείται και εδώ επεξεργασία των δεδομένων του γεγονότος-εκδήλωσης, με την εστίαση στα χρονικά στοιχεία και στα στοιχεία είδους της εκδήλωσης, με τη διαφορά πως δε χρησιμοποιείται καμία δομή αποθήκευσης δεδομένων, αλλά και οι δύο ομάδες στοιχείων μορφοποιούνται ως ξεχωριστοί παράμετροι ενός εξερχόμενου μηνύματος. Με αυτό τον τρόπο μπορούν, έπειτα, εύκολα να διαχωρισθούν και να χρησιμοποιηθεί, στη συνέχεια, για διαφορετική λειτουργία η κάθε μία.

 : Ένωση πληροφοριών

Με τον κόμβο αυτού του πλαισίου επιτυγχάνεται η ένωση των πληροφοριών χρόνου και είδους της εκδήλωσης που προέρχονται από δύο διαφορετικούς προορισμούς και η οργάνωσή τους σε ένα ενιαίο αντικείμενο(object) εξόδου.

Το ανώτερο επίπεδο(upper-level) της εφαρμογής περιλαμβάνει την υπορροή «Event Subflow», στην οποία εμπεριέχεται η υπορροή «event object subflow without the flow context», η οποία περικλείει την υπορροή «event Type Object Subflow».
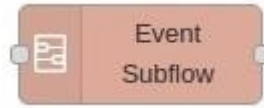
Εικόνα 23 : Κόμβος της υπορροής «Event Subflow»

Η υπορροή «Event Subflow» δέχεται ως είσοδο ένα μήνυμα της μορφής

```
msg = {

    time:{
        startYear : startYear,
        startMonth : startMonth,
        startDay : startDay,
        startHour : startHour,
        endYear : endYear,
        endMonth : endMonth,
        endDay : endDay,
        endHour : endHour
    },
    venue:{
        direction : direction
    }

},
```

στο οποίο δηλώνονται επακριβώς οι παράμετροι του χρονικού διαστήματος της αίτησης, καθώς και η παράμετρός direction με την οποία επιλέγεται ο χώρος ή το κτίριο διεξαγωγής των εκδηλώσεων. Αυτό επιτυγχάνεται με τη δήλωση της κατεύθυνσης Βόρεια,Κέντρο ή Νότια (North,Center,South) με τις τιμές N,C ή S για την επιλογή του σταδίου «Κεντρικό Ολυμπιακό Στάδιο» (Main Olympic Stadium), του χώρου-κτιρίου του Ζαππείου (Zappeion) ή του Σταδίου Ειρήνης και Φιλίας (Peace And Friendship Stadium) αντίστοιχα.

Ως έξοδο παράγει έναν πίνακα με αντικείμενα της μορφής:

```
{
  ID : id
  start : startDatetime,
  end : endDatetime,
  eventType :{
     category : categoryName,
     subcategory : subcategoryName,
     format : formatName
  }
}
```

Τα συστατικά που συγκροτούν την υπορροή «Event Subflow» παρουσιάζονται στην παρακάτω εικόνα.
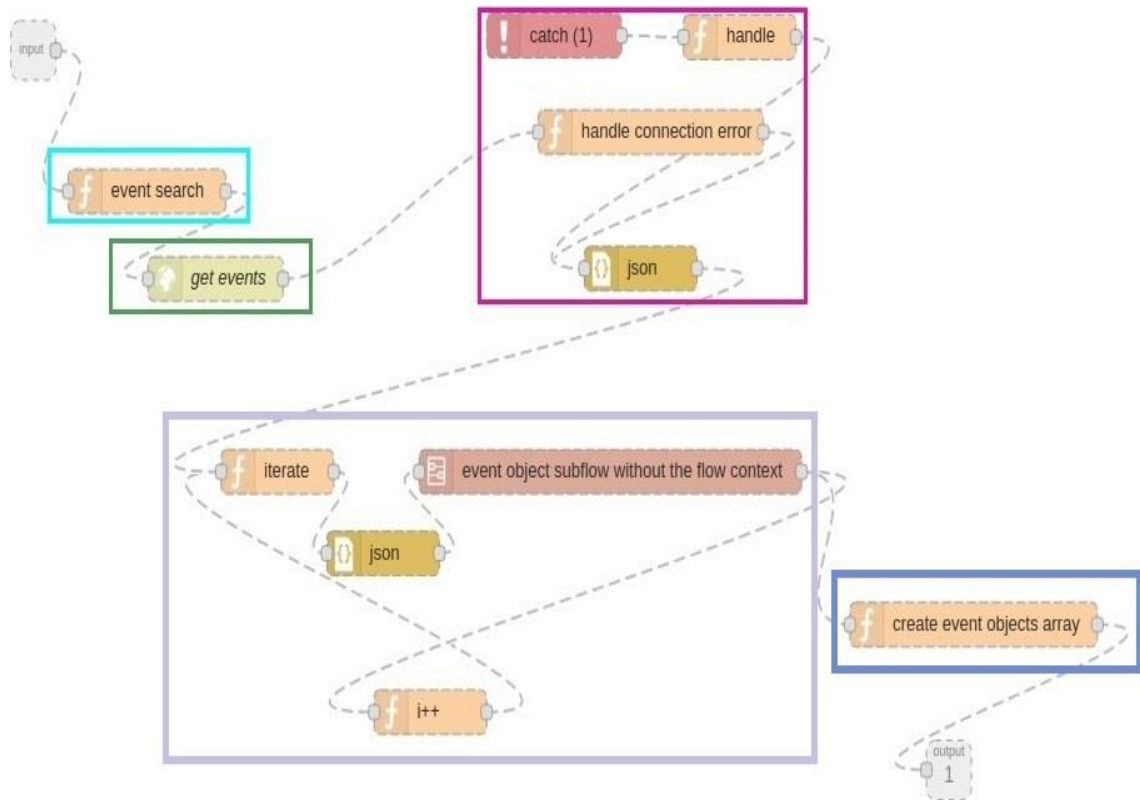
Εικόνα 24 : Ροή της υπορροής «Event Subflow»

![blue icon] : Προετοιμασία κλήσης API.

Σε αυτό το πλαίσιο, ελέγχεται η είσοδος των δεδομένων στην υπορροή(subflow), εάν δηλαδή έχουν οριστεί όλες οι ζητούμενες παράμετροι που χρειάζονται ώστε να μπορέσει να πραγματοποιηθεί η αίτηση στην υπηρεσία(API), επιλέγονται οι κατάλληλες συντεταγμένες για το περίγραμμα γεωγραφικών συντεταγμένων(geographic bounding box-viewport) της αίτησης με βάση την προτίμηση του χώρου-κτιρίου, δημιουργείται το κατάλληλο URL και προετοιμάζεται η αίτηση στην υπηρεσία αφού φτιαχθεί το μήνυμα με τις απαραίτητες παραμέτρους.

![green icon] : Κλήση API

Με αυτόν τον κόμβο καλείται η υπηρεσία API, ώστε να προσκομίσουμε τα δεδομένα που χρειάζονται.

Η απόκριση αυτής της κλήσης εμπεριέχει έναν πίνακα από αντικείμενα(objects) της ακόλουθης μορφής, όπου τα επισημασμένα σημεία δικαιολογούν την αναγκαιότητα της δημιουργίας και χρήσης της υπορροής «event Type Object Subflow».

```
{"name": {
  "text": "16ο ΠΑΝΕΛΛΗΝΙΟ ΣΥΝΕΔΡΙΟ ΑΓΓΕΙΟΛΟΓΙΑΣ - ΑΓΓΕΙΑΚΗΣ &
ΕΝΔΑΓΓΕΙΑΚΗΣ ΧΕΙΡΟΥΡΓΙΚΗΣ",
  "html": "16ο ΠΑΝΕΛΛΗΝΙΟ ΣΥΝΕΔΡΙΟ ΑΓΓΕΙΟΛΟΓΙΑΣ - ΑΓΓΕΙΑΚΗΣ &amp;
ΕΝΔΑΓΓΕΙΑΚΗΣ ΧΕΙΡΟΥΡΓΙΚΗΣ"
 },
 "description": {
  "text": "…",
  "html": "…"
 },
 "id": "30218431141",
 "url": "https://www.eventbrite.com/e/16ο--registration-30218431141?aff=ebapi",
 "vanity_url": "https://16thangiologycongress.eventbrite.com",
 "start": {
  "timezone": "Europe/Athens",
  "local": "2017-03-03T08:30:00",
  "utc": "2017-03-03T06:30:00Z"
 },
 "end": {
  "timezone": "Europe/Athens",
  "local": "2017-03-05T14:30:00",
  "utc": "2017-03-05T12:30:00Z"
 },
 "created": "2016-12-12T12:41:04Z",
 "changed": "2017-02-10T09:31:31Z",
 "capacity": 1200,
 "capacity_is_custom": true,
 "status": "live",
 "currency": "EUR",
 "listed": true,
 "shareable": true,
 "online_event": false,
 "tx_time_limit": 1200,
 "hide_start_date": false,
 "hide_end_date": false,
 "locale": "en_US",
 "is_locked": false,
 "privacy_setting": "unlocked",
 "is_series": false,
 "is_series_parent": false,
 "is_reserved_seating": false,
 "source": "create_2.0",
 "is_free": false,
```

```
"logo_id": "26604410",
"organizer_id": "6507494813",
"venue_id": "17666968",
"category_id": "107",
"subcategory_id": "7003",
"format_id": "4",
"resource_uri": "https://www.eventbriteapi.com/v3/events/30218431141/",
"logo": {
 "crop_mask": {
  "top_left": {
   "x": 0,
   "y": 67
  },
  "width": 1300,
  "height": 650
 },
 "original": {
  "url":
"https://img.evbuc.com/https%3A%2F%2Fcdn.evbuc.com%2Fimages%2F26604410%2F
99774733155%2F1%2Foriginal.jpg?s=360f865d0cab1eced5f8b812a1caae41",
  "width": 1300,
  "height": 1080
 },
 "id": "26604410",
 "url":
"https://img.evbuc.com/https%3A%2F%2Fcdn.evbuc.com%2Fimages%2F26604410%2F
99774733155%2F1%2Foriginal.jpg?h=200&w=450&rect=0%2C67%2C1300%2C650&s
=a94cc106c01d6f202ed1952788983e49",
 "aspect_ratio": "2",
 "edge_color": "#bdb7c8",
 "edge_color_set": true
}
}
```

 : Χειρισμός σφαλμάτων

 : Επαναληπτική διεργασία

Στο πλαίσιο αυτό, υλοποιείται μια τεχνική που βασίζεται στην επαναληπτική κλήση της υπορροής «event object subflow without the flow context» έως ότου εξετασθούν όλα τα αποθηκευμένα δεδομένα.

Η ιδιαιτερότητα αυτής της τεχνικής έγκειται στο γεγονός ότι κάθε επόμενη κλήση του κόμβου της υπορροής «event object subflow without the flow context» πραγματοποιείται μόνο όταν έχει τελειώσει η διαδικασία αυτής της υπορροής από την προηγούμενη κλήση. Μόλις ο συγκεκριμένος κόμβος παράγει την έξοδο της προηγούμενης κλήσης, αυξάνεται ο μετρητής και τότε καλείται ξανά η υπορροή «event object subflow without the flow context» για την επόμενη ομάδα δεδομένων, δηλαδή για την επόμενη εκδήλωση.

 : Συλλογή και μορφοποίηση

Ο κόμβος αυτός δέχεται τις πληροφορίες που αποδίδονται διαδοχικά από την κάθε κλήση της υπορροής «event object subflow without the flow context», τις συλλέγει σε μια δομή και όταν εξετασθούν όλα τα δεδομένα που λήφθηκαν από την υπηρεσία API, τότε τις μορφοποιεί με αποτέλεσμα να παραχθεί η τελική έξοδος.

Σε αυτό το μοντέλο ένθετης-φωλιασμένης αρχιτεκτονικής(nested model architecture) που εφαρμόσθηκε, παρατηρούμε πώς τα στοιχεία, σε κάθε επίπεδο υλοποίησης, συνδέονται μεταξύ τους δομώντας μεγαλύτερες υπορροές εως ότου σχηματιθεί ένα πλήρες και ολικό ανώτατο επίπεδο. Το ανώτατο αυτό επίπεδο υλοποίησης μπορεί, στη συνέχεια, να χρησιμοποιηθεί ως μέρος ενός συνόλου μιας τελικής ροής, όπως απεικονίζεται στην Εικόνα 25.
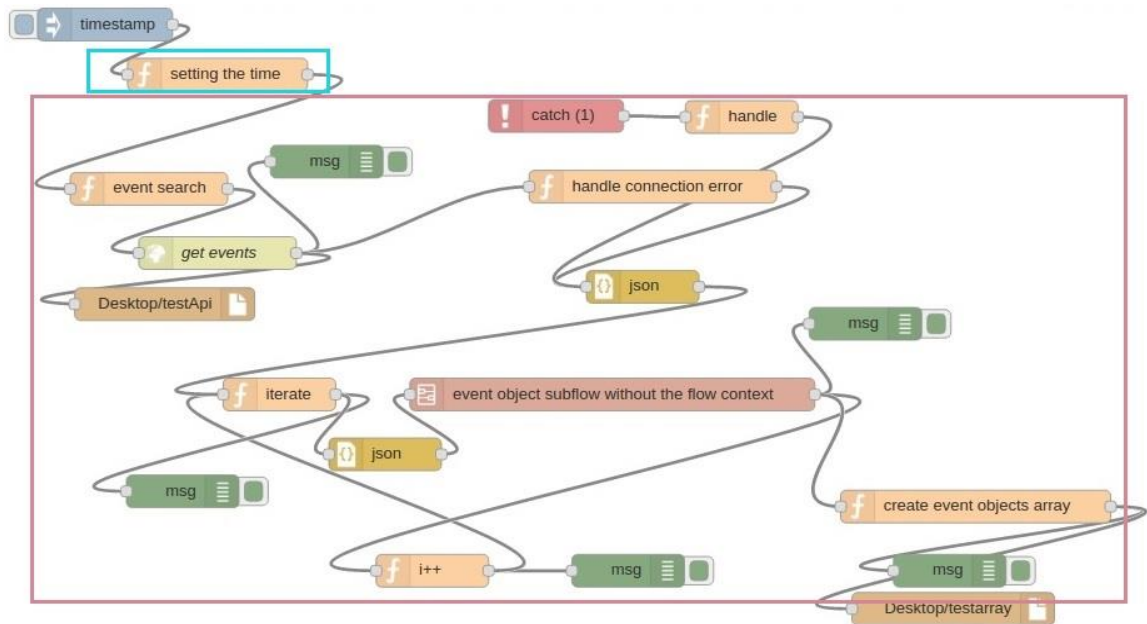
Εικόνα 25 : Τελική ροή γεγονότων-εκδηλώσεων

 : Είσοδος υπορροής(subflow)

 : Υπορροή(Subflow)

Η ένθετη αυτή υλοποίηση μπορεί να τεθεί σε λειτουργία αξιοποιώντας τη δυνατότητα χρήσης της δομής της υπορροής(subflow), πιο συγκεκριμένα της τελικής υπορροής «Event Subflow».
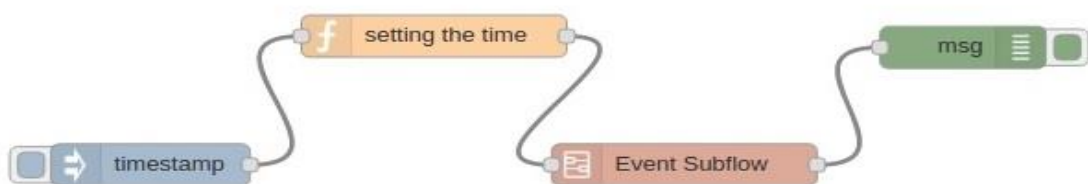
Εικόνα 26 : Σύνθεση ροής με χρήση της υπορροής «Event Subflow»

Συμπληρώνουμε την έως τώρα επεξήγηση παραθέτοντας τη σχεδίαση της υλοποίησης σε μια συνοπτική εικόνα (βλ. Εικόνα 27), όπου γίνεται καλύτερα αντιληπτή η σύνδεση των υπορροών και εμφανίζονται πιο ξεκάθαρα τα βήματα που ακολουθήθηκαν σε μια top-down παρουσίαση.

Εικόνα 27 : Σχεδίαση υλοποίησης στο θέμα των γεγονότων-εκδηλώσεων

Στην παρουσίαση αυτή διακρίνεται η αλληλουχία κλήσης των υπορροών(subflows) και η μεταξύ τους εξάρτηση, καθώς και η ακολουθία των ενεργειών της κάθε υπορροής, με τη μόνη επισήμανση πως στο επίπεδο υλοποίησης της υπορροής «event object subflow» στην «event Object subflow with flow context use» τα βήματα 3b και 3c γίνονται σειριακά, ενώ στην «event object subflow without the flow context» πραγματοποιείται παράλληλη εκτέλεση των ενεργειών αυτών(3b και 3c).

Συμπερασματικά, με αυτόν τον τρόπο ολοκληρώθηκε και η ανάλυση της εφαρμογής της διπλωματικής εργασίας στο θέμα των γεγονότων-εκδηλώσεων.

4.3 Ειδοποιήσεις και Συνδυαστική λογική

Μία πιθανή υλοποίηση της συνδυαστικής λογικής των δύο θεμάτων της διπλωματικής εργασίας μπορεί να είναι:

Κάθε ημέρα να γίνεται έλεγχος για διαθέσιμα γεγονότα-εκδηλώσεις σε κάθε χώρο-κτίριο(κλήση υπορροής «Event Subflow»). Παράλληλα να καλείται η υπορροή(subflow) του καιρού «Weather All Seasons Subflow», ώστε να έχουμε την ωριαία κατάσταση καιρού της ημέρας. Έπειτα, για κάθε εκδήλωση να καθορίζονται οι ώρες προς εξέταση, όπως οι ώρες της εκδήλωσης και ίσως δύο ώρες πριν την έναρξη και δύο ώρες μετά τη λήξη, να διαχωρίζονται αυτές οι ώρες από το αρχείο καιρού και να ελέγχεται εάν υπάρχει ανάγκη ειδοποίησης για αυτές τις ώρες με βάση κάποια λογική(πχ. μια αυστηρή λογική είναι ότι εάν υπάρχει έστω και μία ώρα με κατάσταση bad τότε ειδοποίηση).

Όμως κάποια γεγονότα-εκδηλώσεις διαρκούν μέρες ή θέλουμε προειδοποίηση νωρίτερα.
Σε αυτήν την περίπτωση, μπορούμε να καλούμε την υπορροή(subflow) των εκδηλώσεων «Event Subflow», το αποτέλεσμα να το αποθηκεύουμε σε μία βάση δεδομένων, την οποία συνεχώς να την ενημερώνουμε για την ύπαρξη καινούργιων εκδηλώσεων ή εάν ακυρώθηκαν κάποιες από τις ήδη υπάρχουσες(έλεγχος εάν όντως ισχύουν, με βάση το id και το datetime επειδή εάν ακυρώθηκαν δε θα εμφανίζονται στη έξοδο) με επαναληπτική κλήση της «Event Subflow», να ταξινομούμε χρονικά τα δεδομένα της βάσης δεδομένων, δηλαδή τις εκδηλώσεις (πχ. με βάση το start datetime) και να παίρνουμε τις πιο πρόσφατες.
Έπειτα, για κάθε εκδήλωση ξεχωριστά:

Εάν η εκδήλωση διαρκεί ώρες σε μία ημέρα, τότε είτε να ελέγχουμε εάν το αρχείο κατάστασης του καιρού για τη συγκεκριμένη ημέρα υπάρχει και να το αντλούμε, αλλιώς να καλούμε την υπορροή(subflow) του καιρού και να αποθηκεύουμε το αποτέλεσμα, είτε εάν δεν είναι αποδοτικό, ανάλογα την εφαρμογή, να πραγματοποιείται κατευθείαν κλήση της υπορροής(subflow) του καιρού ώστε να λάβουμε το αρχείο κατάστασης καιρού της ζητούμενης ημέρας.Στη συνέχεια, με την παραπάνω παρόμοια λογική, να να καθορίζονται οι ώρες προς εξέταση, όπως οι ώρες της εκδήλωσης και ίσως δύο ώρες πριν την έναρξη και δύο ώρες μετά τη λήξη, να διαχωρίζονται αυτές οι ώρες από το αρχείο καιρού και να ελέγχεται εάν υπάρχει ανάγκη ειδοποίησης για αυτές τις ώρες με βάση κάποια λογική.

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Αλλά, εάν η εκδήλωση διαρκεί ημέρες, τότε :
Να καθορίζονται οι ημέρες της εκδήλωσης.
Έπειτα, να καθορίζονται οι ακριβείς ώρες της εκδήλωσης για την κάθε ημέρα.
Στη συνέχεια, για κάθε ημέρα

Να καλείται η υπορροή(subflow) του καιρού ή να αντλείται το υπάρχον αρχείο κατάστασης καιρού της ζητούμενης ημέρας, να διαχωρίζονται οι ώρες της εκδήλωσης από το αρχείο καιρού και αφού ελεγχθεί η κατάσταση του καιρού της ημέρας για τις παραπάνω ώρες, να αποφασίζεται εάν υπάρχει ανάγκη ειδοποίησης με βάση κάποια λογική.

Αποθήκευση, για κάθε ημέρα, αυτής της απόφασης.

Συνολικό αποτέλεσμα για την εκδήλωση.

Μπορεί όταν επιλέγεται ο χώρος-κτίριο διεξαγωγής της εκδήλωσης στην είσοδο, παράλληλα να καθορίζεται, κάπως, εάν πρόκειται για ανοιχτό ή κλειστό χώρο και με βάση αυτό, όταν χρειάζεται, να κατευθύνεται ο έλεγχος σε συγκεκριμένες ώρες, δηλαδή εάν είναι κλειστός ο χώρος, ο έλεγχος να περιορίζεται στις ώρες της έναρξης και δύο ώρες πριν και στις ώρες της λήξης και δύο ώρες μετά και κατά τη διάρκεια να μην πραγματοποιείται έλεγχος της κατάστασης του καιρού, σε περίπτωση που η εκδήλωση διαρκεί πολλές ώρες.

Έπειτα, αφού έχουν καθορισθεί για ποιες εκδηλώσεις υπάρχει ανάγκη ειδοποίησης, τότε για κάθε τέτοια εκδήλωση να γίνεται εύρεση των εγγεγραμμένων στην εφαρμογή και με τη χρήση μιας κατάλληλης πλατφόρμας-platform(πχ. Notify My Android(NMA)) να ειδοποιούνται.
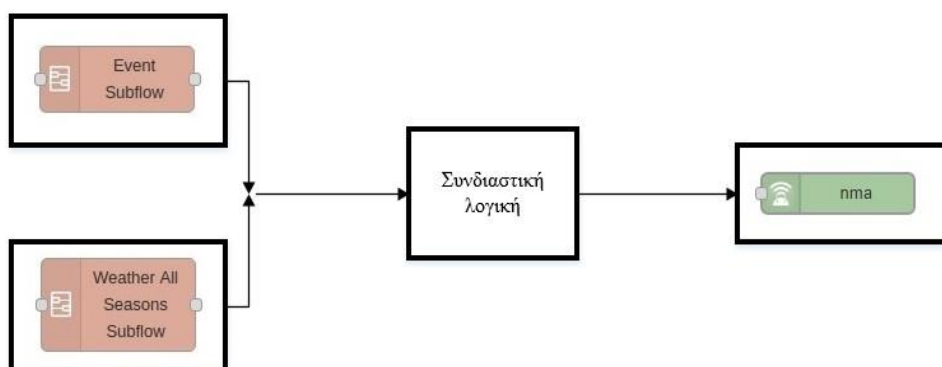
Εικόνα 28 : Συνδιαστική λογική και ειδοποιήσεις

5.Επίλογος

Μέσα από αυτή τη διπλωματική εργασία επιχειρήθηκε γνωριμία με έναν από τους αναπτυσσόμενους τομείς της τεχνολογίας και της επιστήμης, συγκεκριμένα με το Διαδίκτυο των Πραγμάτων.

Έγινε ενασχόληση με το αντικείμενο μέσα από μελέτη, έρευνα και εφαρμογή. Μελετήθηκαν οι έννοιες που συγκροτούν το γνωστικό αυτό πεδίο, πραγματοποιήθηκε έρευνα βιβλιογραφική και εφαρμόσθηκε η λογική που υποστηρίζεται από το πλαίσιο των τεχνολογιών του Διαδικτύου των Πραγμάτων. Με την μελέτη έγινε θεωρητική ένταξη στο Διαδίκτυο των Πραγμάτων και στη συνέχεια με την έρευνα και την εφαρμογή προσεγγίσθηκε το αντικείμενο αυτό τόσο βιβλιογραφικά, όπου έγινε συνειδητοποίηση της ύπαρξης τεραστίου όγκου Ανοιχτών Δεδομένων μέσω των διαφορετικών μορφοποιήσεων τους και των διάφορων πρωτοκόλλων πρόσβασης σε αυτά, όσο και σε επίπεδο σχεδίασης και υλοποίησης εφαρμογών αξιοποίησής τους. Εκεί με την εκμάθηση και την χρήση κατάλληλων προγραμματιστικών εργαλείων τέθηκαν σε εφαρμογή τα στάδια που απαρτίζουν την αφαιρετική λογική, έτσι όπως αυτή διαμορφώνεται από τις τεχνολογίες του Διαδικτύου των Πραγμάτων.

Η διπλωματική, λοιπόν, εργασία ασχολήθηκε με το αντικείμενο αυτό σε θεωρητικό, σε ερευνητικό και σε πρακτικό επίπεδο.

Συμπερασματικά, κατά την εκπόνηση της παρούσας διπλωματικής εργασίας επιτεύχθηκε ουσιαστική κατανόηση, έως ένα βαθμό, του Διαδικτύου των Πραγμάτων, έναν τομέα, οι τεχνολογίες του οποίου συνεχώς εξελίσσονται, απασχολεί ως αντικείμενο όλο και περισσότερο την επιστημονική έρευνα, την τεχνολογική πρόοδο και οι εφαρμογές και τα αποτελέσματά του αποδεικνύονται χρήσιμα σε πολλούς τομείς στο σύγχρονο τρόπο ζωής.

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7.Παράρτημα Α

Πληροφορίες σχετικά με την έρευνα πηγών

➢ Ο τελευταίος έλεγχος εγκυρότητας των συνδέσμων των πηγών Ανοιχτών Δεδομένων, που παρουσιάζονται στον Πίνακα 1, πραγματοποιήθηκε στις 25 Ιανουαρίου 2017.

➢ Το πρωτόκολλο RSS αναγνωρίζεται συνήθως από το χαρακτηριστικό του εικονίδιο .

➢ Το πρωτόκολλο REST συναντήθηκε με τους όρους:

- REST Architectural Style
- REST protocol
- RESTful web service
- RESTful interface
- RESTful API(application programming interface)

➢ Επεξήγηση στοιχείων από τον πίνακα πηγών Ανοιχτών Δεδομένων(Πίνακας 1) :

- **general !!!**
  πρόκειται για έναν σύνδεσμο που σε κατευθύνει σε μια ιστοσελίδα, η οποία εμπεριέχει πολύ περισσότερες πηγές Ανοιχτών Δεδομένων, κυρίως με τη μορφή συνδέσμων(links).

- **general !**
  μια πηγή Ανοιχτών Δεδομένων που περιέχει πολλά διαφορετικά είδη, κατηγορίες ή θέματα Ανοιχτών Δεδομένων που αφορούν μία πόλη ή μία χώρα.

- **general ?**
  μία πηγή Ανοιχτών Δεδομένων που διαθέτει περαιτέρω συνδέσμους για Ανοιχτά Δεδομένα αλλά δεν είναι σίγουρο εάν τα δεδομένα αυτά βρίσκονται στο ζητούμενο μορφότυπο ή αν μπορούν να αντληθούν με κάποιο τρόπο από τα συγκεκριμένα εργαλεία που χρησιμοποιούνται στη διπλωματική εργασία.

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8.Παράρτημα Β

Κατά την εκπόνηση της διπλωματικής εργασίας σε επίπεδο υλοποίησης χρησιμοποιήθηκαν κάποια προγραμματιστικά εργαλεία.

Πιο συγκεκριμένα, το επίπεδο υλοποίησης της διπλωματικής εργασίας πραγματοποιήθηκε σε μια εικονική μηχανή(Virtual Machine-VM), που δημιουργήθηκε στο Oracle VM VirtualBox, λειτουργικού συστήματος Ubuntu 16.04 LTS, όπου εγκαταστάθηκε ένα προγραμματιστικό εργαλείο που βασίζεται στη ροή, το οποίο αναπτύχθηκε από την ομάδα των IBM Emerging Technology Services[20], το Node-RED. Έγινε χρήση , λοιπόν, του Node-RED (version v0.14.6) το οποίο αποτελείται από ένα χρόνο εκτέλεσης που βασίζεται στο Node.js[20] (version v4.2.6) και η γλώσσα προγραμματισμού που χρησιμοποιήθηκε είναι η JavaScript.

9.Παράρτημα Γ

Κώδικας

Κώδικας 1 : Πληροφορίες – ιδιότητες υπορροών (info of subflows)

[{"id":"f2bd5e83.53939","type":"comment","z":"5f041017.a486","name":"Weather Subflow autumn+Dec","info":"set the time parameters of the subflow\n\nshould be set in an incoming message on\n\nmsg.time.year \n\nmsg.time.month \n\nmsg.time.day \n\n\n\n\n\ngetting the year   from   msg.time.year \n \ngetting the month   from   msg.time.month \n\nmust be a string and if it is a single-digit number \nmust be like \"09\" with the zero \n\n//\"09\";\n\ngetting the day   from   msg.time.day \n\nmust be a string and if it is a single-digit number \nmust be like \"06\" with the zero\n\n/\"06\";\n\n\n\nthe output\n\nan array of hourly objects or an empty array\n\n\n newWeatherObj = {\n \n time:{ \n   epoch : time,\n   date : dateStringLocal\n   },\n   hour : hour,\n   state : weatherState\n   \n };\n \n \n ","x":240,"y":80,"wires":[]},{"id":"24f66323.2d47cc","type":"comment","z":"5f041017.a486","name":"API limit filter","info":"λαμβάνουμε υπόψην το όριο των αιτήσεων \n\"1,000 API requests to the Service per day free of charge\"\n\ninput : a msg\n\n\noutput : the input msg or nothing","x":181,"y":153,"wires":[]},{"id":"fc038a.145e0c78","type":"comment","z":"5f041017.a486","name":"event Type Object Subflow","info":"create an event Type Object\n\n\neventType:{\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n} \n\n\ngets an incoming message \nwith parameters\n\nmsg.categoryId\n\nmsg.subcategoryId\n\nmsg.formatId\n\nall of them numbers or null","x":213,"y":229,"wires":[]},{"id":"f185c9c9.09f6f8","type":"comment","z":"5f041017.a486","name":"event Object subflow with flow context use","info":"the input\n\nan incoming message \nan object with the event's properties\n\n\nthe output \n\nan empty message\n \n or\n\na message including the following object \n \n eventObject : {\n \n start : datetime,\n end : datetime\n eventType : {\n   category: string\n   subcategory: string\n   format : string\n   }\n \n}","x":253,"y":316,"wires":[]},{"id":"adbb447b.dfed88","type":"comment","z":"5f041017.a486","name":"event object subflow without the flow context","info":"the input\n\nan incoming message \nin which the payload will include only\nan object with the properties of only one event\n\n\nthe output \n\nan empty message\n \n or\n\na message including the following object in payload \n \n\neventObject :{\n   \n   ID : id \n   start : startDatetime,\n end : endDatetime,\n   eventType :{\n   \n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n   }\n\n}\n\n\n","x":258,"y":376,"wires":[]},{"id":"86839768.3f9fa8","type":"comment","z":"5f041017.a486","name":"Weather All Seasons Subflow","info":"set the time parameters of the subflow\n\nshould be set in an incoming message on\n\nmsg.time.year \n\nmsg.time.month \n\nmsg.time.day \n\n\n\n\n\ngetting the year   from   msg.time.year \n \ngetting the month   from   msg.time.month \n\nmust be a string and if it is a single-digit number \nmust be like \"09\" with the zero \n\n//\"09\";\n\ngetting the day   from   msg.time.day \n\nmust be a string and if it is a single-digit number \nmust be like \"06\" with the zero\n\n/\"06\";\n\n\n\nthe output\n\nan array of hourly objects or an empty array\n\n\n newWeatherObj = {\n \n time:{ \n   epoch : time,\n   date : dateStringLocal\n   },\n   hour : hour,\n   state : weatherState\n   \n };\n \n \n ","x":214,"y":461,"wires":[]},{"id":"a4e01853.904158","type":"comment","z":"5f041017.a486","name":"Event Subflow","info":"Input\n\nan incoming message \n\nmsg = {\n\n   time:{\n   startYear : startYear,\n   startMonth : startMonth,\n   startDay : startDay,\n   startHour : startHour,\n   endYear : endYear,\n   endMonth : endMonth,\n   endDay : endDay,\n   endHour : endHour\n   },\n   venue:{\n direction : direction\n   }\n   \n }\n \ntime parameters\n\nall strings and single numbers with zero //\"07\"\n\ndirection parameter\n\none of \"N\" or \"C\" or \"S\" string values\n   (North,Center,South)\nto choose venue\none of \n\nMain Olympic Stadium,\nZappeion,\nPeace And Friendship Stadium\n\n\n\nOutput\n\nan array of the following objects \n\n\n{\n   \n   ID : id \n   start : startDatetime,\n   end : endDatetime,\n   eventType :{\n   \n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n   }\n\n}\n\n}\n\n\n\n\n","x":185,"y":536,"wires":[]}]

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Καιρός (Weather)

Κώδικας 2 : Κόμβος της υπορροής Weather Subflow autumn+Dec

[{"id":"6c4ea4ac.83d12c","type":"subflow","name":"Weather Subflow autumn+Dec","info":"set the time parameters of the subflow\n\nshould be set in an incoming message on\n\nmsg.time.year \n\nmsg.time.month \n\nmsg.time.day \n\n\n\n\n\ngetting the year   from   msg.time.year \n \ngetting the month   from   msg.time.month \n\nmust be a string and if it is a single-digit number \nmust be like \"09\" with the zero \n\n/\/\"09\";\n\ngetting the day   from   msg.time.day \n\nmust be a string and if it is a single-digit number \nmust be like \"06\" with the zero\n\n/\/\"06\";\n\n\nthe output\n\nan array of hourly objects or an empty array\n\n\n newWeatherObj = {\n \n   time:{ \n   epoch : time,\n   date : dateStringLocal\n   },\n   hour : hour,\n   state : weatherState\n   \n };\n \n\n\n\n\n","in":[{"x":50,"y":30,"wires":[{"id":"8708964a.489488"}]}],"out":[{"x":958,"y":345,"wires":[{"id":"3ccac17b.744a1e","port":0}]}]},{"id":"7b241460.d80d2c","type":"http request","z":"6c4ea4ac.83d12c","name":"AthensSub","method":"use","ret":"txt","url":"","tls":"","x":344,"y":151,"wires":[["fa196ae9.c8cc58"]]},{"id":"3ccac17b.744a1e","type":"function","z":"6c4ea4ac.83d12c","name":"weather analysis","func":"/*var monthString = \"09\";\nvar month = parseInt(monthString);\nnode.log (\"monthString =\"+monthString+ \"   month = \"+month);\n*/\nvar month = flow.get('monthCont');\nnode.log(\"month = \"+month);\n\n\nvar bad = \"bad\";\nvar normal = \"normal\";\nvar good = \"good\";\n\ntempSepNormalMax = 28;\ntempSepNormalMin = 19;\ntempOctNormalMax = 22;\ntempOctNormalMin = 15;\ntempNovNormalMax = 18;\ntempNovNormalMin = 10;\ntempDecNormalMax = 16;\ntempDecNormalMin = 8;\ntempGoodMax = 39;\n\ncloudCoverSepNormalMax = 0.5;\ncloudCoverSepNormalMin = 0.35;\ncloudCoverOctNormalMax = 0.6;\ncloudCoverOctNormalMin = 0.5;\ncloudCoverNovNormalMax = 0.68;\ncloudCoverNovNormalMin = 0.6;\ncloudCoverDecNormalMax = 0.72;\ncloudCoverDecNormalMin = 0.68;\n\nhumiditySepNormalMax = 0.75;\nhumiditySepNormalMin = 0.35;\nhumidityOctNormalMax = 0.82;\nhumidityOctNormalMin = 0.45;\nhumidityNovNormalMax = 0.85;\nhumidityNovNormalMin = 0.52;\nhumidityDecNormalMax = 0.85;\nhumidityDecNormalMin = 0.56;\nhumidityGoodMin = 0.2;\ndewPointMax = 17;\ndewPointMin = 5;\ndewPointDecNormalMin = 2;\n\nwindSpeedNormalMax = 8;\nwindSpeedNormalMin = 3;\n\nvar tempState = \"\";\nvar cloudCoverState = \"\";\nvar humidityState = \"\";\nvar dewPointState = \"\";\nvar windSpeedState = \"\";\n\nswitch (month) {\n   case 9:\n   // code\n   tempMin = tempSepNormalMin;\n   tempMax = tempSepNormalMax;\n   node.log(\" SEP tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n \n   ccMin = cloudCoverSepNormalMin;\n   ccMax = cloudCoverSepNormalMax;\n   node.log(\" SEP ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humiditySepNormalMin;\n   hmMax = humiditySepNormalMax;\n   node.log(\" SEP hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   \n   break;\n   case 10:\n   // code\n   tempMin = tempOctNormalMin;\n   tempMax = tempOctNormalMax;\n   node.log(\" OCT tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverOctNormalMin;\n   ccMax = cloudCoverOctNormalMax;\n   node.log(\" OCT ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityOctNormalMin;\n   hmMax = humidityOctNormalMax;\n   node.log(\" OCT hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   break;\n   case 11:\n   // code\n   tempMin = tempNovNormalMin;\n   tempMax = tempNovNormalMax;\n   node.log(\" NOV tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverNovNormalMin;\n   ccMax = cloudCoverNovNormalMax;\n   node.log(\" NOV ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n\n   hmMin = humidityNovNormalMin;\n   hmMax = humidityNovNormalMax;\n   node.log(\" NOV hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   break;\n   case 12:\n   // code\n   tempMin = tempDecNormalMin;\n   tempMax = tempDecNormalMax;\n   node.log(\" DEC tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverDecNormalMin;\n   ccMax = cloudCoverDecNormalMax;\n   node.log(\" DEC ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityDecNormalMin;\n   hmMax = humidityDecNormalMax;\n   node.log(\" DEC hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   break;\n   \n   default:\n   // code\n   node.log(\"no valid month\");\n   return;\n   }\n   \n\n\nif(msg.hasOwnProperty('payload')){\n\nThings =msg.payload.hourly.data;//array of {}\n   //node.log(Things);\n   msg = {};\n   \n   \n   //create array of hourly objects\n   weatherStateList = [];\n   //\n   for (var prop in Things) {\n   //////Things[prop] == {}\n   hourlyData = Things[prop];\n   //hourlyData = Things[12];\n   \n   \n   //node.log(\"\\n\\n\");\n   // // stringTime =\"time\";\n   // // stringTemp = \"temperature\";\n   // // stringDewPoint = \"dewPoint\";\n   // // stringHumidity = \"humidity\";\n   // // stringWindSpeed = \"windSpeed\";\n   // //stringCloudCover = \"cloudCover\";\n   \n   \n   time =hourlyData.time;\n   temp = hourlyData.temperature;\n   dewPoint = hourlyData.dewPoint;\n   humidity = hourlyData.humidity;\n   windSpeed = hourlyData.windSpeed;\n   if (hourlyData.hasOwnProperty('cloudCover')) {\n   cloudCover = hourlyData.cloudCover;\n   } else {\n   cloudCover = -1;\n   }\n   node.log(\"time= \"+time+\" temp = \"+temp+\" dewpoint =\"+dewPoint+\" humidity= \"+humidity+\" windSpeed= \"+windSpeed+\" cloudCover= \"+cloudCover+\"\\n\\n\");\n   \n   \n   \n   dateObjGMT = new Date(time*1000);\n   dateStringLocal = dateObjGMT.toLocaleString();\n   var hour = dateObjGMT.getHours();\n   node.log(\"hour = \"+ hour +\"\\n\");\n   \n   \n   //check temperature\n   \n   if (temp >= tempMin && temp <= tempMax) {\n   tempState = normal;\n   } else { if (temp >= tempMax && temp <= tempGoodMax) {\n

tempState = good;\n   } else {\n   tempState = bad;\n   }\n   \n   }\n   \n   \n
\n   //check cloud cover \n   \n   if (cloudCover != -1) {\n   if (cloudCover >= ccMin && cloudCover <=
ccMax) {\n   cloudCoverState = normal;\n   } else { if (cloudCover < ccMin) {\n
cloudCoverState = good;\n   } else {\n   cloudCoverState = bad;\n   }\n   }\n
}\n   }else {cloudCoverState = good;}\n   \n   //check humidity\n   \n   if (humidity >= hmMin &&
humidity <= hmMax) {\n   humidityState = normal;\n   } else { if (humidity >= humidityGoodMin &&
humidity < hmMin) {\n   humidityState = good;\n   } else {\n   humidityState = bad;\n
}\n   \n   }\n   \n   //check dewPoint\n   \n   if (dewPoint >= dewPointMin && dewPoint <=
dewPointMax) {\n   dewPointState = good;\n   } else { if (month == 12 && dewPoint >=
dewPointDecNormalMin && dewPoint < dewPointMin) {\n   dewPointState = normal;\n   } else {\n
dewPointState = bad;\n   }\n   \n   }\n   \n   //check wind speed\n   \n   if (windSpeed >=
windSpeedNormalMin && windSpeed <= windSpeedNormalMax) {\n   windSpeedState = normal;\n   } else {
if (windSpeed < windSpeedNormalMin) {\n   windSpeedState = good;\n   } else {\n
windSpeedState = bad;\n   }\n   \n   }\n   \n   node.log(\"\\n\\n\");\n   node.log(\" tempState =
\"+ tempState +\" dewPointState = \"+dewPointState +\" humidityState= \"+humidityState +\" windSpeedState=
\"+windSpeedState+\" cloudCoverState= \"+cloudCoverState+\"\\n\\n\");\n   node.log(\"\\n\\n\");\n   \n   \n
\n   if (tempState == bad || cloudCoverState == bad || humidityState == bad || dewPointState == bad || windSpeedState
== bad) {\n   weatherState = bad;\n   } else { if (tempState == normal && cloudCoverState == normal &&
humidityState == normal && windSpeedState == normal) {\n   weatherState = normal;\n   } else {\n
weatherState = good;\n   }\n   \n   }\n   //create hourly objects\n   \n   newWeatherObj = {\n
time:{ epoch : time, date : dateStringLocal },\n   hour : hour,\n   state : weatherState\n
};\n   \n   //push data\n   \n   weatherStateList.push(newWeatherObj);\n   \n   \n
}\n\n}else{weatherStateList = [];}\n\n\nnewmsg = {payload : weatherStateList};\n\nreturn
newmsg;","outputs":1,"noerr":0,"x":720,"y":346,"wires":[[]]},{"id":"fa196ae9.c8cc58","type":"function","z":"6c4ea4ac.
83d12c","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty =
msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n
node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty ==
\"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn
msg;\n
\n\n","outputs":1,"noerr":0,"x":514,"y":198,"wires":[["ec086f68.7474d"]]},{"id":"ec086f68.7474d","type":"json","z":"6
c4ea4ac.83d12c","name":"","x":629,"y":277,"wires":[["3ccac17b.744a1e"]]},{"id":"31849b66.ec3194","type":"function
","z":"6c4ea4ac.83d12c","name":"handle AthensSub","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":379,"y":280,"wires":[["ec086f68.7474d"]]},{"id":"f5bcd0f4.76f67","type":"catch","z":"
6c4ea4ac.83d12c","name":"","scope":["7b241460.d80d2c"],"x":114,"y":279,"wires":[["31849b66.ec3194"]]},{"id":"870
8964a.489488","type":"function","z":"6c4ea4ac.83d12c","name":"create url","func":"\n//var time = \"2016-11-
01T15:00:00+0200\" ;\nvar year = msg.time.year; //2016; //var year = msg.time.year;??\nvar month = msg.time.month;
//\"11\";   //\"09\";\nvar day = msg.time.day;   //\"05\";   //\"06\";\nif((typeof year === 'undefined') ||(typeof month
=== 'undefined') || (typeof day === 'undefined'))\n{\n   node.log(\"undefined parameter\\n\");\n
return;\n}else{\n\n//var contextFlow5 = this.context().flow;\nvar monthVar = flow.get('monthCont')||0; //arxikopoieitai
mono sth prwth klhsh\n//var monthVar = contextFlow5.get('monthCont')||0;\nnode.log(\"monthCont =\"+
monthVar);\nmonthVar = parseInt(month);\n\nnode.log(\"monthVar =\"+
monthVar);\n//contextFlow5.set('monthCont',monthVar);\nflow.set('monthCont',monthVar);\n//monthVar =
contextFlow5.get('monthCont');\nmonthVar = flow.get('monthCont');\n\nnode.log(\"monthCont =\"+ monthVar);\n\nvar
time = \"\"+year+\"-\"+month+\"-\"+day+\"T00:00:00+0200\" ;\n\nvar exclude =\"currently\";//\"currently\";//
\"hourly\";\nvar units =
\"si\";\n\nmsgUrl=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,\"+time+\"?exclude=\"+exclude+\"&un
its=\"+units;\nmsgMethod = \"GET\";\n//\nmsg.url=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,2017-
01-01T00:00:00+0200?exclude=hourly&units=si\";\nmsg ={};\nmsg = {\n   url : msgUrl,\n   method :
msgMethod\n};\n\nreturn
msg;\n}","outputs":1,"noerr":0,"x":166,"y":94,"wires":[["7b241460.d80d2c"]]},{"id":"5457d56f.1d2c2c","type":"subflo
w:6c4ea4ac.83d12c","z":"5a3c8a13.8bb6e4","x":393,"y":116,"wires":[[]]}]

Κώδικας 3 : Ροή της υπορροής Weather Subflow autumn+Dec

[{"id":"f9850b1e.087238","type":"http
request","z":"4b61ff52.35c77","name":"AthensSub","method":"use","ret":"txt","url":"","tls":"","x":392,"y":193,"wires":
[["4f6ba373.4f236c"]]},{"id":"39d40d2d.bea912","type":"function","z":"4b61ff52.35c77","name":"weather
analysis","func":"/*var monthString = \"09\";\nvar month = parseInt(monthString);\n\nnode.log (\"monthString
=\"+monthString+ \"   month = \"+month);\n*/\n\nvar month = flow.get('monthCont');\n\nnode.log(\"month =
\"+month);\n\n\n\nvar bad = \"bad\";\nvar normal = \"normal\";\nvar good = \"good\";\n\ntempSepNormalMax =
28;\ntempSepNormalMin = 19;\ntempOctNormalMax = 22;\ntempOctNormalMin = 15;\ntempNovNormalMax =
18;\ntempNovNormalMin = 10;\ntempDecNormalMax = 16;\ntempDecNormalMin = 8;\ntempGoodMax =
39;\n\ncloudCoverSepNormalMax = 0.5;\ncloudCoverSepNormalMin = 0.35;\ncloudCoverOctNormalMax =
0.6;\ncloudCoverOctNormalMin = 0.5;\ncloudCoverNovNormalMax = 0.68;\ncloudCoverNovNormalMin =

0.6;\ncloudCoverDecNormalMax = 0.72;\ncloudCoverDecNormalMin = 0.68;\n\nhumiditySepNormalMax = 0.75;\nhumiditySepNormalMin = 0.35;\nhumidityOctNormalMax = 0.82;\nhumidityOctNormalMin = 0.45;\nhumidityNovNormalMax = 0.85;\nhumidityNovNormalMin = 0.52;\nhumidityDecNormalMax = 0.85;\nhumidityDecNormalMin = 0.56;\nhumidityGoodMin = 0.2;\n\ndewPointMax = 17;\ndewPointMin = 5;\ndewPointDecNormalMin = 2;\n\n\nwindSpeedNormalMax = 8;\nwindSpeedNormalMin = 3;\n\n\nvar tempState = \"\";\nvar cloudCoverState = \"\";\nvar humidityState = \"\";\nvar dewPointState = \"\";\nvar windSpeedState = \"\";\n\n switch (month) {\n   case 9:\n   // code\n   tempMin = tempSepNormalMin;\n   tempMax = tempSepNormalMax;\n   node.log(\" SEP tempmin = \"+ tempMin+\" tempmax = \"+ tempMax+\"\\n\");\n \n   ccMin = cloudCoverSepNormalMin;\n   ccMax = cloudCoverSepNormalMax;\n   node.log(\" SEP ccMin = \"+ ccMin+\" ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humiditySepNormalMin;\n hmMax = humiditySepNormalMax;\n   node.log(\" SEP hmMin = \"+ hmMin+\" hmMax = \"+ hmMax+\"\\n\");\n   \n   \n   break;\n   case 10:\n   // code\n   tempMin = tempOctNormalMin;\n   tempMax = tempOctNormalMax;\n   node.log(\" OCT tempmin = \"+ tempMin+\" tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverOctNormalMin;\n   ccMax = cloudCoverOctNormalMax;\n   node.log(\" OCT ccMin = \"+ ccMin+\" ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityOctNormalMin;\n   hmMax = humidityOctNormalMax;\n   node.log(\" OCT hmMin = \"+ hmMin+\" hmMax = \"+ hmMax+\"\\n\");\n   \n   break;\n   case 11:\n   // code\n   tempMin = tempNovNormalMin;\n   tempMax = tempNovNormalMax;\n   node.log(\" NOV tempmin = \"+ tempMin+\" tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverNovNormalMin;\n   ccMax = cloudCoverNovNormalMax;\n   node.log(\" NOV ccMin = \"+ ccMin+\" ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityNovNormalMin;\n   hmMax = humidityNovNormalMax;\n   node.log(\" NOV hmMin = \"+ hmMin+\" hmMax = \"+ hmMax+\"\\n\");\n   \n   break;\n   case 12:\n   // code\n   tempMin = tempDecNormalMin;\n   tempMax = tempDecNormalMax;\n   node.log(\" DEC tempmin = \"+ tempMin+\" tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverDecNormalMin;\n   ccMax = cloudCoverDecNormalMax;\n   node.log(\" DEC ccMin = \"+ ccMin+\" ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityDecNormalMin;\n   hmMax = humidityDecNormalMax;\n   node.log(\" DEC hmMin = \"+ hmMin+\" hmMax = \"+ hmMax+\"\\n\");\n   \n   break;\n   \n   default:\n   // code\n   node.log(\"no valid month\");\n   return;\n   }\n \n\nif(msg.hasOwnProperty('payload')){\n\n Things =msg.payload.hourly.data;//array of {}\n //node.log(Things);\n msg = {};\n \n //create array of hourly objects\n   weatherStateList = [];\n   //\n   for (var prop in Things) {\n   //////Things[prop] == {}\n   hourlyData = Things[prop];\n   //hourlyData = Things[12];\n   \n   \n   //node.log(\"\\n\\n\");\n   // // stringTime =\"time\";\n   // // stringTemp = \"temperature\";\n   // // stringDewPoint = \"dewPoint\";\n   // // stringHumidity = \"humidity\";\n   // // stringWindSpeed = \"windSpeed\";\n   // //stringCloudCover = \"cloudCover\";\n   \n   \n   time =hourlyData.time;\n   temp = hourlyData.temperature;\n   dewPoint = hourlyData.dewPoint;\n   humidity = hourlyData.humidity;\n   windSpeed = hourlyData.windSpeed;\n   if (hourlyData.hasOwnProperty('cloudCover')) {\n   cloudCover = hourlyData.cloudCover;\n   } else {\n   cloudCover = -1;\n   }\n node.log(\"time= \"+time+\" temp = \"+temp+\" dewpoint = \"+dewPoint+\" humidity= \"+humidity+\" windSpeed= \"+windSpeed+\" cloudCover= \"+cloudCover+\"\\n\\n\");\n   \n   \n   \n   dateObjGMT = new Date(time*1000);\n   dateStringLocal = dateObjGMT.toLocaleString();\n   var hour = dateObjGMT.getHours();\n node.log(\"hour = \"+ hour + \"\\n\");\n   \n   \n   //check temperature\n   \n   if (temp >= tempMin && temp <= tempMax) {\n   tempState = normal;\n   } else { if (temp >= tempMax && temp <= tempGoodMax) {\n tempState = good;\n   } else {\n   tempState = bad;\n   }\n   }\n   \n   \n   \n   //check cloud cover \n   \n   if (cloudCover != -1) {\n   if (cloudCover >= ccMin && cloudCover <= ccMax) {\n   cloudCoverState = normal;\n   } else { if (cloudCover < ccMin) {\n cloudCoverState = good;\n   } else {\n   cloudCoverState = bad;\n   }\n   }\n   }\n   }else {cloudCoverState = good;}\n   //check humidity\n   \n   if (humidity >= hmMin && humidity <= hmMax) {\n   humidityState = normal;\n   } else { if (humidity >= humidityGoodMin && humidity < hmMin) {\n   humidityState = good;\n   } else {\n   humidityState = bad;\n   }\n   \n   }\n   \n   //check dewPoint\n   \n   if (dewPoint >= dewPointMin && dewPoint <= dewPointMax) {\n   dewPointState = good;\n   } else { if (month == 12 && dewPoint >= dewPointDecNormalMin && dewPoint < dewPointMin) {\n   dewPointState = normal;\n   } else {\n dewPointState = bad;\n   }\n   }\n   }\n   //check wind speed\n   \n   if (windSpeed >= windSpeedNormalMin && windSpeed <= windSpeedNormalMax) {\n   windSpeedState = normal;\n   } else { if (windSpeed < windSpeedNormalMin) {\n   windSpeedState = good;\n   } else {\n windSpeedState = bad;\n   }\n   }\n   \n   node.log(\"\\n\\n\");\n   node.log(\" tempState = \"+ tempState +\" dewPointState = \"+dewPointState +\" humidityState= \"+humidityState +\" windSpeedState= \"+windSpeedState+\" cloudCoverState= \"+cloudCoverState+\"\\n\\n\");\n   node.log(\"\\n\\n\");\n   \n   \n   if (tempState == bad || cloudCoverState == bad || humidityState == bad || dewPointState == bad || windSpeedState == bad) {\n   weatherState = bad;\n   } else { if (tempState == normal && cloudCoverState == normal && humidityState == normal && windSpeedState == normal) {\n   weatherState = normal;\n   } else {\n weatherState = good;\n   }\n   }\n   //create hourly objects\n   \n   newWeatherObj = {\n time:{ epoch : time, date : dateStringLocal },\n   hour : hour,\n   state : weatherState\n   };\n   \n   //push data\n   \n   weatherStateList.push(newWeatherObj);\n   \n   \n   }\n\n}else{weatherStateList = [];}\n\n\nnewmsg = {payload : weatherStateList};\n\nreturn newmsg;","outputs":1,"noerr":0,"x":768,"y":388,"wires":[[]]},{"id":"4f6ba373.4f236c","type":"function","z":"4b61ff52.35c77","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n

node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n

\n\n","outputs":1,"noerr":0,"x":562,"y":240,"wires":[["34bfc9be.fbe5f6"]]},{"id":"34bfc9be.fbe5f6","type":"json","z":"4 b61ff52.35c77","name":"","x":677,"y":319,"wires":[["39d40d2d.bea912"]]},{"id":"f4fe8627.d37318","type":"function", "z":"4b61ff52.35c77","name":"handle AthensSub","func":"msg = {};\n return msg;","outputs":1,"noerr":0,"x":427,"y":322,"wires":[["34bfc9be.fbe5f6"]]},{"id":"57aab938.300508","type":"catch","z ":"4b61ff52.35c77","name":"","scope":["f9850b1e.087238"],"x":162,"y":321,"wires":[["f4fe8627.d37318"]]},{"id":"c24 909d2.60ee88","type":"function","z":"4b61ff52.35c77","name":"create url","func":"\n//var time = \"2016-11-01T15:00:00+0200\" ;\nvar year = msg.time.year; //2016; //var year = msg.time.year;??\nvar month = msg.time.month; //\"11\";   //\"09\";\nvar day = msg.time.day; //\"05\";   //\"06\";\nnif((typeof year === 'undefined') ||(typeof month === 'undefined') || (typeof day === 'undefined'))\n{\n   node.log(\"undefined parameter\\n\");\n return;\n}else{\n\n//var contextFlow5 = this.context().flow;\nvar monthVar = flow.get('monthCont')||0; //arxikopoieitai mono sth prwth klhsh\n//var monthVar = contextFlow5.get('monthCont')||0;\nnode.log(\"monthCont =\"+ monthVar);\nmonthVar = parseInt(month);\nnode.log(\"monthVar =\"+ monthVar);\n//contextFlow5.set('monthCont',monthVar);\nflow.set('monthCont',monthVar);\n//monthVar = contextFlow5.get('monthCont');\nmonthVar = flow.get('monthCont');\nnode.log(\"monthCont =\"+ monthVar);\n\nvar time = \"+year+\"-\"+month+\"-\"+day+\"T00:00:00+0200\" ;\nvar exclude =\"currently\";//\"currently\";// \"hourly\";\nvar units = \"si\";\nmsgUrl=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,\"+time+\"?exclude=\"+exclude+\"&un its=\"+units;\nmsgMethod = \"GET\";\n//msg.url=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,2017-01-01T00:00:00+0200?exclude=hourly&units=si\";\nmsg ={};\nmsg = {\n   url : msgUrl,\n   method : msgMethod\n};\n\nreturn msg;\n}","outputs":1,"noerr":0,"x":279,"y":109,"wires":[["f9850b1e.087238"]]}]

Κώδικας 4 : Κόμβος της υπορροής API limit filter

[{"id":"5741cc5c.7a6c94","type":"subflow","name":"API limit filter","info":"λαμβάνουμε υπόψην το όριο των αιτήσεων \n\"1,000 API requests to the Service per day free of charge\"\n\ninput : a msg\n\n\noutput : the input msg or nothing","in":[{"x":50,"y":30,"wires":[{"id":"405cb133.bf69b"}]}],"out":[{"x":867,"y":35,"wires":[{"id":"405cb133.bf6 9b","port":0}]}]},{"id":"405cb133.bf69b","type":"function","z":"5741cc5c.7a6c94","name":"filter","func":"//var count;\n//var currentDate;\nvar count = flow.get('count')||0; //arxikopoieitai mono sth prwth klhsh\nvar currentDateOnly = flow.get('currentDateOnly')||\"\"; //arxikopoieitai mono sth prwth klhsh\n\nnode.log(\"count = \"+ count + \"currentDateOnly = \"+ currentDateOnly+\"\\n\");\n\nnowDate = new Date();\n//keep only the date\nnowDateOnly = nowDate.toDateString();\n\n\nif(nowDateOnly !== currentDateOnly){\n   count = 1;\n   currentDate = new Date();\n //keep only the date\n   currentDateOnly = currentDate.toDateString();\n   // flow.set('count',count);\n //flow.set('currentDateOnly',currentDateOnly);\n}\n\n//count=1000;\nflow.set('count',count);\nflow.set('currentDateOnly',c urrentDateOnly);\ncurrentDateOnly = flow.get('currentDateOnly');\ncount = flow.get('count');\nnode.log(\"count = \"+ count + \"currentDateOnly = \"+ currentDateOnly+\"\\n\");\n\nif(currentDateOnly == nowDateOnly && count < 1000){\n   \n   //do request\n   \n   \n   count++;\n   flow.set('count',count);\n flow.set('currentDateOnly',currentDateOnly);\n   \n   \n   \n   return msg;\n   \n\n\n   \n}else{\n   node.log(\"\\n\\n No more API requests\\n\\n\");\n   flow.set('count',count);\n   flow.set('currentDateOnly',currentDateOnly);\n return;\n}\n\n\n","outputs":1,"noerr":0,"x":441,"y":35,"wires":[[]]},{"id":"40946bea.9695e4","type":"subflow:5741cc5c. 7a6c94","z":"8487c327.3f26a","x":448,"y":137,"wires":[[]]}]

Κώδικας 5 : Ροή της υπορροής API limit filter

[{"id":"a50548ab.b76388","type":"function","z":"f982e4f2.9593f8","name":"filter","func":"//var count;\n//var currentDate;\nvar count = flow.get('count')||0; //arxikopoieitai mono sth prwth klhsh\nvar currentDateOnly = flow.get('currentDateOnly')||\"\"; //arxikopoieitai mono sth prwth klhsh\n\nnode.log(\"count = \"+ count + \"currentDateOnly = \"+ currentDateOnly+\"\\n\");\n\nnowDate = new Date();\n//keep only the date\nnowDateOnly = nowDate.toDateString();\n\n\nif(nowDateOnly !== currentDateOnly){\n   count = 1;\n   currentDate = new Date();\n //keep only the date\n   currentDateOnly = currentDate.toDateString();\n   // flow.set('count',count);\n //flow.set('currentDateOnly',currentDateOnly);\n}\n\n//count=1000;\nflow.set('count',count);\nflow.set('currentDateOnly',c urrentDateOnly);\ncurrentDateOnly = flow.get('currentDateOnly');\ncount = flow.get('count');\nnode.log(\"count = \"+ count + \"currentDateOnly = \"+ currentDateOnly+\"\\n\");\n\nif(currentDateOnly == nowDateOnly && count < 1000){\n   \n   //do request\n   \n   \n   count++;\n   flow.set('count',count);\n flow.set('currentDateOnly',currentDateOnly);\n   \n   \n   \n   return msg;\n   \n\n\n   \n}else{\n   node.log(\"\\n\\n No more API requests\\n\\n\");\n   flow.set('count',count);\n   flow.set('currentDateOnly',currentDateOnly);\n return;\n}\n\n\n","outputs":1,"noerr":0,"x":452,"y":165,"wires":[[]]}]

Κώδικας 6 : Κόμβος της υπορροής Weather All Seasons Subflow

[{"id":"84fa4ecf.88b35","type":"subflow","name":"Weather All Seasons Subflow","info":"set the time parameters of the subflow\n\nshould be set in an incoming message on\n\nmsg.time.year \n\nmsg.time.month \n\nmsg.time.day \n\n\n\n\n\n\ngetting the year from   msg.time.year \n \ngetting the month   from   msg.time.month \n\nmust be a string and if it is a single-digit number \nmust be like \"09\" with the zero \n\n/\\"09\";\n\ngetting the day   from   msg.time.day \n\nmust be a string and if it is a single-digit number \nmust be like \"06\" with the zero\n\n/\\"06\";\n\n\n\nthe output\n\nan array of hourly objects or an empty array\n\n\n newWeatherObj = {\n \n   time:{ \n   epoch : time,\n   date : dateStringLocal\n   },\n   hour : hour,\n   state : weatherState\n   \n };\n \n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n","in":[{"x":45,"y":34,"wires":[{"id":"1adc682c.0973b8"}]}],"out":[{"x":945,"y":459,"wires":[{"id":"d723c9c.6bec638","port":0}]}]},{"id":"5ec848bf.407388","type":"http request","z":"84fa4ecf.88b35","name":"Athens","method":"use","ret":"txt","url":"","tls":"","x":310,"y":192,"wires":[["d47c4200.6b7ec"]]},{"id":"d723c9c.6bec638","type":"function","z":"84fa4ecf.88b35","name":"weather analysis all seasons","func":"/*var monthString = \"09\";\nvar month = parseInt(monthString);\nnode.log (\"monthString =\"+monthString+ \"   month = \"+month);\n*/\nvar month = flow.get('monthCont');\nnode.log(\"month = \"+month);\n\n\nvar bad = \"bad\";\nvar normal = \"normal\";\nvar good = \"good\";\n\ntempSepNormalMax = 28;\ntempSepNormalMin = 19;\ntempOctNormalMax = 22;\ntempOctNormalMin = 15;\ntempNovNormalMax = 18;\ntempNovNormalMin = 10;\ntempDecNormalMax = 16;\ntempDecNormalMin = 8;\ntempJanNormalMax = 12;\ntempJanNormalMin = 5;\ntempFebNormalMax = 12;\ntempFebNormalMin = 5;\ntempMarNormalMax = 16;\ntempMarNormalMin = 7;\ntempAprNormalMax = 20;\ntempAprNormalMin = 10;\ntempMayNormalMax = 25;\ntempMayNormalMin = 12;\ntempJunNormalMax = 28;\ntempJunNormalMin = 17;\ntempJulNormalMax = 32;\ntempJulNormalMin = 23;\ntempAugNormalMax = 33;\ntempAugNormalMin = 21;\ntempGoodMax = 39;\ntempGoodMin = 16;\n\ncloudCoverSepNormalMax = 0.5;\ncloudCoverSepNormalMin = 0.35;\ncloudCoverOctNormalMax = 0.6;\ncloudCoverOctNormalMin = 0.5;\ncloudCoverNovNormalMax = 0.68;\ncloudCoverNovNormalMin = 0.6;\ncloudCoverDecNormalMax = 0.72;\ncloudCoverDecNormalMin = 0.68;\ncloudCoverJanNormalMax = 0.77;\ncloudCoverJanNormalMin = 0.73;\ncloudCoverFebNormalMax = 0.75;\ncloudCoverFebNormalMin = 0.71;\ncloudCoverMarNormalMax = 0.72;\ncloudCoverMarNormalMin = 0.65;\ncloudCoverAprNormalMax = 0.65;\ncloudCoverAprNormalMin = 0.60;\ncloudCoverMayNormalMax = 0.58;\ncloudCoverMayNormalMin = 0.45;\ncloudCoverJunNormalMax = 0.45;\ncloudCoverJunNormalMin = 0.33;\ncloudCoverJulNormalMax = 0.33;\ncloudCoverJulNormalMin = 0.29;\ncloudCoverAugNormalMax = 0.35;\ncloudCoverAugNormalMin = 0.28;\ncloudCoverGoodMax = 0.53;\nhumiditySepNormalMax = 0.75;\nhumiditySepNormalMin = 0.35;\nhumidityOctNormalMax = 0.82;\nhumidityOctNormalMin = 0.45;\nhumidityNovNormalMax = 0.85;\nhumidityNovNormalMin = 0.52;\nhumidityDecNormalMax = 0.85;\nhumidityDecNormalMin = 0.56;\nhumidityJanNormalMax = 0.85;\nhumidityJanNormalMin = 0.55;\nhumidityFebNormalMax = 0.85;\nhumidityFebNormalMin = 0.52;\nhumidityMarNormalMax = 0.83;\nhumidityMarNormalMin = 0.45;\nhumidityAprNormalMax = 0.80;\nhumidityAprNormalMin = 0.40;\nhumidityMayNormalMax = 0.77;\nhumidityMayNormalMin = 0.35;\nhumidityJunNormalMax = 0.68;\nhumidityJunNormalMin = 0.30;\nhumidityJulNormalMax = 0.59;\nhumidityJulNormalMin = 0.28;\nhumidityAugNormalMax = 0.63;\nhumidityAugNormalMin = 0.29;\nhumidityGoodMin = 0.2;\ndewPointMax = 17;\ndewPointMin = 5;\ndewPointDecJanNormalMin = 2;\ndewPointFebNormalMin = 0;\ndewPointMarNormalMin = 3;\ndewPointAprNormalMin = 4;\nwindSpeedNormalMax = 8;\nwindSpeedNormalMin = 3;\nwindSpeedJulAugNormalMin = 5;\nwindSpeedJulAugNormalMax = 9;\n\nvar tempState = \"\";\nvar cloudCoverState = \"\";\nvar humidityState = \"\";\nvar dewPointState = \"\";\nvar windSpeedState = \"\";\n\n switch (month) {\n   case 9:\n   // code\n   tempMin = tempSepNormalMin;\n   tempMax = tempSepNormalMax;\n   node.log(\" SEP tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverSepNormalMin;\n   ccMax = cloudCoverSepNormalMax;\n   node.log(\" SEP ccMin = \"+ ccMin+\" ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humiditySepNormalMin;\n   hmMax = humiditySepNormalMax;\n   node.log(\" SEP hmMin = \"+ hmMin+\" hmMax = \"+ hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n   windSpeedMax = windSpeedNormalMax;\n   node.log(\" SEP windSpeedMin = \"+ windSpeedMin+\" windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   break;\n   case 10:\n   // code\n   tempMin = tempOctNormalMin;\n   tempMax = tempOctNormalMax;\n   node.log(\" OCT tempmin = \"+ tempMin+\" tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverOctNormalMin;\n   ccMax = cloudCoverOctNormalMax;\n   node.log(\" OCT ccMin = \"+ ccMin+\" ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityOctNormalMin;\n   hmMax = humidityOctNormalMax;\n   node.log(\" OCT hmMin = \"+ hmMin+\" hmMax = \"+ hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n   windSpeedMax = windSpeedNormalMax;\n   node.log(\" OCT windSpeedMin = \"+ windSpeedMin+\" windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   \n   break;\n   case 11:\n   // code\n   tempMin = tempNovNormalMin;\n   tempMax = tempNovNormalMax;\n   node.log(\" NOV tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverNovNormalMin;\n   ccMax = cloudCoverNovNormalMax;\n   node.log(\" NOV ccMin = \"+ ccMin+\" ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityNovNormalMin;\n   hmMax = humidityNovNormalMax;\n   node.log(\" NOV hmMin = \"+ hmMin+\" hmMax = \"+ hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n   windSpeedMax = windSpeedNormalMax;\n   node.log(\" NOV windSpeedMin = \"+ windSpeedMin+\" windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   \n   break;\n   case 12:\n   // code\n   tempMin = tempDecNormalMin;\n   tempMax = tempDecNormalMax;\n   node.log(\" DEC tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverDecNormalMin;\n   ccMax

= cloudCoverDecNormalMax;\n   node.log(\" DEC ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n   hmMin = humidityDecNormalMin;\n   hmMax = humidityDecNormalMax;\n   node.log(\" DEC
hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n
windSpeedMax = windSpeedNormalMax;\n   node.log(\" DEC windSpeedMin = \"+ windSpeedMin+\"
windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   dewPointNormalMin = dewPointDecJanNormalMin;\n
node.log(\" DEC dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n   \n   break;\n   case 1:\n
// code\n   tempMin = tempJanNormalMin;\n   tempMax = tempJanNormalMax;\n   node.log(\" JAN
tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverJanNormalMin;\n
ccMax = cloudCoverJanNormalMax;\n   node.log(\" JAN ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n   hmMin = humidityJanNormalMin;\n   hmMax = humidityJanNormalMax;\n   node.log(\" JAN
hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   \n   windSpeedMin =
windSpeedNormalMin;\n   windSpeedMax = windSpeedNormalMax;\n   node.log(\" JAN windSpeedMin =
\"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   dewPointNormalMin =
dewPointDecJanNormalMin;\n   node.log(\" JAN dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n
\n   break;\n   case 2:\n   // code\n   tempMin = tempFebNormalMin;\n   tempMax =
tempFebNormalMax;\n   node.log(\" FEB tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n
\n   ccMin = cloudCoverFebNormalMin;\n   ccMax = cloudCoverFebNormalMax;\n   node.log(\" FEB
ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityFebNormalMin;\n
hmMax = humidityFebNormalMax;\n   node.log(\" FEB hmMin = \"+ hmMin+\"   hmMax = \"+
hmMax+\"\\n\");\n   \n   \n   windSpeedMin = windSpeedNormalMin;\n   windSpeedMax =
windSpeedNormalMax;\n   node.log(\" FEB windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+
windSpeedMax+\"\\n\");\n   \n   dewPointNormalMin = dewPointFebNormalMin;\n   node.log(\" FEB
dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n   \n   break;\n   case 3:\n   // code\n
tempMin = tempMarNormalMin;\n   tempMax = tempMarNormalMax;\n   node.log(\" MAR tempmin = \"+
tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverMarNormalMin;\n   ccMax
= cloudCoverMarNormalMax;\n   node.log(\" MAR ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n   hmMin = humidityMarNormalMin;\n   hmMax = humidityMarNormalMax;\n   node.log(\" MAR
hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   \n   windSpeedMin =
windSpeedNormalMin;\n   windSpeedMax = windSpeedNormalMax;\n   node.log(\" MAR windSpeedMin =
\"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   dewPointNormalMin =
dewPointMarNormalMin;\n   node.log(\" MAR dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n
\n   break;\n   case 4:\n   // code\n   tempMin = tempAprNormalMin;\n   tempMax =
tempAprNormalMax;\n   node.log(\" APR tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n
\n   ccMin = cloudCoverAprNormalMin;\n   ccMax = cloudCoverAprNormalMax;\n   node.log(\" APR
ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityAprNormalMin;\n
hmMax = humidityAprNormalMax;\n   node.log(\" APR hmMin = \"+ hmMin+\"   hmMax = \"+
hmMax+\"\\n\");\n   \n   \n   windSpeedMin = windSpeedNormalMin;\n   windSpeedMax =
windSpeedNormalMax;\n   node.log(\" APR windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+
windSpeedMax+\"\\n\");\n   \n   dewPointNormalMin = dewPointAprNormalMin;\n   node.log(\" APR
dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n   \n   break; \n   case 5:\n   // code\n
tempMin = tempMayNormalMin;\n   tempMax = tempMayNormalMax;\n   node.log(\" MAY tempmin = \"+
tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverMayNormalMin;\n
ccMax = cloudCoverMayNormalMax;\n   node.log(\" MAY ccMin = \"+ ccMin+\"   ccMax = \"+
ccMax+\"\\n\");\n   \n   hmMin = humidityMayNormalMin;\n   hmMax = humidityMayNormalMax;\n
node.log(\" MAY hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   \n   windSpeedMin =
windSpeedNormalMin;\n   windSpeedMax = windSpeedNormalMax;\n   node.log(\" MAY windSpeedMin =
\"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   \n   break;\n   case 6:\n
// code\n   tempMin = tempJunNormalMin;\n   tempMax = tempJunNormalMax;\n   node.log(\" JUN
tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverJunNormalMin;\n
ccMax = cloudCoverJunNormalMax;\n   node.log(\" JUN ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n   hmMin = humidityJunNormalMin;\n   hmMax = humidityJunNormalMax;\n   node.log(\" JUN
hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   \n   windSpeedMin =
windSpeedNormalMin;\n   windSpeedMax = windSpeedNormalMax;\n   node.log(\" JUN windSpeedMin =
\"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   \n   break;\n   case 7:\n
// code\n   tempMin = tempJulNormalMin;\n   tempMax = tempJulNormalMax;\n   node.log(\" JUL
tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverJulNormalMin;\n
ccMax = cloudCoverJulNormalMax;\n   node.log(\" JUL ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n   hmMin = humidityJulNormalMin;\n   hmMax = humidityJulNormalMax;\n   node.log(\" JUL
hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   \n   windSpeedMin =
windSpeedJulAugNormalMin;\n   windSpeedMax = windSpeedJulAugNormalMax;\n   node.log(\" JUL
windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   \n
break;\n   case 8:\n   // code\n   tempMin = tempAugNormalMin;\n   tempMax =
tempAugNormalMax;\n   node.log(\" AUG tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n
\n   ccMin = cloudCoverAugNormalMin;\n   ccMax = cloudCoverAugNormalMax;\n   node.log(\"
AUG ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityAugNormalMin;\n
hmMax = humidityAugNormalMax;\n   node.log(\" AUG hmMin = \"+ hmMin+\"   hmMax = \"+
hmMax+\"\\n\");\n   \n   \n   windSpeedMin = windSpeedJulAugNormalMin;\n   windSpeedMax =

windSpeedJulAugNormalMax;\n   node.log(\" AUG windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   break; \n   default:\n   // code\n   node.log(\"no valid month\");\n   return;\n   }\n   \n\n\nif(msg.hasOwnProperty('payload')){\n\n   Things =msg.payload.hourly.data;//array of {}\n   //node.log(Things);\n   msg = {};\n   \n   \n   //create array of hourly objects\n   weatherStateList = [];\n   //\n   for (var prop in Things) {\n   //////Things[prop] == {}\n   hourlyData = Things[prop];\n   //hourlyData = Things[12];\n   //node.log(\"\\n\\n\");\n   // // stringTime =\"time\";\n   // // stringTemp = \"temperature\";\n   // // stringDewPoint = \"dewPoint\";\n   // // stringHumidity = \"humidity\";\n   // // stringWindSpeed = \"windSpeed\";\n   // //stringCloudCover = \"cloudCover\";\n   \n   \n   time =hourlyData.time;\n   temp = hourlyData.temperature;\n   dewPoint = hourlyData.dewPoint;\n   humidity = hourlyData.humidity;\n   windSpeed = hourlyData.windSpeed;\n   if (hourlyData.hasOwnProperty('cloudCover')) {\n   cloudCover = hourlyData.cloudCover;\n   } else {\n   cloudCover = -1;\n   }\n   node.log(\"time= \"+time+\" temp = \"+temp+\" dewpoint = \"+dewPoint+\" humidity= \"+humidity+\" windSpeed= \"+windSpeed+\" cloudCover= \"+cloudCover+\"\\n\\n\");\n   \n   \n   \n   dateObjGMT = new Date(time*1000);\n   dateStringLocal = dateObjGMT.toLocaleString();\n   var hour = dateObjGMT.getHours();\n   node.log(\"hour = \"+ hour + \"\\n\");\n   \n   \n   //check temperature\n   \n   if (temp >= tempMin && temp <= tempMax) {\n   tempState = normal;\n   } else { if ((temp >= tempMax && temp <= tempGoodMax) || (temp <= tempMin && temp >= tempGoodMin)) {\n   tempState = good;\n   } else {\n   tempState = bad;\n   }\n   \n   }\n   \n   \n   \n   //check cloud cover \n   \n   if (cloudCover != -1) {\n   if (cloudCover >= ccMin && cloudCover <= ccMax) {\n   cloudCoverState = normal;\n   } else { if (cloudCover < ccMin || (cloudCover >= ccMax && cloudCover <= cloudCoverGoodMax)) { \n   cloudCoverState = good;\n   } else {\n   cloudCoverState = bad;\n   }\n   \n   }\n   }else {cloudCoverState = good;}\n   \n   //check humidity\n   \n   if (humidity >= hmMin && humidity <= hmMax) {\n   humidityState = normal;\n   } else { if (humidity >= humidityGoodMin && humidity < hmMin) {\n   humidityState = good;\n   } else {\n   humidityState = bad;\n   }\n   \n   }\n   \n   //check dewPoint\n   \n   if (dewPoint >= dewPointMin && dewPoint <= dewPointMax) {\n   dewPointState = good;\n   } else {\n   if ((month == 12 || month == 1 || month == 3 || month == 4) && dewPoint >= dewPointNormalMin && dewPoint < dewPointMin) {\n   dewPointState = normal;\n   } else {\n   dewPointState = bad;\n   }\n   }\n   \n   \n   \n   //check wind speed\n   \n   if (windSpeed >= windSpeedMin && windSpeed <= windSpeedMax) {\n   windSpeedState = normal;\n   } else { if (windSpeed < windSpeedMin) {\n   windSpeedState = good;\n   } else {\n   windSpeedState = bad;\n   }\n   \n   }\n   \n   node.log(\"\\n\\n\");\n   node.log(\" tempState = \"+ tempState +\" dewPointState = \"+dewPointState +\" humidityState= \"+humidityState +\" windSpeedState= \"+windSpeedState+\" cloudCoverState= \"+cloudCoverState+\"\\n\\n\");\n   node.log(\"\\n\\n\");\n   \n   \n   \n   if (tempState == bad || cloudCoverState == bad || humidityState == bad || dewPointState == bad || windSpeedState == bad) {\n   weatherState = bad;\n   } else { if (tempState == normal && cloudCoverState == normal && humidityState == normal && windSpeedState == normal) {\n   weatherState = normal;\n   } else {\n   weatherState = good;\n   }\n   \n   }\n   //create hourly objects\n   \n   newWeatherObj = {\n   time:{ epoch : time, date : dateStringLocal },\n   hour : hour,\n   state : weatherState\n   };\n   \n   //push data\n   \n   weatherStateList.push(newWeatherObj);\n   \n   \n   }\n\n}else{weatherStateList = [];}\n\n\nnewmsg = {payload : weatherStateList};\n\nreturn newmsg;","outputs":1,"noerr":0,"x":726,"y":387,"wires":[[]]},{"id":"d47c4200.6b7ec","type":"function","z":"84fa4ecf.88b35","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n\n","outputs":1,"noerr":0,"x":490,"y":239,"wires":[["f95c4ed6.92229"]]},{"id":"f95c4ed6.92229","type":"json","z":"84fa4ecf.88b35","name":"","x":605,"y":318,"wires":[["d723c9c6.bec638"]]},{"id":"f6754138.4ee7d","type":"catch","z":"84fa4ecf.88b35","name":"","scope":["5ec848bf.407388"],"x":86,"y":317,"wires":[["665212f3.01aa2c"]]},{"id":"665212f3.01aa2c","type":"function","z":"84fa4ecf.88b35","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":277,"y":319,"wires":[["f95c4ed6.92229"]]},{"id":"1adc682c.0973b8","type":"function","z":"84fa4ecf.88b35","name":"create url","func":"\n//var time = \"2016-11-01T15:00:00+0200\" ;\nvar year = msg.time.year; //2016; //var year = msg.time.year;??\nvar month = msg.time.month; //\"11\";   //\"09\";\nvar day = msg.time.day; //\"05\";   //\"06\";\n\nif((typeof year === 'undefined') ||(typeof month === 'undefined') || (typeof day === 'undefined')){\n   node.log(\"undefined parameter\\n\");\n   return;\n}else{\n\n//var contextFlow5 = this.context().flow;\nvar monthVar = flow.get('monthCont')||0; //arxikopoieitai mono sth prwth klhsh\n//var monthVar = contextFlow5.get('monthCont')||0;\nnode.log(\"monthCont =\"+ monthVar);\nmonthVar = parseInt(month);\nnode.log(\"monthVar =\"+ monthVar);\n//contextFlow5.set('monthCont',monthVar);\nflow.set('monthCont',monthVar);\n//monthVar = contextFlow5.get('monthCont');\nmonthVar = flow.get('monthCont');\nnode.log(\"monthCont =\"+ monthVar);\n\nvar time = \"\\\"+year+\"-\"+month+\"-\"+day+\"T00:00:00+0200\" ;\n\nvar exclude =\"currently\";//\"currently\";//\"hourly\";\nvar units = \"si\";\nmsgUrl=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,\"+time+\"?exclude=\"+exclude+\"&units=\"+units;\nmsgMethod = \"GET\";\n//\n//msg.url=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,2017-01-01T00:00:00+0200?exclude=hourly&units=si\";\nmsg ={};\nmsg = {\n   url : msgUrl,\n   method : msgMethod\n};\n\nreturn

msg;\n}","outputs":1,"noerr":0,"x":223,"y":137,"wires":[["5ec848bf.407388"]]},{"id":"a2a23b5e.6e7c48","type":"subflo
w:84fa4ecf.88b35","z":"77be59a9.76d338","x":448,"y":128,"wires":[[]]}]

Κώδικας 7 : Ροή της υπορροής Weather All Seasons Subflow

[{"id":"41a8d055.38c8e","type":"http
request","z":"924ebf69.d166a","name":"Athens","method":"use","ret":"txt","url":"","tls":"","x":326,"y":206,"wires":[["8
8e81aee.304b08"]]},{"id":"9508a45e.749cc8","type":"function","z":"924ebf69.d166a","name":"weather analysis all
seasons","func":"/*var monthString = \"09\";\nvar month = parseInt(monthString);\nnode.log (\"monthString
=\"+monthString+ \"   month = \"+month);\n*/\n\nvar month = flow.get('monthCont');\nnode.log(\"month =
\"+month);\n\n\n\nvar bad = \"bad\";\nvar normal = \"normal\";\nvar good = \"good\";\n\ntempSepNormalMax =
28;\ntempSepNormalMin = 19;\ntempOctNormalMax = 22;\ntempOctNormalMin = 15;\ntempNovNormalMax =
18;\ntempNovNormalMin = 10;\ntempDecNormalMax = 16;\ntempDecNormalMin = 8;\ntempJanNormalMax =
12;\ntempJanNormalMin = 5;\ntempFebNormalMax = 12;\ntempFebNormalMin = 5;\ntempMarNormalMax =
16;\ntempMarNormalMin = 7;\ntempAprNormalMax = 20;\ntempAprNormalMin = 10;\ntempMayNormalMax =
25;\ntempMayNormalMin = 12;\ntempJunNormalMax = 28;\ntempJunNormalMin = 17;\ntempJulNormalMax =
32;\ntempJulNormalMin = 23;\ntempAugNormalMax = 33;\ntempAugNormalMin = 21;\ntempGoodMax =
39;\ntempGoodMin = 16;\n\ncloudCoverSepNormalMax = 0.5;\ncloudCoverSepNormalMin =
0.35;\ncloudCoverOctNormalMax = 0.6;\ncloudCoverOctNormalMin = 0.5;\ncloudCoverNovNormalMax =
0.68;\ncloudCoverNovNormalMin = 0.6;\ncloudCoverDecNormalMax = 0.72;\ncloudCoverDecNormalMin =
0.68;\ncloudCoverJanNormalMax = 0.77;\ncloudCoverJanNormalMin = 0.73;\ncloudCoverFebNormalMax =
0.75;\ncloudCoverFebNormalMin = 0.71;\ncloudCoverMarNormalMax = 0.72;\ncloudCoverMarNormalMin =
0.65;\ncloudCoverAprNormalMax = 0.65;\ncloudCoverAprNormalMin = 0.60;\ncloudCoverMayNormalMax =
0.58;\ncloudCoverMayNormalMin = 0.45;\ncloudCoverJunNormalMax = 0.45;\ncloudCoverJunNormalMin =
0.33;\ncloudCoverJulNormalMax = 0.33;\ncloudCoverJulNormalMin = 0.29;\ncloudCoverAugNormalMax =
0.35;\ncloudCoverAugNormalMin = 0.28;\ncloudCoverGoodMax = 0.53;\n\nhumiditySepNormalMax =
0.75;\nhumiditySepNormalMin = 0.35;\nhumidityOctNormalMax = 0.82;\nhumidityOctNormalMin =
0.45;\nhumidityNovNormalMax = 0.85;\nhumidityNovNormalMin = 0.52;\nhumidityDecNormalMax =
0.85;\nhumidityDecNormalMin = 0.56;\nhumidityJanNormalMax = 0.85;\nhumidityJanNormalMin =
0.55;\nhumidityFebNormalMax = 0.85;\nhumidityFebNormalMin = 0.52;\nhumidityMarNormalMax =
0.83;\nhumidityMarNormalMin = 0.45;\nhumidityAprNormalMax = 0.80;\nhumidityAprNormalMin =
0.40;\nhumidityMayNormalMax = 0.77;\nhumidityMayNormalMin = 0.35;\nhumidityJunNormalMax =
0.68;\nhumidityJunNormalMin = 0.30;\nhumidityJulNormalMax = 0.59;\nhumidityJulNormalMin =
0.28;\nhumidityAugNormalMax = 0.63;\nhumidityAugNormalMin = 0.29;\nhumidityGoodMin = 0.2;\n\ndewPointMax
= 17;\ndewPointMin = 5;\ndewPointDecJanNormalMin = 2;\ndewPointFebNormalMin = 0;\ndewPointMarNormalMin
= 3;\ndewPointAprNormalMin = 4;\n\nwindSpeedNormalMax = 8;\nwindSpeedNormalMin =
3;\nwindSpeedJulAugNormalMin = 5;\nwindSpeedJulAugNormalMax = 9;\n\n\nvar tempState = \"\";\nvar
cloudCoverState = \"\";\nvar humidityState = \"\";\nvar dewPointState = \"\";\nvar windSpeedState = \"\";\n\n switch
(month) {\n   case 9:\n   // code\n   tempMin = tempSepNormalMin;\n   tempMax =
tempSepNormalMax;\n   node.log(\" SEP tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n
\n   ccMin = cloudCoverSepNormalMin;\n   ccMax = cloudCoverSepNormalMax;\n   node.log(\" SEP
ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humiditySepNormalMin;\n
hmMax = humiditySepNormalMax;\n   node.log(\" SEP hmMin = \"+ hmMin+\"   hmMax = \"+
hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n   windSpeedMax =
windSpeedNormalMax;\n   node.log(\" SEP windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+
windSpeedMax+\"\\n\");\n   \n   break;\n   case 10:\n   // code\n   tempMin =
tempOctNormalMin;\n   tempMax = tempOctNormalMax;\n   node.log(\" OCT tempmin = \"+ tempMin+\"
tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverOctNormalMin;\n   ccMax =
cloudCoverOctNormalMax;\n   node.log(\" OCT ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n
hmMin = humidityOctNormalMin;\n   hmMax = humidityOctNormalMax;\n   node.log(\" OCT hmMin = \"+
hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n
windSpeedMax = windSpeedNormalMax;\n   node.log(\" OCT windSpeedMin = \"+ windSpeedMin+\"
windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   \n   break;\n   case 11:\n   // code\n
tempMin = tempNovNormalMin;\n   tempMax = tempNovNormalMax;\n   node.log(\" NOV tempmin = \"+
tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverNovNormalMin;\n   ccMax
= cloudCoverNovNormalMax;\n   node.log(\" NOV ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n   hmMin = humidityNovNormalMin;\n   hmMax = humidityNovNormalMax;\n   node.log(\" NOV
hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n
windSpeedMax = windSpeedNormalMax;\n   node.log(\" NOV windSpeedMin = \"+ windSpeedMin+\"
windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   \n   break;\n   case 12:\n   // code\n
tempMin = tempDecNormalMin;\n   tempMax = tempDecNormalMax;\n   node.log(\" DEC tempmin = \"+
tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverDecNormalMin;\n   ccMax
= cloudCoverDecNormalMax;\n   node.log(\" DEC ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n   hmMin = humidityDecNormalMin;\n   hmMax = humidityDecNormalMax;\n   node.log(\" DEC

```
hmMin = \"+ hmMin+\"  hmMax = \"+ hmMax+\"\\n\");\n        \n        windSpeedMin = windSpeedNormalMin;\n
windSpeedMax = windSpeedNormalMax;\n        node.log(\" DEC windSpeedMin = \"+ windSpeedMin+\"
windSpeedMax = \"+ windSpeedMax+\"\\n\");\n        \n        dewPointNormalMin = dewPointDecJanNormalMin;\n
node.log(\" DEC dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n        \n        break;\n        case 1:\n
// code\n        tempMin = tempJanNormalMin;\n        tempMax = tempJanNormalMax;\n        node.log(\" JAN
tempmin = \"+ tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n        ccMin = cloudCoverJanNormalMin;\n
ccMax = cloudCoverJanNormalMax;\n        node.log(\" JAN ccMin = \"+ ccMin+\"  ccMax = \"+ ccMax+\"\\n\");\n
\n        hmMin = humidityJanNormalMin;\n        hmMax = humidityJanNormalMax;\n        node.log(\" JAN
hmMin = \"+ hmMin+\"  hmMax = \"+ hmMax+\"\\n\");\n        \n        \n        windSpeedMin =
windSpeedNormalMin;\n        windSpeedMax = windSpeedNormalMax;\n        node.log(\" JAN windSpeedMin =
\"+ windSpeedMin+\"  windSpeedMax = \"+ windSpeedMax+\"\\n\");\n        \n        dewPointNormalMin =
dewPointDecJanNormalMin;\n        node.log(\" JAN dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n
\n        break;\n        case 2:\n        // code\n        tempMin = tempFebNormalMin;\n        tempMax =
tempFebNormalMax;\n        node.log(\" FEB tempmin = \"+ tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n
\n        ccMin = cloudCoverFebNormalMin;\n        ccMax = cloudCoverFebNormalMax;\n        node.log(\" FEB
ccMin = \"+ ccMin+\"  ccMax = \"+ ccMax+\"\\n\");\n        \n        hmMin = humidityFebNormalMin;\n
hmMax = humidityFebNormalMax;\n        node.log(\" FEB hmMin = \"+ hmMin+\"  hmMax = \"+
hmMax+\"\\n\");\n        \n        \n        windSpeedMin = windSpeedNormalMin;\n        windSpeedMax =
windSpeedNormalMax;\n        node.log(\" FEB windSpeedMin = \"+ windSpeedMin+\"  windSpeedMax = \"+
windSpeedMax+\"\\n\");\n        \n        dewPointNormalMin = dewPointFebNormalMin;\n        node.log(\" FEB
dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n        \n        break;\n        case 3:\n        // code\n
tempMin = tempMarNormalMin;\n        tempMax = tempMarNormalMax;\n        node.log(\" MAR tempmin = \"+
tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n        \n        ccMin = cloudCoverMarNormalMin;\n        ccMax
= cloudCoverMarNormalMax;\n        node.log(\" MAR ccMin = \"+ ccMin+\"  ccMax = \"+ ccMax+\"\\n\");\n
\n        hmMin = humidityMarNormalMin;\n        hmMax = humidityMarNormalMax;\n        node.log(\" MAR
hmMin = \"+ hmMin+\"  hmMax = \"+ hmMax+\"\\n\");\n        \n        \n        windSpeedMin =
windSpeedNormalMin;\n        windSpeedMax = windSpeedNormalMax;\n        node.log(\" MAR windSpeedMin =
\"+ windSpeedMin+\"  windSpeedMax = \"+ windSpeedMax+\"\\n\");\n        \n        dewPointNormalMin =
dewPointMarNormalMin;\n        node.log(\" MAR dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n
\n        break;\n        case 4:\n        // code\n        tempMin = tempAprNormalMin;\n        tempMax =
tempAprNormalMax;\n        node.log(\" APR tempmin = \"+ tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n
\n        ccMin = cloudCoverAprNormalMin;\n        ccMax = cloudCoverAprNormalMax;\n        node.log(\" APR
ccMin = \"+ ccMin+\"  ccMax = \"+ ccMax+\"\\n\");\n        \n        hmMin = humidityAprNormalMin;\n
hmMax = humidityAprNormalMax;\n        node.log(\" APR hmMin = \"+ hmMin+\"  hmMax = \"+
hmMax+\"\\n\");\n        \n        \n        windSpeedMin = windSpeedNormalMin;\n        windSpeedMax =
windSpeedNormalMax;\n        node.log(\" APR windSpeedMin = \"+ windSpeedMin+\"  windSpeedMax = \"+
windSpeedMax+\"\\n\");\n        \n        dewPointNormalMin = dewPointAprNormalMin;\n        node.log(\" APR
dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n        \n        break; \n        case 5:\n        // code\n
tempMin = tempMayNormalMin;\n        tempMax = tempMayNormalMax;\n        node.log(\" MAY tempmin = \"+
tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n        \n        ccMin = cloudCoverMayNormalMin;\n
ccMax = cloudCoverMayNormalMax;\n        node.log(\" MAY ccMin = \"+ ccMin+\"  ccMax = \"+
ccMax+\"\\n\");\n        \n        hmMin = humidityMayNormalMin;\n        hmMax = humidityMayNormalMax;\n
node.log(\" MAY hmMin = \"+ hmMin+\"  hmMax = \"+ hmMax+\"\\n\");\n        \n        \n        windSpeedMin =
windSpeedNormalMin;\n        windSpeedMax = windSpeedNormalMax;\n        node.log(\" MAY windSpeedMin =
\"+ windSpeedMin+\"  windSpeedMax = \"+ windSpeedMax+\"\\n\");\n        \n        \n        break;\n        case 6:\n
// code\n        tempMin = tempJunNormalMin;\n        tempMax = tempJunNormalMax;\n        node.log(\" JUN
tempmin = \"+ tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n        \n        ccMin = cloudCoverJunNormalMin;\n
ccMax = cloudCoverJunNormalMax;\n        node.log(\" JUN ccMin = \"+ ccMin+\"  ccMax = \"+ ccMax+\"\\n\");\n
\n        hmMin = humidityJunNormalMin;\n        hmMax = humidityJunNormalMax;\n        node.log(\" JUN
hmMin = \"+ hmMin+\"  hmMax = \"+ hmMax+\"\\n\");\n        \n        \n        windSpeedMin =
windSpeedNormalMin;\n        windSpeedMax = windSpeedNormalMax;\n        node.log(\" JUN windSpeedMin =
\"+ windSpeedMin+\"  windSpeedMax = \"+ windSpeedMax+\"\\n\");\n        \n        \n        break;\n        case 7:\n
// code\n        tempMin = tempJulNormalMin;\n        tempMax = tempJulNormalMax;\n        node.log(\" JUL
tempmin = \"+ tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n        \n        ccMin = cloudCoverJulNormalMin;\n
ccMax = cloudCoverJulNormalMax;\n        node.log(\" JUL ccMin = \"+ ccMin+\"  ccMax = \"+ ccMax+\"\\n\");\n
\n        hmMin = humidityJulNormalMin;\n        hmMax = humidityJulNormalMax;\n        node.log(\" JUL
hmMin = \"+ hmMin+\"  hmMax = \"+ hmMax+\"\\n\");\n        \n        \n        windSpeedMin =
windSpeedJulAugNormalMin;\n        windSpeedMax = windSpeedJulAugNormalMax;\n        node.log(\" JUL
windSpeedMin = \"+ windSpeedMin+\"  windSpeedMax = \"+ windSpeedMax+\"\\n\");\n        \n        \n
break;\n        case 8:\n        // code\n        tempMin = tempAugNormalMin;\n        tempMax =
tempAugNormalMax;\n        node.log(\" AUG tempmin = \"+ tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n
\n        ccMin = cloudCoverAugNormalMin;\n        ccMax = cloudCoverAugNormalMax;\n        node.log(\"
AUG ccMin = \"+ ccMin+\"  ccMax = \"+ ccMax+\"\\n\");\n        \n        hmMin = humidityAugNormalMin;\n
hmMax = humidityAugNormalMax;\n        node.log(\" AUG hmMin = \"+ hmMin+\"  hmMax = \"+
hmMax+\"\\n\");\n        \n        \n        windSpeedMin = windSpeedJulAugNormalMin;\n        windSpeedMax =
windSpeedJulAugNormalMax;\n        node.log(\" AUG windSpeedMin = \"+ windSpeedMin+\"  windSpeedMax =
\"+ windSpeedMax+\"\\n\");\n        \n        \n        break; \n        default:\n        // code\n        node.log(\"no
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valid month\");\n   return;\n   }\n   \n\n\nif(msg.hasOwnProperty('payload')){\n\n   Things =msg.payload.hourly.data;//array of {}\n   //node.log(Things);\n   msg = {};\n   \n   \n   //create array of hourly objects\n   weatherStateList = [];\n   //\n   for (var prop in Things) {\n   //////Things[prop] == {}\n   hourlyData = Things[prop];\n   //hourlyData = Things[12];\n   \n   \n   //node.log(\"\\n\\n\");\n   // // stringTime =\"time\";\n // // stringTemp = \"temperature\";\n   // // stringDewPoint = \"dewPoint\";\n   // // stringHumidity = \"humidity\";\n // // stringWindSpeed=\"windSpeed\";\n   // //stringCloudCover = \"cloudCover\";\n   \n   time =hourlyData.time;\n   temp = hourlyData.temperature;\n   dewPoint = hourlyData.dewPoint;\n   humidity = hourlyData.humidity;\n   windSpeed = hourlyData.windSpeed;\n   if (hourlyData.hasOwnProperty('cloudCover')) {\n   cloudCover = hourlyData.cloudCover;\n   } else {\n   cloudCover = -1;\n   }\n   node.log(\"time= \"+time+\" temp = \"+temp+\" dewpoint = \"+dewPoint+\" humidity= \"+humidity+\" windSpeed= \"+windSpeed+\" cloudCover= \"+cloudCover+\"\\n\\n\");\n   \n   \n   \n   dateObjGMT = new Date(time*1000);\n   dateStringLocal = dateObjGMT.toLocaleString();\n   var hour = dateObjGMT.getHours();\n   node.log(\"hour = \"+ hour + \"\\n\");\n   \n   \n   //check temperature\n   \n   if (temp >= tempMin && temp <= tempMax) {\n   tempState = normal;\n   } else { if ((temp >= tempMax && temp <= tempGoodMax) || (temp <= tempMin && temp >= tempGoodMin)) {\n   tempState = good;\n   } else {\n   tempState = bad;\n   }\n   \n   }\n   \n   \n   \n   //check cloud cover \n   \n   if (cloudCover != -1) {\n   if (cloudCover >= ccMin && cloudCover <= ccMax) {\n   cloudCoverState = normal;\n   } else { if (cloudCover < ccMin || (cloudCover >= ccMax && cloudCover <= cloudCoverGoodMax)) {\n   cloudCoverState = good;\n   } else {\n   cloudCoverState = bad;\n   }\n   \n   }\n   }else {cloudCoverState = good;}\n   \n   //check humidity\n   \n   if (humidity >= hmMin && humidity <= hmMax) {\n   humidityState = normal;\n   } else { if (humidity >= humidityGoodMin && humidity < hmMin) {\n   humidityState = good;\n   } else {\n   humidityState = bad;\n   }\n   \n   }\n   \n   //check dewPoint\n   \n   if (dewPoint >= dewPointMin && dewPoint <= dewPointMax) {\n   dewPointState = good;\n   } else {\n   if ((month == 12 || month == 1 || month == 3 || month == 4) && dewPoint >= dewPointNormalMin && dewPoint < dewPointMin) {\n   dewPointState = normal;\n   } else {\n   dewPointState = bad;\n   }\n   \n   }\n   \n   \n   //check wind speed\n   \n   if (windSpeed >= windSpeedMin && windSpeed <= windSpeedMax) {\n   windSpeedState = normal;\n   } else { if (windSpeed < windSpeedMin) {\n   windSpeedState = good;\n   } else {\n   windSpeedState = bad;\n   }\n   \n   }\n   \n   node.log(\"\\n\\n\");\n   node.log(\" tempState = \"+ tempState +\" dewPointState = \"+dewPointState +\" humidityState= \"+humidityState +\" windSpeedState= \"+windSpeedState+\" cloudCoverState= \"+cloudCoverState+\"\\n\\n\");\n   node.log(\"\\n\\n\");\n   \n   \n   \n   if (tempState == bad || cloudCoverState == bad || humidityState == bad || dewPointState == bad || windSpeedState == bad) {\n   weatherState = bad;\n   } else { if (tempState == normal && cloudCoverState == normal && humidityState == normal && windSpeedState == normal) {\n   weatherState = normal;\n   } else {\n   weatherState = good;\n   }\n   \n   }\n   //create hourly objects\n   \n   newWeatherObj = {\n   time:{ epoch : time, date : dateStringLocal },\n   hour : hour,\n   state : weatherState\n   };\n   \n   //push data\n   \n   weatherStateList.push(newWeatherObj);\n   \n   \n   }\n\n}else{weatherStateList = [];}\n\n\nnewmsg = {payload : weatherStateList};\n\nreturn newmsg;","outputs":1,"noerr":0,"x":742,"y":401,"wires":[[]]},{"id":"88e81aee.304b08","type":"function","z":"924ebf69.d166a","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n\n","outputs":1,"noerr":0,"x":506,"y":253,"wires":[["335835da.fffd2a"]]},{"id":"335835da.fffd2a","type":"json","z":"924ebf69.d166a","name":"","x":621,"y":332,"wires":[["9508a45e.749cc8"]]},{"id":"ef089ffb.0f38","type":"catch","z":"924ebf69.d166a","name":"","scope":["41a8d055.38c8e"],"x":102,"y":331,"wires":[["40034ac.d8079b4"]]},{"id":"40034ac.d8079b4","type":"function","z":"924ebf69.d166a","name":"handle","func":"msg = { };\nreturn msg;","outputs":1,"noerr":0,"x":293,"y":333,"wires":[["335835da.fffd2a"]]},{"id":"e7c910a0.4fd92","type":"function","z":"924ebf69.d166a","name":"create url","func":"\n//var time = \"2016-11-01T15:00:00+0200\" ;\nvar year = msg.time.year; //2016; //var year = msg.time.year;??\nvar month = msg.time.month; //\"11\";   //\"09\";\nvar day = msg.time.day; //\"05\";   //\"06\";\n\nif((typeof year === 'undefined') ||(typeof month === 'undefined') || (typeof day === 'undefined')){\n{\n   node.log(\"undefined parameter\\n\");\n   return;\n}else{\n\n//var contextFlow5 = this.context().flow;\nvar monthVar = flow.get('monthCont')||0; //arxikopoieitai mono sth prwth klhsh\n//var monthVar = contextFlow5.get('monthCont')||0;\n\nnode.log(\"monthCont =\"+ monthVar);\nmonthVar = parseInt(month);\nnode.log(\"monthVar =\"+ monthVar);\n\n//contextFlow5.set('monthCont',monthVar);\nflow.set('monthCont',monthVar);\n//monthVar = contextFlow5.get('monthCont');\nmonthVar = flow.get('monthCont');\nnode.log(\"monthCont =\"+ monthVar);\n\nvar time = \"\"+year+\"-\"+month+\"-\"+day+\"T00:00:00+0200\" ;\n\nvar exclude =\"currently\";//\"currently\";// \"hourly\";\nvar units = \"si\";\nmsgUrl=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,\"+time+\"?exclude=\"+exclude+\"&units=\"+units;\nmsgMethod = \"GET\";\n//msg.url=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,2017-01-01T00:00:00+0200?exclude=hourly&units=si\";\nmsg ={};\nmsg = {\n   url : msgUrl,\n   method : msgMethod\n};\n\nreturn msg;\n}","outputs":1,"noerr":0,"x":239,"y":151,"wires":[["41a8d055.38c8e"]]}]

Κώδικας 8 : Τελική ροή καιρού

[{"id":"82992bd1.3bce98","type":"inject","z":"fb35491.32a75b8","name":"","topic":"","payload":"","payloadType":"date","repeat":"","crontab":"","once":false,"x":123,"y":33,"wires":[["191198fd.7b8da7"]]},{"id":"7ef59db.b0f9964","type":"http request","z":"fb35491.32a75b8","name":"athens","method":"use","ret":"txt","url":"","tls":"","x":359,"y":279,"wires":[["b8d80970.377088","3049436a.e3eb7c","978f92ac.c4984"]]},{"id":"b8d80970.377088","type":"debug","z":"fb35491.32a75b8","name":"","active":true,"console":"false","complete":"true","x":439,"y":122,"wires":[]},{"id":"b64c3395.fb3a4","type":"file","z":"fb35491.32a75b8","name":"","filename":"Desktop/testWeatherState","appendNewline":true,"createDir":true,"overwriteFile":"true","x":846,"y":547,"wires":[]},{"id":"232556c0.c3e99a","type":"function","z":"fb35491.32a75b8","name":"weather analysis all seasons","func":"/*var monthString = \"09\";\nvar month = parseInt(monthString);\n\nnode.log (\"monthString =\"+monthString+ \"   month = \"+month);\n*/\n\nvar month = flow.get('monthCont');\n\nnode.log(\"month = \"+month);\n\n\n\nvar bad = \"bad\";\nvar normal = \"normal\";\nvar good = \"good\";\n\ntempSepNormalMax = 28;\ntempSepNormalMin = 19;\ntempOctNormalMax = 22;\ntempOctNormalMin = 15;\ntempNovNormalMax = 18;\ntempNovNormalMin = 10;\ntempDecNormalMax = 16;\ntempDecNormalMin = 8;\ntempJanNormalMax = 12;\ntempJanNormalMin = 5;\ntempFebNormalMax = 12;\ntempFebNormalMin = 5;\ntempMarNormalMax = 16;\ntempMarNormalMin = 7;\ntempAprNormalMax = 20;\ntempAprNormalMin = 10;\ntempMayNormalMax = 25;\ntempMayNormalMin = 12;\ntempJunNormalMax = 28;\ntempJunNormalMin = 17;\ntempJulNormalMax = 32;\ntempJulNormalMin = 23;\ntempAugNormalMax = 33;\ntempAugNormalMin = 21;\ntempGoodMax = 39;\ntempGoodMin = 16;\n\ncloudCoverSepNormalMax = 0.5;\ncloudCoverSepNormalMin = 0.35;\ncloudCoverOctNormalMax = 0.6;\ncloudCoverOctNormalMin = 0.5;\ncloudCoverNovNormalMax = 0.68;\ncloudCoverNovNormalMin = 0.6;\ncloudCoverDecNormalMax = 0.72;\ncloudCoverDecNormalMin = 0.68;\ncloudCoverJanNormalMax = 0.77;\ncloudCoverJanNormalMin = 0.73;\ncloudCoverFebNormalMax = 0.75;\ncloudCoverFebNormalMin = 0.71;\ncloudCoverMarNormalMax = 0.72;\ncloudCoverMarNormalMin = 0.65;\ncloudCoverAprNormalMax = 0.65;\ncloudCoverAprNormalMin = 0.60;\ncloudCoverMayNormalMax = 0.58;\ncloudCoverMayNormalMin = 0.45;\ncloudCoverJunNormalMax = 0.45;\ncloudCoverJunNormalMin = 0.33;\ncloudCoverJulNormalMax = 0.33;\ncloudCoverJulNormalMin = 0.29;\ncloudCoverAugNormalMax = 0.35;\ncloudCoverAugNormalMin = 0.28;\ncloudCoverGoodMax = 0.53;\n\nhumiditySepNormalMax = 0.75;\nhumiditySepNormalMin = 0.35;\nhumidityOctNormalMax = 0.82;\nhumidityOctNormalMin = 0.45;\nhumidityNovNormalMax = 0.85;\nhumidityNovNormalMin = 0.52;\nhumidityDecNormalMax = 0.85;\nhumidityDecNormalMin = 0.56;\nhumidityJanNormalMax = 0.85;\nhumidityJanNormalMin = 0.55;\nhumidityFebNormalMax = 0.85;\nhumidityFebNormalMin = 0.52;\nhumidityMarNormalMax = 0.83;\nhumidityMarNormalMin = 0.45;\nhumidityAprNormalMax = 0.80;\nhumidityAprNormalMin = 0.40;\nhumidityMayNormalMax = 0.77;\nhumidityMayNormalMin = 0.35;\nhumidityJunNormalMax = 0.68;\nhumidityJunNormalMin = 0.30;\nhumidityJulNormalMax = 0.59;\nhumidityJulNormalMin = 0.28;\nhumidityAugNormalMax = 0.63;\nhumidityAugNormalMin = 0.29;\nhumidityGoodMin = 0.2;\n\ndewPointMax = 17;\ndewPointMin = 5;\ndewPointDecJanNormalMin = 2;\ndewPointFebNormalMin = 0;\ndewPointMarNormalMin = 3;\ndewPointAprNormalMin = 4;\n\nwindSpeedNormalMax = 8;\nwindSpeedNormalMin = 3;\nwindSpeedJulAugNormalMin = 5;\nwindSpeedJulAugNormalMax = 9;\n\n\nvar tempState = \"\";\nvar cloudCoverState = \"\";\nvar humidityState = \"\";\nvar dewPointState = \"\";\nvar windSpeedState = \"\";\n\n switch (month) {\n   case 9:\n   // code\n   tempMin = tempSepNormalMin;\n   tempMax = tempSepNormalMax;\n   node.log(\" SEP tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverSepNormalMin;\n   ccMax = cloudCoverSepNormalMax;\n   node.log(\" SEP ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humiditySepNormalMin;\n   hmMax = humiditySepNormalMax;\n   node.log(\" SEP hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n   windSpeedMax = windSpeedNormalMax;\n   node.log(\" SEP windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   break;\n   case 10:\n   // code\n   tempMin = tempOctNormalMin;\n   tempMax = tempOctNormalMax;\n   node.log(\" OCT tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverOctNormalMin;\n   ccMax = cloudCoverOctNormalMax;\n   node.log(\" OCT ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityOctNormalMin;\n   hmMax = humidityOctNormalMax;\n   node.log(\" OCT hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n   windSpeedMax = windSpeedNormalMax;\n   node.log(\" OCT windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   \n   break;\n   case 11:\n   // code\n   tempMin = tempNovNormalMin;\n   tempMax = tempNovNormalMax;\n   node.log(\" NOV tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverNovNormalMin;\n   ccMax = cloudCoverNovNormalMax;\n   node.log(\" NOV ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityNovNormalMin;\n   hmMax = humidityNovNormalMax;\n   node.log(\" NOV hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n   windSpeedMax = windSpeedNormalMax;\n   node.log(\" NOV windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n   \n   \n   break;\n   case 12:\n   // code\n   tempMin = tempDecNormalMin;\n   tempMax = tempDecNormalMax;\n   node.log(\" DEC tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverDecNormalMin;\n   ccMax = cloudCoverDecNormalMax;\n   node.log(\" DEC ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humidityDecNormalMin;\n   hmMax = humidityDecNormalMax;\n   node.log(\" DEC hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   windSpeedMin = windSpeedNormalMin;\n

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windSpeedMax = windSpeedNormalMax;\n          node.log(\" DEC windSpeedMin = \"+ windSpeedMin+\"
windSpeedMax = \"+ windSpeedMax+\"\\n\");\n          \n          dewPointNormalMin = dewPointDecJanNormalMin;\n
node.log(\" DEC dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n          \n          break;\n          case 1:\n
// code\n          tempMin = tempJanNormalMin;\n          tempMax = tempJanNormalMax;\n          node.log(\" JAN
tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n          ccMin = cloudCoverJanNormalMin;\n
ccMax = cloudCoverJanNormalMax;\n          node.log(\" JAN ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n          hmMin = humidityJanNormalMin;\n          hmMax = humidityJanNormalMax;\n          node.log(\" JAN
hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n          \n          \n          windSpeedMin =
windSpeedNormalMin;\n          windSpeedMax = windSpeedNormalMax;\n          node.log(\" JAN windSpeedMin =
\"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n          \n          dewPointNormalMin =
dewPointDecJanNormalMin;\n          node.log(\" JAN dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n
\n          break;\n          case 2:\n          // code\n          tempMin = tempFebNormalMin;\n          tempMax =
tempFebNormalMax;\n          node.log(\" FEB tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n
\n          ccMin = cloudCoverFebNormalMin;\n          ccMax = cloudCoverFebNormalMax;\n          node.log(\" FEB
ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n          \n          hmMin = humidityFebNormalMin;\n
hmMax = humidityFebNormalMax;\n          node.log(\" FEB hmMin = \"+ hmMin+\"   hmMax = \"+
hmMax+\"\\n\");\n          \n          \n          windSpeedMin = windSpeedNormalMin;\n          windSpeedMax =
windSpeedNormalMax;\n          node.log(\" FEB windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+
windSpeedMax+\"\\n\");\n          \n          dewPointNormalMin = dewPointFebNormalMin;\n          node.log(\" FEB
dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n          \n          break;\n          case 3:\n          // code\n
tempMin = tempMarNormalMin;\n          tempMax = tempMarNormalMax;\n          node.log(\" MAR tempmin = \"+
tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n          \n          ccMin = cloudCoverMarNormalMin;\n          ccMax
= cloudCoverMarNormalMax;\n          node.log(\" MAR ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n          hmMin = humidityMarNormalMin;\n          hmMax = humidityMarNormalMax;\n          node.log(\" MAR
hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n          \n          \n          windSpeedMin =
windSpeedNormalMin;\n          windSpeedMax = windSpeedNormalMax;\n          node.log(\" MAR windSpeedMin =
\"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n          \n          dewPointNormalMin =
dewPointMarNormalMin;\n          node.log(\" MAR dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n
\n          break;\n          case 4:\n          // code\n          tempMin = tempAprNormalMin;\n          tempMax =
tempAprNormalMax;\n          node.log(\" APR tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n
\n          ccMin = cloudCoverAprNormalMin;\n          ccMax = cloudCoverAprNormalMax;\n          node.log(\" APR
ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n          \n          hmMin = humidityAprNormalMin;\n
hmMax = humidityAprNormalMax;\n          node.log(\" APR hmMin = \"+ hmMin+\"   hmMax = \"+
hmMax+\"\\n\");\n          \n          \n          windSpeedMin = windSpeedNormalMin;\n          windSpeedMax =
windSpeedNormalMax;\n          node.log(\" APR windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+
windSpeedMax+\"\\n\");\n          \n          dewPointNormalMin = dewPointAprNormalMin;\n          node.log(\" APR
dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n          \n          break; \n          case 5:\n          // code\n
tempMin = tempMayNormalMin;\n          tempMax = tempMayNormalMax;\n          node.log(\" MAY tempmin = \"+
tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n          \n          ccMin = cloudCoverMayNormalMin;\n
ccMax = cloudCoverMayNormalMax;\n          node.log(\" MAY ccMin = \"+ ccMin+\"   ccMax = \"+
ccMax+\"\\n\");\n          \n          hmMin = humidityMayNormalMin;\n          hmMax = humidityMayNormalMax;\n
node.log(\" MAY hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n          \n          \n          windSpeedMin =
windSpeedNormalMin;\n          windSpeedMax = windSpeedNormalMax;\n          node.log(\" MAY windSpeedMin =
\"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n          \n          \n          break;\n          case 6:\n
// code\n          tempMin = tempJunNormalMin;\n          tempMax = tempJunNormalMax;\n          node.log(\" JUN
tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n          \n          ccMin = cloudCoverJunNormalMin;\n
ccMax = cloudCoverJunNormalMax;\n          node.log(\" JUN ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n          hmMin = humidityJunNormalMin;\n          hmMax = humidityJunNormalMax;\n          node.log(\" JUN
hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n          \n          \n          windSpeedMin =
windSpeedNormalMin;\n          windSpeedMax = windSpeedNormalMax;\n          node.log(\" JUN windSpeedMin =
\"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n          \n          \n          break;\n          case 7:\n
// code\n          tempMin = tempJulNormalMin;\n          tempMax = tempJulNormalMax;\n          node.log(\" JUL
tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n          \n          ccMin = cloudCoverJulNormalMin;\n
ccMax = cloudCoverJulNormalMax;\n          node.log(\" JUL ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n
\n          hmMin = humidityJulNormalMin;\n          hmMax = humidityJulNormalMax;\n          node.log(\" JUL
hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n          \n          \n          windSpeedMin =
windSpeedJulAugNormalMin;\n          windSpeedMax = windSpeedJulAugNormalMax;\n          node.log(\" JUL
windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax = \"+ windSpeedMax+\"\\n\");\n          \n          \n
break;\n          case 8:\n          // code\n          tempMin = tempAugNormalMin;\n          tempMax =
tempAugNormalMax;\n          node.log(\" AUG tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n
\n          ccMin = cloudCoverAugNormalMin;\n          ccMax = cloudCoverAugNormalMax;\n          node.log(\"
AUG ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n          \n          hmMin = humidityAugNormalMin;\n
hmMax = humidityAugNormalMax;\n          node.log(\" AUG hmMin = \"+ hmMin+\"   hmMax = \"+
hmMax+\"\\n\");\n          \n          \n          windSpeedMin = windSpeedJulAugNormalMin;\n          windSpeedMax =
windSpeedJulAugNormalMax;\n          node.log(\" AUG windSpeedMin = \"+ windSpeedMin+\"   windSpeedMax =
\"+ windSpeedMax+\"\\n\");\n          \n          \n          break; \n          default:\n          // code\n          node.log(\"no
valid month\");\n          return;\n     }\n          \n\n\nif(msg.hasOwnProperty('payload')){\n\n   Things
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=msg.payload.hourly.data;//array of {}\n //node.log(Things);\n msg = {};\n \n \n //create array of hourly objects\n weatherStateList = [];\n //\n for (var prop in Things) {\n   //////Things[prop] == {}\n   hourlyData = Things[prop];\n   //hourlyData = Things[12];\n   \n   \n //node.log(\"\\n\\n\");\n // // stringTime = \"time\";\n // // stringTemp = \"temperature\";\n   // // stringDewPoint = \"dewPoint\";\n // // stringHumidity = \"humidity\";\n // // stringWindSpeed = \"windSpeed\";\n   // // stringCloudCover = \"cloudCover\";\n   \n   time =hourlyData.time;\n   temp = hourlyData.temperature;\n   dewPoint = hourlyData.dewPoint;\n   humidity = hourlyData.humidity;\n   windSpeed = hourlyData.windSpeed;\n   if (hourlyData.hasOwnProperty('cloudCover')) {\n   cloudCover = hourlyData.cloudCover;\n   } else {\n   cloudCover = -1;\n   }\n node.log(\"time= \"+time+\" temp = \"+temp+\" dewpoint = \"+dewPoint+\" humidity= \"+humidity+\" windSpeed= \"+windSpeed+\" cloudCover= \"+cloudCover+\"\\n\\n\");\n   \n   \n   \n   dateObjGMT = new Date(time*1000);\n   dateStringLocal = dateObjGMT.toLocaleString();\n   var hour = dateObjGMT.getHours();\n node.log(\"hour = \"+ hour + \"\\n\");\n   \n   \n   //check temperature\n   \n   if (temp >= tempMin && temp <= tempMax) {\n   tempState = normal;\n   } else { if ((temp >= tempMax && temp <= tempGoodMax) || (temp <= tempMin && temp >= tempGoodMin)) {\n   tempState = good;\n   } else {\n   tempState = bad;\n   }\n   \n   }\n   \n   \n   \n   //check cloud cover \n   \n   if (cloudCover != -1) {\n   if (cloudCover >= ccMin && cloudCover <= ccMax) {\n   cloudCoverState = normal;\n   } else { if (cloudCover < ccMin || (cloudCover >= ccMax && cloudCover <= cloudCoverGoodMax)) { \n   cloudCoverState = good;\n   } else {\n   cloudCoverState = bad;\n   }\n   \n   }\n   }else {cloudCoverState = good;}\n   \n   //check humidity\n   \n   if (humidity >= hmMin && humidity <= hmMax) {\n   humidityState = normal;\n   } else { if (humidity >= humidityGoodMin && humidity < hmMin) {\n   humidityState = good;\n   } else {\n   humidityState = bad;\n   }\n   \n   }\n   \n   //check dewPoint\n   \n   if (dewPoint >= dewPointMin && dewPoint <= dewPointMax) {\n   dewPointState = good;\n   } else {\n   if ((month == 12 || month == 1 || month == 3 || month == 4) && dewPoint >= dewPointNormalMin && dewPoint < dewPointMin) {\n   dewPointState = normal;\n   } else {\n   dewPointState = bad;\n   }\n   }\n   \n   }\n   \n   //check wind speed\n   \n   if (windSpeed >= windSpeedMin && windSpeed <= windSpeedMax) {\n   windSpeedState = normal;\n   } else { if (windSpeed < windSpeedMin) {\n   windSpeedState = good;\n   } else {\n   windSpeedState = bad;\n   }\n   \n   }\n   \n   node.log(\"\\n\\n\");\n node.log(\" tempState = \"+ tempState +\" dewPointState = \"+dewPointState +\" humidityState= \"+humidityState +\" windSpeedState= \"+windSpeedState+\" cloudCoverState= \"+cloudCoverState+\"\\n\\n\");\n   node.log(\"\\n\\n\");\n   \n   \n   \n   if (tempState == bad || cloudCoverState == bad || humidityState == bad || dewPointState == bad || windSpeedState == bad) {\n   weatherState = bad;\n   } else { if (tempState == normal && cloudCoverState == normal && humidityState == normal && windSpeedState == normal) {\n   weatherState = normal;\n   } else {\n   weatherState = good;\n   }\n   \n   }\n   //create hourly objects\n   \n   newWeatherObj = {\n   time:{ epoch : time, date : dateStringLocal },\n   hour : hour,\n   state : weatherState\n   };\n   \n   //push data\n   \n   weatherStateList.push(newWeatherObj);\n \n \n   }\n\n}else{weatherStateList = [];}\n\n\nnewmsg = {payload : weatherStateList};\n\nreturn newmsg;","outputs":1,"noerr":0,"x":785,"y":474,"wires":[["7f754eb0.4cbf","b64c3395.fb3a4"]]},{"id":"7f754eb0.4cbf","type":"debug","z":"fb35491.32a75b8","name":"","active":true,"console":"false","complete":"true","x":842,"y":319,"wires":[]},{"id":"3049436a.e3eb7c","type":"file","z":"fb35491.32a75b8","name":"","filename":"Desktop/testweatherAPI","appendNewline":true,"createDir":true,"overwriteFile":"true","x":441,"y":169,"wires":[]},{"id":"978f92ac.c4984","type":"function","z":"fb35491.32a75b8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":549,"y":326,"wires":[["8f5901b3.6148b","dfa2c62e.3fac28","cf203a02.1e3098"]]},{"id":"8f5901b3.6148b","type":"debug","z":"fb35491.32a75b8","name":"","active":true,"console":"false","complete":"true","x":774,"y":213,"wires":[]},{"id":"dfa2c62e.3fac28","type":"file","z":"fb35491.32a75b8","name":"","filename":"Desktop/testHandleMessage","appendNewline":true,"createDir":true,"overwriteFile":"true","x":880,"y":261,"wires":[]},{"id":"cf203a02.1e3098","type":"json","z":"fb35491.32a75b8","name":"","x":664,"y":405,"wires":[["232556c0.c3e99a"]]},{"id":"18714781.c9f868","type":"catch","z":"fb35491.32a75b8","name":"","scope":["7ef59db.b0f9964"],"x":145,"y":404,"wires":[["e5e704e1.5fe968"]]},{"id":"e5e704e1.5fe968","type":"function","z":"fb35491.32a75b8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":336,"y":406,"wires":[["cf203a02.1e3098"]]},{"id":"191198fd.7b8da7","type":"function","z":"fb35491.32a75b8","name":"setting the time","func":"msg = {};\nvar yearvar =2016;\nvar monthvar = \"07\";\nvar dayvar = \"25\";\nmsg = {\n   time:{\n   year:yearvar,\n   month: monthvar,\n   day:dayvar\n   }\n   }\n   };\nreturn msg;","outputs":1,"noerr":0,"x":196,"y":88,"wires":[["a5aa5fcc.9496d"]]},{"id":"a5aa5fcc.9496d","type":"function","z":"fb35491.32a75b8","name":"filter","func":"//var count;\n//var currentDate;\nvar count = flow.get('count')||0;   //arxikopoieitai mono sth prwth klhsh\nvar currentDateOnly = flow.get('currentDateOnly')||\"\"; //arxikopoieitai mono sth prwth klhsh\n\nnode.log(\"count = \"+ count + \"currentDateOnly = \"+ currentDateOnly+\"\\n\");\n\nnowDate = new Date();\n//keep only the date\nnowDateOnly = nowDate.toDateString();\n\nif(nowDateOnly !== currentDateOnly){\n   count = 1;\n   currentDate = new Date();\n   //keep only the date\n   currentDateOnly = currentDate.toDateString();\n   // flow.set('count',count);\n   //flow.set('currentDateOnly',currentDateOnly);\n}\n\n//count=1000;\nflow.set('count',count);\nflow.set('currentDateOnly',currentDateOnly);\n\ncurrentDateOnly = flow.get('currentDateOnly');\ncount = flow.get('count');\nnode.log(\"count = \"+

count + \"currentDateOnly = \"+ currentDateOnly+\"\\n\");\n\nif(currentDateOnly == nowDateOnly && count < 1000){\n \n //do request\n \n \n count++;\n flow.set('count',count);\n flow.set('currentDateOnly',currentDateOnly);\n \n \n \n return msg;\n \n\n\n \n}else{\n node.log(\"\\n\\n No more API requests\\n\\n\");\n flow.set('count',count);\n flow.set('currentDateOnly',currentDateOnly);\n return;\n}\n\n\n\n","outputs":1,"noerr":0,"x":226,"y":156,"wires":[["c8757331.90326"]]},{"id":"c8757331.90326","type":"function","z":"fb35491.32a75b8","name":"create url","func":"\n//var time = \"2016-11-01T15:00:00+0200\" ;\nvar year = msg.time.year; //2016; //var year = msg.time.year;??\nvar month = msg.time.month; //\"11\"; //\"09\";\nvar day = msg.time.day; //\"05\"; //\"06\";\nif((typeof year === 'undefined') ||(typeof month === 'undefined') || (typeof day === 'undefined'))\n{\n node.log(\"undefined parameter\\n\");\n return;\n}else{\n\n//var contextFlow5 = this.context().flow;\nvar monthVar = flow.get('monthCont')||0; //arxikopoieitai mono sth prwth klhsh\n//var monthVar = contextFlow5.get('monthCont')||0;\nnode.log(\"monthCont =\"+ monthVar);\nmonthVar = parseInt(month);\nnode.log(\"monthVar =\"+ monthVar);\n//contextFlow5.set('monthCont',monthVar);\nflow.set('monthCont',monthVar);\n//monthVar = contextFlow5.get('monthCont');\nmonthVar = flow.get('monthCont');\nnode.log(\"monthCont =\"+ monthVar);\n\nvar time = \"\"+year+\"-\"+month+\"-\"+day+\"T00:00:00+0200\" ;\nvar exclude =\"currently\";//\"currently\";//\"hourly\";\nvar units = \"si\";\nmsgUrl=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,\"+time+\"?exclude=\"+exclude+\"&units=\"+units;\nmsgMethod = \"GET\";\n//msg.url=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,2017-01-01T00:00:00+0200?exclude=hourly&units=si\";\nmsg ={};\nmsg = {\n url : msgUrl,\n method : msgMethod\n};\n\nreturn msg;\n}","outputs":1,"noerr":0,"x":282,"y":224,"wires":[["7ef59db.b0f9964"]]}]}

Κώδικας 9 : Σύνθεση ροής με χρήση των υπορροών(subflows) καιρού

[{"id":"84fa4ecf.88b35","type":"subflow","name":"Weather All Seasons Subflow","info":"set the time parameters of the subflow\n\nshould be set in an incoming message on\n\nmsg.time.year \n\nmsg.time.month \n\nmsg.time.day \n\n\n\n\n\ngetting the year from msg.time.year \n \ngetting the month from msg.time.month \n\nmust be a string and if it is a single-digit number \nmust be like \"09\" with the zero \n\n//\"09\";\n\ngetting the day from msg.time.day \n\nmust be a string and if it is a single-digit number \nmust be like \"06\" with the zero\n\n//\"06\";\n\n\nthe output\n\nan array of hourly objects or an empty array\n\n\n newWeatherObj = {\n \n time:{ \n epoch : time,\n date : dateStringLocal\n },\n hour : hour,\n state : weatherState\n \n };\n \n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n","in":[{"x":45,"y":34,"wires":[{"id":"1adc682c.0973b8"}]}],"out":[{"x":945,"y":459,"wires":[{"id":"d723c9c.6bec638","port":0}]}]},{"id":"5ec848bf.407388","type":"http request","z":"84fa4ecf.88b35","name":"Athens","method":"use","ret":"txt","url":"","tls":"","x":310,"y":192,"wires":[["d47c4200.6b7ec"]]},{"id":"d723c9c.6bec638","type":"function","z":"84fa4ecf.88b35","name":"weather analysis all seasons","func":"/*var monthString = \"09\";\nvar month = parseInt(monthString);\nnode.log (\"monthString =\"+monthString+ \" month = \"+month);\n*/\nvar month = flow.get('monthCont');\nnode.log(\"month = \"+month);\n\n\nvar bad = \"bad\";\nvar normal = \"normal\";\nvar good = \"good\";\n\ntempSepNormalMax = 28;\ntempSepNormalMin = 19;\ntempOctNormalMax = 22;\ntempOctNormalMin = 15;\ntempNovNormalMax = 18;\ntempNovNormalMin = 10;\ntempDecNormalMax = 16;\ntempDecNormalMin = 8;\ntempJanNormalMax = 12;\ntempJanNormalMin = 5;\ntempFebNormalMax = 12;\ntempFebNormalMin = 5;\ntempMarNormalMax = 16;\ntempMarNormalMin = 7;\ntempAprNormalMax = 20;\ntempAprNormalMin = 10;\ntempMayNormalMax = 25;\ntempMayNormalMin = 12;\ntempJunNormalMax = 28;\ntempJunNormalMin = 17;\ntempJulNormalMax = 32;\ntempJulNormalMin = 23;\ntempAugNormalMax = 33;\ntempAugNormalMin = 21;\ntempGoodMax = 39;\ntempGoodMin = 16;\ncloudCoverSepNormalMax = 0.5;\ncloudCoverSepNormalMin = 0.35;\ncloudCoverOctNormalMax = 0.6;\ncloudCoverOctNormalMin = 0.5;\ncloudCoverNovNormalMax = 0.68;\ncloudCoverNovNormalMin = 0.6;\ncloudCoverDecNormalMax = 0.72;\ncloudCoverDecNormalMin = 0.68;\ncloudCoverJanNormalMax = 0.77;\ncloudCoverJanNormalMin = 0.73;\ncloudCoverFebNormalMax = 0.75;\ncloudCoverFebNormalMin = 0.71;\ncloudCoverMarNormalMax = 0.72;\ncloudCoverMarNormalMin = 0.65;\ncloudCoverAprNormalMax = 0.65;\ncloudCoverAprNormalMin = 0.60;\ncloudCoverMayNormalMax = 0.58;\ncloudCoverMayNormalMin = 0.45;\ncloudCoverJunNormalMax = 0.45;\ncloudCoverJunNormalMin = 0.33;\ncloudCoverJulNormalMax = 0.33;\ncloudCoverJulNormalMin = 0.29;\ncloudCoverAugNormalMax = 0.35;\ncloudCoverAugNormalMin = 0.28;\ncloudCoverGoodMax = 0.53;\nhumiditySepNormalMax = 0.75;\nhumiditySepNormalMin = 0.35;\nhumidityOctNormalMax = 0.82;\nhumidityOctNormalMin = 0.45;\nhumidityNovNormalMax = 0.85;\nhumidityNovNormalMin = 0.52;\nhumidityDecNormalMax = 0.85;\nhumidityDecNormalMin = 0.56;\nhumidityJanNormalMax = 0.85;\nhumidityJanNormalMin = 0.55;\nhumidityFebNormalMax = 0.85;\nhumidityFebNormalMin = 0.52;\nhumidityMarNormalMax = 0.83;\nhumidityMarNormalMin = 0.45;\nhumidityAprNormalMax = 0.80;\nhumidityAprNormalMin = 0.40;\nhumidityMayNormalMax = 0.77;\nhumidityMayNormalMin = 0.35;\nhumidityJunNormalMax = 0.68;\nhumidityJunNormalMin = 0.30;\nhumidityJulNormalMax = 0.59;\nhumidityJulNormalMin = 0.28;\nhumidityAugNormalMax = 0.63;\nhumidityAugNormalMin = 0.29;\nhumidityGoodMin = 0.2;\ndewPointMax = 17;\ndewPointMin = 5;\ndewPointDecJanNormalMin = 2;\ndewPointFebNormalMin = 0;\ndewPointMarNormalMin = 3;\ndewPointAprNormalMin = 4;\nwindSpeedNormalMax = 8;\nwindSpeedNormalMin = 3;\nwindSpeedJulAugNormalMin = 5;\nwindSpeedJulAugNormalMax = 9;\n\nvar tempState = \"\";\nvar cloudCoverState = \"\";\nvar humidityState = \"\";\nvar dewPointState = \"\";\nvar windSpeedState = \"\";\n\n switch

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(month) {\n              case 9:\n                  // code\n                  tempMin = tempSepNormalMin;\n                  tempMax =
tempSepNormalMax;\n                  node.log(\" SEP tempmin = \"+ tempMin+\"    tempmax = \"+ tempMax+\"\\n\");\n
\n                  ccMin = cloudCoverSepNormalMin;\n                  ccMax = cloudCoverSepNormalMax;\n                  node.log(\" SEP
ccMin = \"+ ccMin+\"    ccMax = \"+ ccMax+\"\\n\");\n                  \n                  hmMin = humiditySepNormalMin;\n
hmMax = humiditySepNormalMax;\n                  node.log(\" SEP hmMin = \"+ hmMin+\"    hmMax = \"+
hmMax+\"\\n\");\n                  \n                  windSpeedMin = windSpeedNormalMin;\n                  windSpeedMax =
windSpeedNormalMax;\n                  node.log(\" SEP windSpeedMin = \"+ windSpeedMin+\"    windSpeedMax = \"+
windSpeedMax+\"\\n\");\n                  \n                  break;\n              case 10:\n                  // code\n                  tempMin =
tempOctNormalMin;\n                  tempMax = tempOctNormalMax;\n                  node.log(\" OCT tempmin = \"+ tempMin+\"
tempmax = \"+ tempMax+\"\\n\");\n                  \n                  ccMin = cloudCoverOctNormalMin;\n                  ccMax =
cloudCoverOctNormalMax;\n                  node.log(\" OCT ccMin = \"+ ccMin+\"    ccMax = \"+ ccMax+\"\\n\");\n                  \n
hmMin = humidityOctNormalMin;\n                  hmMax = humidityOctNormalMax;\n                  node.log(\" OCT hmMin = \"+
hmMin+\"    hmMax = \"+ hmMax+\"\\n\");\n                  \n                  windSpeedMin = windSpeedNormalMin;\n
windSpeedMax = windSpeedNormalMax;\n                  node.log(\" OCT windSpeedMin = \"+ windSpeedMin+\"
windSpeedMax = \"+ windSpeedMax+\"\\n\");\n                  \n                  \n                  break;\n              case 11:\n                  // code\n
tempMin = tempNovNormalMin;\n                  tempMax = tempNovNormalMax;\n                  node.log(\" NOV tempmin = \"+
tempMin+\"    tempmax = \"+ tempMax+\"\\n\");\n                  \n                  ccMin = cloudCoverNovNormalMin;\n                  ccMax
= cloudCoverNovNormalMax;\n                  node.log(\" NOV ccMin = \"+ ccMin+\"    ccMax = \"+ ccMax+\"\\n\");\n
\n          hmMin = humidityNovNormalMin;\n                  hmMax = humidityNovNormalMax;\n                  node.log(\" NOV
hmMin = \"+ hmMin+\"    hmMax = \"+ hmMax+\"\\n\");\n                  \n                  windSpeedMin = windSpeedNormalMin;\n
windSpeedMax = windSpeedNormalMax;\n                  node.log(\" NOV windSpeedMin = \"+ windSpeedMin+\"
windSpeedMax = \"+ windSpeedMax+\"\\n\");\n                  \n                  \n                  break;\n              case 12:\n                  // code\n
tempMin = tempDecNormalMin;\n                  tempMax = tempDecNormalMax;\n                  node.log(\" DEC tempmin = \"+
tempMin+\"    tempmax = \"+ tempMax+\"\\n\");\n                  \n                  ccMin = cloudCoverDecNormalMin;\n                  ccMax
= cloudCoverDecNormalMax;\n                  node.log(\" DEC ccMin = \"+ ccMin+\"    ccMax = \"+ ccMax+\"\\n\");\n
\n          hmMin = humidityDecNormalMin;\n                  hmMax = humidityDecNormalMax;\n                  node.log(\" DEC
hmMin = \"+ hmMin+\"    hmMax = \"+ hmMax+\"\\n\");\n                  \n                  windSpeedMin = windSpeedNormalMin;\n
windSpeedMax = windSpeedNormalMax;\n                  node.log(\" DEC windSpeedMin = \"+ windSpeedMin+\"
windSpeedMax = \"+ windSpeedMax+\"\\n\");\n                  \n                  dewPointNormalMin = dewPointDecJanNormalMin;\n
node.log(\" DEC dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n                  \n                  break;\n              case 1:\n
// code\n                  tempMin = tempJanNormalMin;\n                  tempMax = tempJanNormalMax;\n                  node.log(\" JAN
tempmin = \"+ tempMin+\"    tempmax = \"+ tempMax+\"\\n\");\n                  \n                  ccMin = cloudCoverJanNormalMin;\n
ccMax = cloudCoverJanNormalMax;\n                  node.log(\" JAN ccMin = \"+ ccMin+\"    ccMax = \"+ ccMax+\"\\n\");\n
\n          hmMin = humidityJanNormalMin;\n                  hmMax = humidityJanNormalMax;\n                  node.log(\" JAN
hmMin = \"+ hmMin+\"    hmMax = \"+ hmMax+\"\\n\");\n                  \n                  \n                  windSpeedMin =
windSpeedNormalMin;\n                  windSpeedMax = windSpeedNormalMax;\n                  node.log(\" JAN windSpeedMin =
\"+ windSpeedMin+\"    windSpeedMax = \"+ windSpeedMax+\"\\n\");\n                  \n                  dewPointNormalMin =
dewPointDecJanNormalMin;\n                  node.log(\" JAN dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n
\n          break;\n              case 2:\n                  // code\n                  tempMin = tempFebNormalMin;\n                  tempMax =
tempFebNormalMax;\n                  node.log(\" FEB tempmin = \"+ tempMin+\"    tempmax = \"+ tempMax+\"\\n\");\n
\n          ccMin = cloudCoverFebNormalMin;\n                  ccMax = cloudCoverFebNormalMax;\n                  node.log(\" FEB
ccMin = \"+ ccMin+\"    ccMax = \"+ ccMax+\"\\n\");\n                  \n                  hmMin = humidityFebNormalMin;\n
hmMax = humidityFebNormalMax;\n                  node.log(\" FEB hmMin = \"+ hmMin+\"    hmMax = \"+
hmMax+\"\\n\");\n                  \n                  \n                  windSpeedMin = windSpeedNormalMin;\n                  windSpeedMax =
windSpeedNormalMax;\n                  node.log(\" FEB windSpeedMin = \"+ windSpeedMin+\"    windSpeedMax = \"+
windSpeedMax+\"\\n\");\n                  \n                  dewPointNormalMin = dewPointFebNormalMin;\n                  node.log(\" FEB
dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n                  \n                  break;\n              case 3:\n                  // code\n
tempMin = tempMarNormalMin;\n                  tempMax = tempMarNormalMax;\n                  node.log(\" MAR tempmin = \"+
tempMin+\"    tempmax = \"+ tempMax+\"\\n\");\n                  \n                  ccMin = cloudCoverMarNormalMin;\n                  ccMax
= cloudCoverMarNormalMax;\n                  node.log(\" MAR ccMin = \"+ ccMin+\"    ccMax = \"+ ccMax+\"\\n\");\n
\n          hmMin = humidityMarNormalMin;\n                  hmMax = humidityMarNormalMax;\n                  node.log(\" MAR
hmMin = \"+ hmMin+\"    hmMax = \"+ hmMax+\"\\n\");\n                  \n                  \n                  windSpeedMin =
windSpeedNormalMin;\n                  windSpeedMax = windSpeedNormalMax;\n                  node.log(\" MAR windSpeedMin =
\"+ windSpeedMin+\"    windSpeedMax = \"+ windSpeedMax+\"\\n\");\n                  \n                  dewPointNormalMin =
dewPointMarNormalMin;\n                  node.log(\" MAR dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n
\n          break;\n              case 4:\n                  // code\n                  tempMin = tempAprNormalMin;\n                  tempMax =
tempAprNormalMax;\n                  node.log(\" APR tempmin = \"+ tempMin+\"    tempmax = \"+ tempMax+\"\\n\");\n
\n          ccMin = cloudCoverAprNormalMin;\n                  ccMax = cloudCoverAprNormalMax;\n                  node.log(\" APR
ccMin = \"+ ccMin+\"    ccMax = \"+ ccMax+\"\\n\");\n                  \n                  hmMin = humidityAprNormalMin;\n
hmMax = humidityAprNormalMax;\n                  node.log(\" APR hmMin = \"+ hmMin+\"    hmMax = \"+
hmMax+\"\\n\");\n                  \n                  \n                  windSpeedMin = windSpeedNormalMin;\n                  windSpeedMax =
windSpeedNormalMax;\n                  node.log(\" APR windSpeedMin = \"+ windSpeedMin+\"    windSpeedMax = \"+
windSpeedMax+\"\\n\");\n                  \n                  dewPointNormalMin = dewPointAprNormalMin;\n                  node.log(\" APR
dewPointNormalMin = \"+ dewPointNormalMin+\"\\n\");\n                  \n                  break; \n              case 5:\n                  // code\n
tempMin = tempMayNormalMin;\n                  tempMax = tempMayNormalMax;\n                  node.log(\" MAY tempmin = \"+
tempMin+\"    tempmax = \"+ tempMax+\"\\n\");\n                  \n                  ccMin = cloudCoverMayNormalMin;\n
ccMax = cloudCoverMayNormalMax;\n                  node.log(\" MAY ccMin = \"+ ccMin+\"    ccMax = \"+
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ccMax+\"\\n\");\n            \n        hmMin = humidityMayNormalMin;\n        hmMax = humidityMayNormalMax;\n
node.log(\" MAY hmMin = \"+ hmMin+\"  hmMax = \"+ hmMax+\"\\n\");\n        \n        windSpeedMin =
windSpeedNormalMin;\n        windSpeedMax = windSpeedNormalMax;\n        node.log(\" MAY windSpeedMin =
\"+ windSpeedMin+\"  windSpeedMax = \"+ windSpeedMax+\"\\n\");\n        \n        break;\n        case 6:\n
// code\n        tempMin = tempJunNormalMin;\n        tempMax = tempJunNormalMax;\n        node.log(\" JUN
tempmin = \"+ tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n        ccMin = cloudCoverJunNormalMin;\n
ccMax = cloudCoverJunNormalMax;\n        node.log(\" JUN ccMin = \"+ ccMin+\"  ccMax = \"+ ccMax+\"\\n\");\n
\n        hmMin = humidityJunNormalMin;\n        hmMax = humidityJunNormalMax;\n        node.log(\" JUN
hmMin = \"+ hmMin+\"  hmMax = \"+ hmMax+\"\\n\");\n        \n        \n        windSpeedMin =
windSpeedNormalMin;\n        windSpeedMax = windSpeedNormalMax;\n        node.log(\" JUN windSpeedMin =
\"+ windSpeedMin+\"  windSpeedMax = \"+ windSpeedMax+\"\\n\");\n        \n        break;\n        case 7:\n
// code\n        tempMin = tempJulNormalMin;\n        tempMax = tempJulNormalMax;\n        node.log(\" JUL
tempmin = \"+ tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n        \n        ccMin = cloudCoverJulNormalMin;\n
ccMax = cloudCoverJulNormalMax;\n        node.log(\" JUL ccMin = \"+ ccMin+\"  ccMax = \"+ ccMax+\"\\n\");\n
\n        hmMin = humidityJulNormalMin;\n        hmMax = humidityJulNormalMax;\n        node.log(\" JUL
hmMin = \"+ hmMin+\"  hmMax = \"+ hmMax+\"\\n\");\n        \n        \n        windSpeedMin =
windSpeedJulAugNormalMin;\n        windSpeedMax = windSpeedJulAugNormalMax;\n        node.log(\" JUL
windSpeedMin = \"+ windSpeedMin+\"  windSpeedMax = \"+ windSpeedMax+\"\\n\");\n        \n        \n
break;\n        case 8:\n        // code\n        tempMin = tempAugNormalMin;\n        tempMax =
tempAugNormalMax;\n        node.log(\" AUG tempmin = \"+ tempMin+\"  tempmax = \"+ tempMax+\"\\n\");\n
\n        ccMin = cloudCoverAugNormalMin;\n        ccMax = cloudCoverAugNormalMax;\n        node.log(\"
AUG ccMin = \"+ ccMin+\"  ccMax = \"+ ccMax+\"\\n\");\n        \n        hmMin = humidityAugNormalMin;\n
hmMax = humidityAugNormalMax;\n        node.log(\" AUG hmMin = \"+ hmMin+\"  hmMax = \"+
hmMax+\"\\n\");\n        \n        \n        windSpeedMin = windSpeedJulAugNormalMin;\n        windSpeedMax =
windSpeedJulAugNormalMax;\n        node.log(\" AUG windSpeedMin = \"+ windSpeedMin+\"  windSpeedMax =
\"+ windSpeedMax+\"\\n\");\n        \n        \n        break; \n        default:\n        // code\n        node.log(\"no
valid month\");\n        return;\n        }\n        \n\n\nif(msg.hasOwnProperty('payload')){\n\n        Things
=msg.payload.hourly.data;//array of {}\n        //node.log(Things);\n        msg = {};\n        \n        \n        //create array of hourly
objects\n        weatherStateList = [];\n        //\n        for (var prop in Things) {\n            //////Things[prop] == {}\n        hourlyData =
Things[prop];\n        //hourlyData = Things[12];\n        \n        \n        //node.log(\"\\n\\n\");\n        // // stringTime =\"time\";\n
// // stringTemp = \"temperature\";\n        // // stringDewPoint = \"dewPoint\";\n        // // stringHumidity = \"humidity\";\n
// // stringWindSpeed = \"windSpeed\";\n        // //stringCloudCover = \"cloudCover\";\n        \n        \n        time
=hourlyData.time;\n        temp = hourlyData.temperature;\n        dewPoint = hourlyData.dewPoint;\n        humidity =
hourlyData.humidity;\n        windSpeed = hourlyData.windSpeed;\n        if (hourlyData.hasOwnProperty('cloudCover'))
{\n            cloudCover = hourlyData.cloudCover;\n        } else {\n            cloudCover = -1;\n        }\n
node.log(\"time= \"+time+\"  temp = \"+temp+\"  dewpoint = \"+dewPoint+\"  humidity= \"+humidity+\"  windSpeed=
\"+windSpeed+\"  cloudCover= \"+cloudCover+\"\\n\\n\");\n        \n        \n        \n        dateObjGMT = new
Date(time*1000);\n        dateStringLocal = dateObjGMT.toLocaleString();\n        var hour = dateObjGMT.getHours();\n
node.log(\"hour = \"+ hour +\"\\n\");\n        \n        \n        //check temperature\n        \n        if (temp >= tempMin && temp
<= tempMax) {\n            tempState = normal;\n        } else { if ((temp >= tempMax && temp <= tempGoodMax ) ||
(temp <= tempMin && temp >= tempGoodMin)) {\n            tempState = good;\n        } else {\n
tempState = bad;\n        }\n        \n        }\n        \n        \n        \n        //check cloud cover \n        \n        if
(cloudCover != -1) {\n        if (cloudCover >= ccMin && cloudCover <= ccMax) {\n            cloudCoverState =
normal;\n        } else { if (cloudCover < ccMin || (cloudCover >= ccMax && cloudCover <= cloudCoverGoodMax) )
{ \n            cloudCoverState = good;\n        } else {\n            cloudCoverState = bad;\n
}\n        \n        }\n        }else {cloudCoverState = good;}\n        \n        //check humidity\n        \n        if
(humidity >= hmMin && humidity <= hmMax) {\n            humidityState = normal;\n        } else { if (humidity >=
humidityGoodMin && humidity < hmMin ) {\n            humidityState = good;\n        } else {\n
humidityState = bad;\n        }\n        \n        }\n        \n        //check dewPoint\n        \n        if (dewPoint >=
dewPointMin && dewPoint <= dewPointMax) {\n        dewPointState = good;\n        } else {\n        if ((month ==
12 || month == 1 || month == 3 || month == 4 ) && dewPoint >= dewPointNormalMin && dewPoint < dewPointMin) {\n
dewPointState = normal;\n        } else {\n            dewPointState = bad;\n        }\n        \n        }\n        \n
//check wind speed\n        \n        if (windSpeed >= windSpeedMin && windSpeed <= windSpeedMax) {\n
windSpeedState = normal;\n        } else { if (windSpeed < windSpeedMin) {\n            windSpeedState = good;\n
} else {\n            windSpeedState = bad;\n        }\n        \n        }\n        \n        node.log(\"\\n\\n\");\n
node.log(\" tempState = \"+ tempState +\"  dewPointState = \"+dewPointState +\"  humidityState= \"+humidityState +\"
windSpeedState= \"+windSpeedState+\"  cloudCoverState= \"+cloudCoverState+\"\\n\\n\");\n        node.log(\"\\n\\n\");\n
\n        \n        \n        if (tempState == bad || cloudCoverState == bad || humidityState == bad || dewPointState == bad ||
windSpeedState == bad) {\n            weatherState = bad;\n        } else { if (tempState == normal && cloudCoverState ==
normal && humidityState == normal && windSpeedState == normal) {\n            weatherState = normal;\n
} else {\n            weatherState = good;\n        }\n        \n        }\n        //create hourly objects\n        \n
newWeatherObj = {\n            time:{ epoch : time, date : dateStringLocal },\n            hour : hour,\n
state : weatherState\n        };\n        \n        //push data\n        \n        weatherStateList.push(newWeatherObj);\n
\n        \n        }\n\n}else{weatherStateList = [];}\n\n\nnewmsg = {payload : weatherStateList};\n\nreturn
newmsg;","outputs":1,"noerr":0,"x":726,"y":387,"wires":[[]]},{"id":"d47c4200.6b7ec","type":"function","z":"84fa4ecf.8
8b35","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n        statusCodeproperty =
msg.statusCode\n        node.log(statusCodeproperty);\n        if (statusCodeproperty == \"ETIMEDOUT\") {\n
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node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n

\n\n","outputs":1,"noerr":0,"x":490,"y":239,"wires":[["f95c4ed6.92229"]]},{"id":"f95c4ed6.92229","type":"json","z":"84fa4ecf.88b35","name":"","x":605,"y":318,"wires":[["d723c9c.6bec638"]]},{"id":"f6754138.4ee7d","type":"catch","z":"84fa4ecf.88b35","name":"","scope":["5ec848bf.407388"],"x":86,"y":317,"wires":[["665212f3.01aa2c"]]},{"id":"665212f3.01aa2c","type":"function","z":"84fa4ecf.88b35","name":"handle","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":277,"y":319,"wires":[["f95c4ed6.92229"]]},{"id":"1adc682c.0973b8","type":"function", "z":"84fa4ecf.88b35","name":"create url","func":"\n//var time = \"2016-11-01T15:00:00+0200\" ;\nvar year = msg.time.year; //2016; //var year = msg.time.year;??\nvar month = msg.time.month; //\"11\";   //\"09\";\nvar day = msg.time.day; //\"05\";   //\"06\";\n\nif((typeof year === 'undefined') ||(typeof month === 'undefined') || (typeof day === 'undefined')){\n   node.log(\"undefined parameter\\n\");\n   return;\n}else{\n\n//var contextFlow5 = this.context().flow;\nvar monthVar = flow.get('monthCont')||0; //arxikopoieitai mono sth prwth klhsh\n//var monthVar = contextFlow5.get('monthCont')||0;\nnode.log(\"monthCont   =\"+   monthVar);\nmonthVar   = parseInt(month);\nnode.log(\"monthVar   =\"+ monthVar);\n//contextFlow5.set('monthCont',monthVar);\nflow.set('monthCont',monthVar);\n//monthVar   = contextFlow5.get('monthCont');\nmonthVar = flow.get('monthCont');\nnode.log(\"monthCont =\"+ monthVar);\nvar time = \"\"+year+\"-\"+month+\"-\"+day+\"T00:00:00+0200\" ;\nvar exclude =\"currently\";//\"currently\";//\"hourly\";\nvar   units   = \"si\";\nmsgUrl=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,\"+time+\"?exclude=\"+exclude+\"&units=\"+units;\nmsgMethod = \"GET\";\n//msg.url=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,2017-01-01T00:00:00+0200?exclude=hourly&units=si\";\nmsg ={};\nmsg = {\n   url : msgUrl,\n   method : msgMethod\n};\n\nreturn msg;\n}","outputs":1,"noerr":0,"x":223,"y":137,"wires":[["5ec848bf.407388"]]},{"id":"5741cc5c.7a6c94","type":"subflow","name":"API limit filter","info":"λαμβάνουμε υπόψην το όριο των αιτήσεων \n\"1,000 API requests to the Service per day free of charge\"\n\ninput : a msg\n\n\noutput : the input msg or nothing","in":[{"x":50,"y":30,"wires":[{"id":"405cb133.bf69b"}]}],"out":[{"x":867,"y":35,"wires":[{"id":"405cb133.bf69b","port":0}]}]},{"id":"405cb133.bf69b","type":"function","z":"5741cc5c.7a6c94","name":"filter","func":"//var count;\n//var currentDate;\nvar count = flow.get('count')||0; //arxikopoieitai mono sth prwth klhsh\nvar currentDateOnly = flow.get('currentDateOnly')||\"\"; //arxikopoieitai mono sth prwth klhsh\nnode.log(\"count = \"+ count + \"currentDateOnly = \"+ currentDateOnly+\"\\n\");\n\nnowDate = new Date();\n//keep only the date\nnowDateOnly = nowDate.toDateString();\n\nif(nowDateOnly !== currentDateOnly){\n   count = 1;\n   currentDate = new Date();\n //keep only the date\n   currentDateOnly = currentDate.toDateString();\n   // flow.set('count',count);\n //flow.set('currentDateOnly',currentDateOnly);\n}\n//count=1000;\nflow.set('count',count);\nflow.set('currentDateOnly',currentDateOnly);\ncurrentDateOnly = flow.get('currentDateOnly');\ncount = flow.get('count');\nnode.log(\"count = \"+ count + \"currentDateOnly = \"+ currentDateOnly+\"\\n\");\nif(currentDateOnly == nowDateOnly && count < 1000){\n   \n   //do request\n   \n   \n   count++;\n   flow.set('count',count);\nflow.set('currentDateOnly',currentDateOnly);\n   \n   \n   return msg;\n   \n\n\n \n}else{\n node.log(\"\\n\\n No more API requests\\n\\n\");\n   flow.set('count',count);\n   flow.set('currentDateOnly',currentDateOnly);\nreturn;\n}\n\n\n","outputs":1,"noerr":0,"x":441,"y":35,"wires":[[]]},{"id":"6c4ea4ac.83d12c","type":"subflow","name":"Weather Subflow autumn+Dec","info":"set the time parameters of the subflow\n\nshould be set in an incoming message on\n\nmsg.time.year \n\nmsg.time.month \n\nmsg.time.day \n\n\n\n\ngetting the year   from   msg.time.year \n\ngetting the month   from   msg.time.month \n\nmust be a string and if it is a single-digit number \nmust be like \"09\" with the zero \n\n//\"09\";\n\ngetting the day   from   msg.time.day \n\nmust be a string and if it is a single-digit number \nmust be like \"06\" with the zero\n\n//\"06\";\n\n\nthe output\n\nan array of hourly objects or an empty array\n\n\n newWeatherObj = {\n \n   time:{ \n   epoch : time,\n   date : dateStringLocal\n   },\n   hour : hour,\n state   :   weatherState\n   };\n\n\n\n\n","in":[{"x":50,"y":30,"wires":[{"id":"8708964a.489488"}]}],"out":[{"x":958,"y":345,"wires":[{"id":"3ccac17b.744a1e","port":0}]}]},{"id":"7b241460.d80d2c","type":"http request","z":"6c4ea4ac.83d12c","name":"AthensSub","method":"use","ret":"txt","url":"","tls":"","x":344,"y":151,"wires":[["fa196ae9.c8cc58"]]},{"id":"3ccac17b.744a1e","type":"function","z":"6c4ea4ac.83d12c","name":"weather analysis","func":"/*var monthString = \"09\";\nvar month = parseInt(monthString);\nnode.log (\"monthString =\"+monthString+ \"   month = \"+month);\n*/\nvar month = flow.get('monthCont');\nnode.log(\"month = \"+month);\n\n\nvar bad = \"bad\";\nvar normal = \"normal\";\nvar good = \"good\";\n\ntempSepNormalMax = 28;\ntempSepNormalMin = 19;\ntempOctNormalMax = 22;\ntempOctNormalMin = 15;\ntempNovNormalMax = 18;\ntempNovNormalMin = 10;\ntempDecNormalMax = 16;\ntempDecNormalMin = 8;\ntempGoodMax = 39;\n\ncloudCoverSepNormalMax = 0.5;\ncloudCoverSepNormalMin = 0.35;\ncloudCoverOctNormalMax = 0.6;\ncloudCoverOctNormalMin = 0.5;\ncloudCoverNovNormalMax = 0.68;\ncloudCoverNovNormalMin = 0.6;\ncloudCoverDecNormalMax = 0.72;\ncloudCoverDecNormalMin = 0.68;\n\nhumiditySepNormalMax = 0.75;\nhumiditySepNormalMin = 0.35;\nhumidityOctNormalMax = 0.82;\nhumidityOctNormalMin = 0.45;\nhumidityNovNormalMax = 0.85;\nhumidityNovNormalMin = 0.52;\nhumidityDecNormalMax = 0.85;\nhumidityDecNormalMin = 0.56;\nhumidityGoodMin = 0.2;\ndewPointMax = 17;\ndewPointMin = 5;\ndewPointDecNormalMin = 2;\n\nwindSpeedNormalMax = 8;\nwindSpeedNormalMin = 3;\n\nvar tempState = \"\";\nvar cloudCoverState = \"\";\nvar humidityState = \"\";\nvar dewPointState = \"\";\nvar windSpeedState = \"\";\n\nswitch (month) {\n   case 9:\n   // code\n   tempMin = tempSepNormalMin;\n   tempMax = tempSepNormalMax;\n   node.log(\" SEP tempmin = \"+ tempMin+\"   tempmax = \"+ tempMax+\"\\n\");\n\n   ccMin = cloudCoverSepNormalMin;\n   ccMax = cloudCoverSepNormalMax;\n   node.log(\" SEP

ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n   \n   hmMin = humiditySepNormalMin;\n hmMax = humiditySepNormalMax;\n   node.log(\" SEP hmMin = \"+ hmMin+\"   hmMax = \"+ hmMax+\"\\n\");\n   \n   break;\n   case 10:\n   // code\n   tempMin = tempOctNormalMin;\n   tempMax = tempOctNormalMax;\n   node.log(\" OCT tempmin = \"+ tempMin+\" tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverOctNormalMin;\n   ccMax = cloudCoverOctNormalMax;\n   node.log(\" OCT ccMin = \"+ ccMin+\" ccMax = \"+ ccMax+\"\\n\");\n   \n hmMin = humidityOctNormalMin;\n   hmMax = humidityOctNormalMax;\n   node.log(\" OCT hmMin = \"+ hmMin+\" hmMax = \"+ hmMax+\"\\n\");\n   \n   break;\n   case 11:\n   // code\n   tempMin = tempNovNormalMin;\n   tempMax = tempNovNormalMax;\n   node.log(\" NOV tempmin = \"+ tempMin+\" tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverNovNormalMin;\n   ccMax = cloudCoverNovNormalMax;\n   node.log(\" NOV ccMin = \"+ ccMin+\"   ccMax = \"+ ccMax+\"\\n\");\n \n   hmMin = humidityNovNormalMin;\n   hmMax = humidityNovNormalMax;\n   node.log(\" NOV hmMin = \"+ hmMin+\" hmMax = \"+ hmMax+\"\\n\");\n   \n   break;\n   case 12:\n   // code\n tempMin = tempDecNormalMin;\n   tempMax = tempDecNormalMax;\n   node.log(\" DEC tempmin = \"+ tempMin+\" tempmax = \"+ tempMax+\"\\n\");\n   \n   ccMin = cloudCoverDecNormalMin;\n   ccMax = cloudCoverDecNormalMax;\n   node.log(\" DEC ccMin = \"+ ccMin+\" ccMax = \"+ ccMax+\"\\n\");\n \n   hmMin = humidityDecNormalMin;\n   hmMax = humidityDecNormalMax;\n   node.log(\" DEC hmMin = \"+ hmMin+\" hmMax = \"+ hmMax+\"\\n\");\n   \n   break;\n   \n   default:\n   // code\n   node.log(\"no valid month\");\n   return;\n   }\n   \n\n\nif(msg.hasOwnProperty('payload')){\n\n   Things =msg.payload.hourly.data;//array of {}\n   //node.log(Things);\n   msg = {};\n   \n   \n   //create array of hourly objects\n   weatherStateList = [];\n   //\n   for (var prop in Things) {\n   //////Things[prop] == {}\n   hourlyData = Things[prop];\n   //hourlyData = Things[12];\n   \n   \n   //node.log(\"\\n\\n\");\n   // // stringTime =\"time\";\n // // stringTemp = \"temperature\";\n   // // stringDewPoint = \"dewPoint\";\n   // // stringHumidity = \"humidity\";\n   // // stringWindSpeed = \"windSpeed\";\n   // //stringCloudCover = \"cloudCover\";\n   \n   \n   time =hourlyData.time;\n   temp = hourlyData.temperature;\n   dewPoint = hourlyData.dewPoint;\n   humidity = hourlyData.humidity;\n   windSpeed = hourlyData.windSpeed;\n   if (hourlyData.hasOwnProperty('cloudCover')) {\n   cloudCover = hourlyData.cloudCover;\n   } else {\n   cloudCover = -1;\n   }\n   node.log(\"time= \"+time+\" temp = \"+temp+\" dewpoint = \"+dewPoint+\" humidity= \"+humidity+\" windSpeed= \"+windSpeed+\" cloudCover= \"+cloudCover+\"\\n\\n\");\n   \n   \n   \n   dateObjGMT = new Date(time*1000);\n   dateStringLocal = dateObjGMT.toLocaleString();\n   var hour = dateObjGMT.getHours();\n   node.log(\"hour = \"+ hour +\"\\n\");\n   \n   \n   //check temperature\n   \n   if (temp >= tempMin && temp <= tempMax) {\n   tempState = normal;\n   } else { if (temp >= tempMax && temp <= tempGoodMax) {\n tempState = good;\n   } else {\n   tempState = bad;\n   }\n   \n   }\n   \n   \n   \n   //check cloud cover \n   \n   if (cloudCover != -1) {\n   if (cloudCover >= ccMin && cloudCover <= ccMax) {\n   cloudCoverState = normal;\n   } else { if (cloudCover < ccMin) {\n cloudCoverState = good;\n   } else {\n   cloudCoverState = bad;\n   }\n   }\n   }else {cloudCoverState = good;}\n   \n   //check humidity\n   \n   if (humidity >= hmMin && humidity <= hmMax) {\n   humidityState = normal;\n   } else { if (humidity >= humidityGoodMin && humidity < hmMin) {\n   humidityState = good;\n   } else {\n   humidityState = bad;\n   }\n   \n   }\n   \n   //check dewPoint\n   \n   if (dewPoint >= dewPointMin && dewPoint <= dewPointMax) {\n   dewPointState = good;\n   } else { if (month == 12 && dewPoint >= dewPointDecNormalMin && dewPoint < dewPointMin) {\n   dewPointState = normal;\n   } else {\n   dewPointState = bad;\n   }\n   \n   }\n   \n   //check wind speed\n   \n   if (windSpeed >= windSpeedNormalMin && windSpeed <= windSpeedNormalMax) {\n   windSpeedState = normal;\n   } else {\n   if (windSpeed < windSpeedNormalMin) {\n   windSpeedState = good;\n   } else {\n   windSpeedState = bad;\n   }\n   \n   }\n   \n   node.log(\"\\n\\n\");\n   node.log(\" tempState = \"+ tempState +\" dewPointState = \"+dewPointState +\" humidityState= \"+humidityState +\" windSpeedState= \"+windSpeedState+\" cloudCoverState= \"+cloudCoverState+\"\\n\\n\");\n   node.log(\"\\n\\n\");\n   \n   \n   \n   if (tempState == bad || cloudCoverState == bad || humidityState == bad || dewPointState == bad || windSpeedState == bad) {\n   weatherState = bad;\n   } else { if (tempState == normal && cloudCoverState == normal && humidityState == normal && windSpeedState == normal) {\n   weatherState = normal;\n   } else {\n weatherState = good;\n   }\n   \n   }\n   //create hourly objects\n   \n   newWeatherObj = {\n   time:{ epoch : time, date : dateStringLocal },\n   hour : hour,\n   state : weatherState\n   };\n   \n   //push data\n   \n   weatherStateList.push(newWeatherObj);\n   \n   \n   }\n\n}else{weatherStateList = [];}\n\n\nnewmsg = {payload : weatherStateList};\n\nreturn newmsg;","outputs":1,"noerr":0,"x":720,"y":346,"wires":[[]]},{"id":"fa196ae9.c8cc58","type":"function","z":"6c4ea4ac.83d12c","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n
\n\n","outputs":1,"noerr":0,"x":514,"y":198,"wires":[["ec086f68.7474d"]]},{"id":"ec086f68.7474d","type":"json","z":"6c4ea4ac.83d12c","name":"","x":629,"y":277,"wires":[["3ccac17b.744a1e"]]},{"id":"31849b66.ec3194","type":"function","z":"6c4ea4ac.83d12c","name":"handle   AthensSub","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":379,"y":280,"wires":[["ec086f68.7474d"]]},{"id":"f5bcd0f4.76f67","type":"catch","z":"6c4ea4ac.83d12c","name":"","scope":["7b241460.d80d2c"],"x":114,"y":279,"wires":[["31849b66.ec3194"]]},{"id":"8708964a.489488","type":"function","z":"6c4ea4ac.83d12c","name":"create   url","func":"\n//var time = \"2016-11-

01T15:00:00+0200\" ;\nvar year = msg.time.year; //2016; //var year = msg.time.year;??\nvar month = msg.time.month; //\\"11\";   //\\"09\";\nvar day = msg.time.day; //\\"05\";   //\\"06\";\n\nif((typeof year === 'undefined') ||(typeof month === 'undefined') || (typeof day === 'undefined')\n{\n   node.log(\"undefined parameter\\n\");\n return;\n}else{\n\n//var contextFlow5 = this.context().flow;\nvar monthVar = flow.get('monthCont')||0; //arxikopoieitai mono sth prwth klhsh\n//var monthVar = contextFlow5.get('monthCont')||0;\nnode.log(\"monthCont =\"+ monthVar);\nmonthVar   =   parseInt(month);\nnode.log(\"monthVar   =\"+ monthVar);\n//contextFlow5.set('monthCont',monthVar);\nflow.set('monthCont',monthVar);\n//monthVar   = contextFlow5.get('monthCont');\nmonthVar = flow.get('monthCont');\nnode.log(\"monthCont =\"+ monthVar);\n\nvar time   =   \"\\"+year+\"-\"+month+\"-\"+day+\"T00:00:00+0200\"   ;\n\nvar exclude   =\"currently\";//\\"currently\";// \\"hourly\";\nvar   units   = \"si\";\nmsgUrl=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,\"+time+\"?exclude=\"+exclude+\"&un its=\"+units;\nmsgMethod = \"GET\";\n//msg.url=\"https://api.darksky.net/forecast/MY_TOKEN/37.9838,23.7275,2017-01-01T00:00:00+0200?exclude=hourly&units=si\";\nmsg ={};\nmsg = {\n   url : msgUrl,\n   method : msgMethod\n};\n\nreturn msg;\n}","outputs":1,"noerr":0,"x":166,"y":94,"wires":[["7b241460.d80d2c"]]},{"id":"58fa2a21.bae424","type":"inject", "z":"dfeef7be.9e4008","name":"","topic":"","payload":"","payloadType":"date","repeat":"","crontab":"","once":false,"x" :114,"y":158,"wires":[["dc090339.6e1f4"]]},{"id":"ad8a3f5e.2b5f5","type":"subflow:6c4ea4ac.83d12c","z":"dfeef7be.9 e4008","x":719,"y":177,"wires":[["309ec69b.57aafa"]]},{"id":"dc090339.6e1f4","type":"function","z":"dfeef7be.9e4008 ","name":"setting the time","func":"msg = {};\nvar yearvar =2016;\nvar monthvar = \\"11\";\nvar dayvar = \\"10\";\nmsg = {\n   time:{\n   year:yearvar,\n   month: monthvar,\n   day:dayvar\n   \n   }\n \n };\nreturn msg;","outputs":1,"noerr":0,"x":301,"y":195,"wires":[["df21a3a0.8cc73"]]},{"id":"df21a3a0.8cc73","type":"subflow:574 1cc5c.7a6c94","z":"dfeef7be.9e4008","x":497,"y":122,"wires":[["ad8a3f5e.2b5f5"]]},{"id":"309ec69b.57aafa","type":"d ebug","z":"dfeef7be.9e4008","name":"","active":true,"console":"false","complete":"true","x":872,"y":105,"wires":[]},{"i d":"4bdd1013.9818c","type":"inject","z":"dfeef7be.9e4008","name":"","topic":"","payload":"","payloadType":"date","re peat":"","crontab":"","once":false,"x":102,"y":321,"wires":[["8b3c9d37.96126"]]},{"id":"8b3c9d37.96126","type":"func tion","z":"dfeef7be.9e4008","name":"setting the time","func":"msg = {};\nvar yearvar =2017;\nvar monthvar = \\"01\";\nvar dayvar = \\"25\";\nmsg = {\n   time:{\n   year:yearvar,\n   month: monthvar,\n day:dayvar\n   \n   }\n   \n };\nreturn msg;","outputs":1,"noerr":0,"x":256,"y":387,"wires":[["6d45f1e6.ef66a"]]},{"id":"6d45f1e6.ef66a","type":"subflow:574 1cc5c.7a6c94","z":"dfeef7be.9e4008","x":451,"y":319,"wires":[["b877c1cc.98123"]]},{"id":"b877c1cc.98123","type":"s ubflow:84fa4ecf.88b35","z":"dfeef7be.9e4008","x":653,"y":385,"wires":[["272cca6.fef7e36"]]},{"id":"272cca6.fef7e36 ","type":"debug","z":"dfeef7be.9e4008","name":"","active":true,"console":"false","complete":"true","x":833,"y":306,"wi res":[]}]

Κώδικας 10 : Κόμβος της υπορροής «event Type Object Subflow»

[{"id":"ff55e874.2c48e8","type":"subflow","name":"event Type Object Subflow","info":"create an event Type Object\n\n\neventType:{\n\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n} \n\n\ngets an incoming message \nwith parameters\n\nmsg.categoryId\n\nmsg.subcategoryId\n\nmsg.formatId\n\nall of them numbers or null","in":[{"x":44,"y":778,"wires":[{"id":"eed9b526.8c69c8"},{"id":"30d248ff.c61128"},{"id":"3a8010.06756ff"}]}],"out":[{"x":2065,"y":752,"wires":[{"id":"3e100827.c64958","port":0}]}]},{"id":"12c54218.ab0c0e","type":"function","z":"ff55e874.2c48e8","name":"category search","func":"//var categoryID = 107;\ncategoryID = msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":483,"y":374,"wires":[["769f84b6.919d8c"]]},{"id":"382931ce.446dfe","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event category","info":"","x":1066,"y":228,"wires":[]},{"id":"769f84b6.919d8c","type":"http request","z":"ff55e874.2c48e8","name":"get category","method":"use","ret":"txt","url":"","tls":"","x":599,"y":287,"wires":[["266e134.15704ec"]]},{"id":"23667dcd.27f482","type":"json","z":"ff55e874.2c48e8","name":"","x":761,"y":366,"wires":[["3fb4da05.103056"]]},{"id":"3fb4da05.103056","type":"function","z":"ff55e874.2c48e8","name":"get category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category = \"\";\n}\n\nnode.log(\"category name = \"+ category +\"\\n\");\ntopic = \"category\";\nmsg = {};\n\nnewmsg = {\n   topic : topic,\n   payload : category\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":970,"y":455,"wires":[["f5c91617.8e2ee8"]]},{"id":"9d021d6c.8edbe","type":"comment","z":"ff55e874.2c48e8","name":" take the category","info":"","x":967,"y":374,"wires":[]},{"id":"ce357ebf.a4c9e","type":"function","z":"ff55e874.2c48e8","name":"subcategory search","func":"//var subcategoryID = 7003;\nsubcategoryID = msg.payload.subcategID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//subcategories/\"+subcategoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":561,"y":881,"wires":[["4f0b91d.031a77"]]},{"id":"5f3da062.4ed36","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event subcategory","info":"","x":1072,"y":739,"wires":[]},{"id":"4f0b91d.031a77","type":"http request","z":"ff55e874.2c48e8","name":"get subcategory","method":"use","ret":"txt","url":"","tls":"","x":605,"y":798,"wires":[["1062c721.6036b9"]]},{"id":"8f47b3b.aad9d5","type":"json","z":"ff55e874.2c48e8","name":"","x":757,"y":877,"wires":[["7c5cb79e.9761a8"]]},{"id":"7c5cb79e.9761a8","type":"function","z":"ff55e874.2c48e8","name":"get subcategory","func":"if(msg.hasOwnProperty('payload')){\n   subcategory = msg.payload.name;\n}else{\n   subcategory = \"\";\n}\n\nnode.log(\"subcategory name = \"+subcategory +\"\\n\");\ntopic = \"subcategory\";\nmsg = {};\n\nnewmsg = {\n   topic : topic,\n   payload : subcategory\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":957,"y":963,"wires":[["e5345aa5.58bb28"]]},{"id":"e04a3bd0.32c348","type":"comment","z":"ff55e874.2c48e8","name":" take the subcategory","info":"","x":951,"y":883,"wires":[]},{"id":"e8c73870.37c108","type":"function","z":"ff55e874.2c48e8","name":"format search","func":"//var formatID = 4;\nformatID = msg.payload.formatID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//formats/\"+formatID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":490,"y":1375,"wires":[["40e7a47f.63b11c"]]},{"id":"67e15ebb.ececf","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event format","info":"","x":1073,"y":1229,"wires":[]},{"id":"40e7a47f.63b11c","type":"http request","z":"ff55e874.2c48e8","name":"get format","method":"use","ret":"txt","url":"","tls":"","x":571,"y":1283,"wires":[["7ef55232.49e05c"]]},{"id":"f95118c3.4b2518","type":"json","z":"ff55e874.2c48e8","name":"","x":768,"y":1367,"wires":[["fa76714c.bed85"]]},{"id":"fa76714c.bed85","type":"function","z":"ff55e874.2c48e8","name":"get format","func":"if(msg.hasOwnProperty('payload')){\n   format = msg.payload.name;\n}else{\n   format = \"\";\n}\n\nnode.log(\"format name = \"+ format+\"\\n\");\ntopic = \"format\";\nmsg = {};\n\nnewmsg = {\n   topic : topic,\n   payload : format\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":976,"y":1502,"wires":[["12d00354.89ca5d"]]},{"id":"5be1780e.8b0998","type":"comment","z":"ff55e874.2c48e8","name":" take the format","info":"","x":966,"y":1404,"wires":[]},{"id":"f5c91617.8e2ee8","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1396,"y":445,"wires":[["3e100827.c64958"]]},{"id":"e5345aa5.58bb28","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1378,"y":746,"wires":[["3e100827.c64958"]]},{"id":"12d00354.89ca5d","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","random

Last":"5","randomUnits":"seconds","drop":false,"x":1369,"y":1107,"wires":[["3e100827.c64958"]]},{"id":"3e100827.c64958","type":"function","z":"ff55e874.2c48e8","name":"event Type Object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventType:{category : null,subcategory : null,format : null} }; \n\nswitch (msg.topic) {\n   case \"category\":\n   categoryName = msg.payload;\n context.data.eventType.category = categoryName;\n   msg = null;\n   break;\n   case \"subcategory\":\n subcategoryName = msg.payload;\n   context.data.eventType.subcategory = subcategoryName;\n   msg = null;\n break;\n   case \"format\":\n   formatName = msg.payload;\n   context.data.eventType.format = formatName;\n msg = null;\n   break;\n   \n   default:\n   msg = null;\n}\n\nif (context.data.eventType.category !== null && context.data.eventType.subcategory !== null && context.data.eventType.format !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;","outputs":1,"noerr":0,"x":1810,"y":753,"wires":[[]]},{"id":"4371e589.c88d9c","type":"comment","z":"ff55e874.2c48e8","name":"newmsg","info":"newmsg = {\n   eventType:{\n   category : categoryName,\n subcategory : subcategoryName,\n   format : formatName\n   } \n };","x":1801,"y":667,"wires":[]},{"id":"2654d4c3.0baeec","type":"comment","z":"ff55e874.2c48e8","name":"create the eventType Object","info":"","x":355,"y":209,"wires":[]},{"id":"7ef55232.49e05c","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":686,"y":1451,"wires":[["f95118c3.4b2518"]]},{"id":"1062c721.6036b9","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":668,"y":976,"wires":[["8f47b3b.aad9d5"]]},{"id":"266e134.15704ec","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":661,"y":452,"wires":[["23667dcd.27f482"]]},{"id":"810af2e2.3a747","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["4f0b91d.031a77"],"x":507,"y":1054,"wires":[["574bc18a.8d73d"]]},{"id":"c2638965.0c4dd8","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["769f84b6.919d8c"],"x":484,"y":539,"wires":[["5ba3b0ab.c4554"]]},{"id":"e657a3b3.0e35e","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["40e7a47f.63b11c"],"x":441,"y":1540,"wires":[["568e2d67.9899f4"]]},{"id":"568e2d67.9899f4","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":621,"y":1539,"wires":[["f95118c3.4b2518"]]},{"id":"574bc18a.8d73d","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":662,"y":1055,"wires":[["8f47b3b.aad9d5"]]},{"id":"5ba3b0ab.c4554","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":655,"y":538,"wires":[["23667dcd.27f482"]]},{"id":"9a4b8229.58fb","type":"comment","z":"ff55e874.2c48e8","name":"event Type Object with handling the errors","info":"","x":667,"y":140,"wires":[]},{"id":"2c0151dc.b74c8e","type":"switch","z":"ff55e874.2c48e8","name":"check categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":565,"y":621,"wires":[["35e106e2.aac98a"],["12c54218.ab0c0e"]]},{"id":"eed9b526.8c69c8","type":"function","z":"ff55e874.2c48e8","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   categID:categoryID\n   }};\nreturn msg;","outputs":1,"noerr":0,"x":338,"y":622,"wires":[["2c0151dc.b74c8e"]]},{"id":"35e106e2.aac98a","type":"function","z":"ff55e874.2c48e8","name":"category ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":831,"y":596,"wires":[["23667dcd.27f482"]]},{"id":"e6d18f3b.79032","type":"switch","z":"ff55e874.2c48e8","name":"check subcategoryID","property":"payload.subcategID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":523,"y":1165,"wires":[["ded90b18.93b438"],["ce357ebf.a4c9e"]]},{"id":"30d248ff.c61128","type":"function","z":"ff55e874.2c48e8","name":"set subcategory ID","func":"//subcategoryID = 7003;\nsubcategoryID = msg.subcategoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   subcategID:subcategoryID\n   }};\nreturn msg;","outputs":1,"noerr":0,"x":296,"y":1166,"wires":[["e6d18f3b.79032"]]},{"id":"ded90b18.93b438","type":"function","z":"ff55e874.2c48e8","name":"subcategory ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":789,"y":1140,"wires":[["8f47b3b.aad9d5"]]},{"id":"16f0cbb1.424534","type":"switch","z":"ff55e874.2c48e8","name":"check formatID","property":"payload.formatID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":509,"y":1648,"wires":[["a3284a80.a4aad8"],["e8c73870.37c108"]]},{"id":"3a8010.06756ff","type":"function","z":"ff55e874.2c48e8","name":"set format ID","func":"//formatID = 4;\nformatID = msg.formatId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   formatID:formatID\n   }};\nreturn

msg;","outputs":1,"noerr":0,"x":282,"y":1649,"wires":[["16f0cbb1.424534"]]},{"id":"a3284a80.a4aad8","type":"functio
n","z":"ff55e874.2c48e8","name":"format ID is null","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":775,"y":1623,"wires":[["f95118c3.4b2518"]]},{"id":"50cce838.e77cc8","type":"comme
nt","z":"ff55e874.2c48e8","name":" handle the case of optional ID
fields","info":"","x":184,"y":138,"wires":[]},{"id":"79a21397.e36b3c","type":"comment","z":"ff55e874.2c48e8","name"
:" testing the flow-prepare the
subflow","info":"","x":584,"y":63,"wires":[]},{"id":"ca99d874.e89148","type":"subflow:ff55e874.2c48e8","z":"777537
98.bf0708","x":539,"y":106,"wires":[[[]]]}]

Κώδικας 11 : Ροή της υπορροής «event Type Object Subflow»

[{"id":"3d00a862.893dd8","type":"function","z":"4816b556.271e3c","name":"category search","func":"//var categoryID
= 107;\ncategoryID =
msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKE
N\";\n\n\nmsg.method = \"GET\";\nreturn
msg;","outputs":1,"noerr":0,"x":546,"y":386,"wires":[["b1db4ac1.140cc8"]]},{"id":"4d88464c.c12388","type":"commen
t","z":"4816b556.271e3c","name":" call API to get the event
category","info":"","x":1129,"y":240,"wires":[]},{"id":"b1db4ac1.140cc8","type":"http
request","z":"4816b556.271e3c","name":"get
category","method":"use","ret":"txt","url":"","tls":"","x":662,"y":299,"wires":[["dfa883d3.95a3b"]]},{"id":"a64a39b0.73
5e08","type":"json","z":"4816b556.271e3c","name":"","x":824,"y":378,"wires":[["a307855b.c384f8"]]},{"id":"a307855
b.c384f8","type":"function","z":"4816b556.271e3c","name":"get
category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category =
\"\";\n}\nnode.log(\"category name = \"+ category +\"\n\");\ntopic = \"category\";\nmsg = {};\nnewmsg = {\n   topic :
topic,\n   payload : category\n   };\nreturn
newmsg;","outputs":1,"noerr":0,"x":1033,"y":467,"wires":[["68a604c5.34baec"]]},{"id":"73433cf6.fadee4","type":"com
ment","z":"4816b556.271e3c","name":" take the
category","info":"","x":1030,"y":386,"wires":[]},{"id":"9cc87c66.c6051","type":"function","z":"4816b556.271e3c","na
me":"subcategory search","func":"//var subcategoryID = 7003;\nsubcategoryID =
msg.payload.subcategID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//subcategories/\"+subcategoryID+\"/?token=
MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn
msg;","outputs":1,"noerr":0,"x":624,"y":893,"wires":[["1567155c.7de1ab"]]},{"id":"1cdc8618.38627a","type":"commen
t","z":"4816b556.271e3c","name":" call API to get the event
subcategory","info":"","x":1135,"y":751,"wires":[]},{"id":"1567155c.7de1ab","type":"http
request","z":"4816b556.271e3c","name":"get
subcategory","method":"use","ret":"txt","url":"","tls":"","x":668,"y":810,"wires":[["78e0c2cb.41122c"]]},{"id":"f4eca20
2.402a3","type":"json","z":"4816b556.271e3c","name":"","x":820,"y":889,"wires":[["aaf97e59.23ca6"]]},{"id":"aaf97e5
9.23ca6","type":"function","z":"4816b556.271e3c","name":"get
subcategory","func":"if(msg.hasOwnProperty('payload')){\n   subcategory = msg.payload.name;\n}else{\n
subcategory = \"\";\n}\nnode.log(\"subcategory name = \"+subcategory +\"\n\");\ntopic = \"subcategory\";\nmsg =
{};\nnewmsg = {\n   topic : topic,\n   payload : subcategory\n   };\nreturn
newmsg;","outputs":1,"noerr":0,"x":1020,"y":975,"wires":[["92de7448.b20738"]]},{"id":"6a2d8d87.a9a944","type":"co
mment","z":"4816b556.271e3c","name":" take the
subcategory","info":"","x":1014,"y":895,"wires":[]},{"id":"d61a91cd.3dd13","type":"function","z":"4816b556.271e3c","
name":"format search","func":"//var formatID = 4;\nformatID =
msg.payload.formatID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//formats/\"+formatID+\"/?token=MY_TOKEN\
";\n\n\nmsg.method = \"GET\";\nreturn
msg;","outputs":1,"noerr":0,"x":553,"y":1387,"wires":[["219beb40.121ab4"]]},{"id":"59934223.c9bb5c","type":"comme
nt","z":"4816b556.271e3c","name":" call API to get the event
format","info":"","x":1136,"y":1241,"wires":[]},{"id":"219beb40.121ab4","type":"http
request","z":"4816b556.271e3c","name":"get
format","method":"use","ret":"txt","url":"","tls":"","x":634,"y":1295,"wires":[["81ab2c65.f3c51"]]},{"id":"38b9559a.51
d5ba","type":"json","z":"4816b556.271e3c","name":"","x":831,"y":1379,"wires":[["f0d1dea7.2aaa5"]]},{"id":"f0d1dea7
.2aaa5","type":"function","z":"4816b556.271e3c","name":"get format","func":"if(msg.hasOwnProperty('payload')){\n
format = msg.payload.name;\n}else{\n   format = \"\";\n}\nnode.log(\"format name = \"+ format+\"\n\");\ntopic =
\"format\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : format\n   };\nreturn
newmsg;","outputs":1,"noerr":0,"x":1039,"y":1514,"wires":[["b7e65b5.e8035a8"]]},{"id":"bcbe63fe.fda85","type":"com
ment","z":"4816b556.271e3c","name":" take the
format","info":"","x":1029,"y":1416,"wires":[]},{"id":"68a604c5.34baec","type":"delay","z":"4816b556.271e3c","name
":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","
randomLast":"5","randomUnits":"seconds","drop":false,"x":1459,"y":457,"wires":[["cf17df53.7b176"]]},{"id":"92de744
8.b20738","type":"delay","z":"4816b556.271e3c","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seco
nds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":144
1,"y":758,"wires":[["cf17df53.7b176"]]},{"id":"b7e65b5.e8035a8","type":"delay","z":"4816b556.271e3c","name":"","p

auseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","rando
mLast":"5","randomUnits":"seconds","drop":false,"x":1432,"y":1119,"wires":[["cf17df53.7b176"]]},{"id":"cf17df53.7b
176","type":"function","z":"4816b556.271e3c","name":"event Type Object","func":"//arxikopoieitai mono sthn prwth
klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventType:{category : null,subcategory : null,format :
null} }; \n\nswitch (msg.topic) {\n   case \"category\":\n   categoryName = msg.payload;\n
context.data.eventType.category = categoryName;\n   msg = null;\n   break;\n   case \"subcategory\":\n
subcategoryName = msg.payload;\n   context.data.eventType.subcategory = subcategoryName;\n   msg = null;\n
break;\n   case \"format\":\n   formatName = msg.payload;\n   context.data.eventType.format = formatName;\n
msg = null;\n   break;\n   \n   default:\n   msg = null;\n}\n\nif (context.data.eventType.category !== null &&
context.data.eventType.subcategory !== null && context.data.eventType.format !== null) {\n   newmsg = {payload :
null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn
newmsg;","outputs":1,"noerr":0,"x":1873,"y":765,"wires":[[]]},{"id":"ef18dbe4.0c9b18","type":"comment","z":"4816b5
56.271e3c","name":"newmsg","info":"newmsg = {\n   eventType:{\n   category : categoryName,\n
subcategory : subcategoryName,\n   format : formatName\n   } \n
};","x":1864,"y":679,"wires":[]},{"id":"9e474d05.73b56","type":"comment","z":"4816b556.271e3c","name":"create the
eventType
Object","info":"","x":418,"y":221,"wires":[]},{"id":"81ab2c65.f3c51","type":"function","z":"4816b556.271e3c","name":
"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty =
msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n
node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty ==
\"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\n\nreturn
msg;\n
\n\n","outputs":1,"noerr":0,"x":749,"y":1463,"wires":[["38b9559a.51d5ba"]]},{"id":"78e0c2cb.41122c","type":"function
","z":"4816b556.271e3c","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n
statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty ==
\"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if
(statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n
return;\n   }\n}\n\nreturn msg;\n
\n\n","outputs":1,"noerr":0,"x":731,"y":988,"wires":[["f4eca202.402a3"]]},{"id":"dfa883d3.95a3b","type":"function","z"
:"4816b556.271e3c","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n
statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty ==
\"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if
(statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n
return;\n   }\n}\n\nreturn msg;\n
\n\n","outputs":1,"noerr":0,"x":724,"y":464,"wires":[["a64a39b0.735e08"]]},{"id":"9c727523.a31c68","type":"catch","z
":"4816b556.271e3c","name":"","scope":["1567155c.7de1ab"],"x":570,"y":1066,"wires":[["654d94d3.a8f0bc"]]},{"id":"
dd083e41.fe3bd","type":"catch","z":"4816b556.271e3c","name":"","scope":["b1db4ac1.140cc8"],"x":547,"y":551,"wire
s":[["dace7755.7f3df8"]]},{"id":"9adb90b9.13a37","type":"catch","z":"4816b556.271e3c","name":"","scope":["219beb4
0.121ab4"],"x":504,"y":1552,"wires":[["a41fd1bf.66b3b"]]},{"id":"a41fd1bf.66b3b","type":"function","z":"4816b556.2
71e3c","name":"handle","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":684,"y":1551,"wires":[["38b9559a.51d5ba"]]},{"id":"654d94d3.a8f0bc","type":"functio
n","z":"4816b556.271e3c","name":"handle","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":725,"y":1067,"wires":[["f4eca202.402a3"]]},{"id":"dace7755.7f3df8","type":"function",
"z":"4816b556.271e3c","name":"handle","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":718,"y":550,"wires":[["a64a39b0.735e08"]]},{"id":"c505eae0.398fe8","type":"comment
","z":"4816b556.271e3c","name":"event Type Object with handling the
errors","info":"","x":730,"y":152,"wires":[]},{"id":"f3a48410.202068","type":"switch","z":"4816b556.271e3c","name":"
check
categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","
outputs":2,"x":628,"y":633,"wires":[["a2439c38.ac2f1"],["3d00a862.893dd8"]]},{"id":"c2e99ab0.7866f8","type":"functi
on","z":"4816b556.271e3c","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg
= {};\nmsg = {\n payload:\n   {\n   categID:categoryID\n   }\n};\nreturn
msg;","outputs":1,"noerr":0,"x":401,"y":634,"wires":[["f3a48410.202068"]]},{"id":"a2439c38.ac2f1","type":"function",
"z":"4816b556.271e3c","name":"category ID is null","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":894,"y":608,"wires":[["a64a39b0.735e08"]]},{"id":"380f72af.d1d37e","type":"switch","
z":"4816b556.271e3c","name":"check
subcategoryID","property":"payload.subcategID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"
true","outputs":2,"x":586,"y":1177,"wires":[["7a336d34.b0c024"],["9cc87c66.c6051"]]},{"id":"9c8f91c8.00a0b","type":
"function","z":"4816b556.271e3c","name":"set subcategory ID","func":"//subcategoryID = 7003;\nsubcategoryID =
msg.subcategoryId;\nmsg = {};\nmsg = {\n payload:\n   {\n   subcategID:subcategoryID\n   }\n};\nreturn
msg;","outputs":1,"noerr":0,"x":359,"y":1178,"wires":[["380f72af.d1d37e"]]},{"id":"7a336d34.b0c024","type":"functio
n","z":"4816b556.271e3c","name":"subcategory ID is null","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":852,"y":1152,"wires":[["f4eca202.402a3"]]},{"id":"ffa2b3cc.a46f8","type":"switch","z":
"4816b556.271e3c","name":"check
formatID","property":"payload.formatID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","o
utputs":2,"x":572,"y":1660,"wires":[["1c2ace28.3c2eb2"],["d61a91cd.3dd13"]]},{"id":"2bd456cc.4f562a","type":"functi
on","z":"4816b556.271e3c","name":"set format ID","func":"//formatID = 4;\nformatID = msg.formatId;\nmsg =

{};\nmsg = {\n   payload:\n   {\n   formatID:formatID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":345,"y":1661,"wires":[["ffa2b3cc.a46f8"]]},{"id":"1c2ace28.3c2eb2","type":"function","z":"4816b556.271e3c","name":"format ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":838,"y":1635,"wires":[["38b9559a.51d5ba"]]},{"id":"8dc2af97.e1667","type":"comment","z":"4816b556.271e3c","name":" handle the case of optional ID fields","info":"","x":247,"y":150,"wires":[]},{"id":"10ce34fd.eb6c6b","type":"comment","z":"4816b556.271e3c","name":" testing the flow-prepare the subflow","info":"","x":647,"y":75,"wires":[]}]

Κώδικας 12 : Ροή διεργασίας (κατηγορία εκδήλωσης)

[{"id":"67ea34ef.39385c","type":"function","z":"6e087f27.d215d","name":"category search","func":"//var categoryID = 107;\ncategoryID = msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":342,"y":222,"wires":[["ab68965c.b74c18"]]},{"id":"ab68965c.b74c18","type":"http request","z":"6e087f27.d215d","name":"get category","method":"use","ret":"txt","url":"","tls":"","x":458,"y":135,"wires":[["97439064.c0e31"]]},{"id":"4ec3c4a3.7257dc","type":"json","z":"6e087f27.d215d","name":"","x":620,"y":214,"wires":[["868d7c0.ebf1888"]]},{"id":"868d7c0.ebf1888","type":"function","z":"6e087f27.d215d","name":"get category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category = \"\";\n}\n\nnode.log(\"category name = \"+ category +\"\n\");\ntopic = \"category\";\nmsg = {};\n\nnewmsg = {\n   topic : topic,\n   payload : category\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":829,"y":303,"wires":[[]]},{"id":"6feff070.d312e","type":"comment","z":"6e087f27.d215d","name":" take the category","info":"","x":826,"y":222,"wires":[]},{"id":"97439064.c0e31","type":"function","z":"6e087f27.d215d","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":520,"y":300,"wires":[["4ec3c4a3.7257dc"]]},{"id":"affa0b0b.ba91e8","type":"catch","z":"6e087f27.d215d","name":"","scope":["ab68965c.b74c18"],"x":343,"y":387,"wires":[["c723fee2.05cdc"]]},{"id":"c723fee2.05cdc","type":"function","z":"6e087f27.d215d","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":514,"y":386,"wires":[["4ec3c4a3.7257dc"]]},{"id":"5de40a8b.ff6484","type":"switch","z":"6e087f27.d215d","name":"check categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":424,"y":469,"wires":[["afd8691e.01d198"],["67ea34ef.39385c"]]},{"id":"73933e4d.e5a8a","type":"function","z":"6e087f27.d215d","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   categID:categoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":197,"y":470,"wires":[["5de40a8b.ff6484"]]},{"id":"afd8691e.01d198","type":"function","z":"6e087f27.d215d","name":"category ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":690,"y":444,"wires":[["4ec3c4a3.7257dc"]]}]

Κώδικας 13 : Κόμβος της υπορροής «event Object subflow with flow context use»

[{"id":"ff55e874.2c48e8","type":"subflow","name":"event Type Object Subflow","info":"create an event Type Object\n\n\neventType:{\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   }\n\n\ngets an incoming message \nwith parameters\n\nmsg.categoryId\n\nmsg.subcategoryId\n\nmsg.formatId\n\nall of them numbers or null","in":[{"x":44,"y":778,"wires":[{"id":"eed9b526.8c69c8"},{"id":"30d248ff.c61128"},{"id":"3a8010.06756ff"}]}],"out":[{"x":2065,"y":752,"wires":[{"id":"3e100827.c64958","port":0}]}]},{"id":"12c54218.ab0c0e","type":"function","z":"ff55e874.2c48e8","name":"category search","func":"//var categoryID = 107;\ncategoryID = msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":483,"y":374,"wires":[["769f84b6.919d8c"]]},{"id":"382931ce.446dfe","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event category","info":"","x":1066,"y":228,"wires":[]},{"id":"769f84b6.919d8c","type":"http request","z":"ff55e874.2c48e8","name":"get category","method":"use","ret":"txt","url":"","tls":"","x":599,"y":287,"wires":[["266e134.15704ec"]]},{"id":"23667dcd.27f482","type":"json","z":"ff55e874.2c48e8","name":"","x":761,"y":366,"wires":[["3fb4da05.103056"]]},{"id":"3fb4da05.103056","type":"function","z":"ff55e874.2c48e8","name":"get category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category =

\"\";\n}\nnode.log(\"category name = \"+ category +\"\\n\");\ntopic = \"category\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : category\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":970,"y":455,"wires":[["f5c91617.8e2ee8"]]},{"id":"9d021d6c.8edbe","type":"comment","z":"ff55e874.2c48e8","name":" take the category","info":"","x":967,"y":374,"wires":[]},{"id":"ce357ebf.a4c9e","type":"function","z":"ff55e874.2c48e8","name":"subcategory search","func":"//var subcategoryID = 7003;\nsubcategoryID = msg.payload.subcategID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//subcategories/\"+subcategoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":561,"y":881,"wires":[["4f0b91d.031a77"]]},{"id":"5f3da062.4ed36","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event subcategory","info":"","x":1072,"y":739,"wires":[]},{"id":"4f0b91d.031a77","type":"http request","z":"ff55e874.2c48e8","name":"get subcategory","method":"use","ret":"txt","url":"","tls":"","x":605,"y":798,"wires":[["1062c721.6036b9"]]},{"id":"8f47b3b.aad9d5","type":"json","z":"ff55e874.2c48e8","name":"","x":757,"y":877,"wires":[["7c5cb79e.9761a8"]]},{"id":"7c5cb79e.9761a8","type":"function","z":"ff55e874.2c48e8","name":"get subcategory","func":"if(msg.hasOwnProperty('payload')){\n   subcategory = msg.payload.name;\n}else{\n   subcategory = \"\";\n}\nnode.log(\"subcategory name = \"+subcategory +\"\\n\");\ntopic = \"subcategory\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : subcategory\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":957,"y":963,"wires":[["e5345aa5.58bb28"]]},{"id":"e04a3bd0.32c348","type":"comment","z":"ff55e874.2c48e8","name":" take the subcategory","info":"","x":951,"y":883,"wires":[]},{"id":"e8c73870.37c108","type":"function","z":"ff55e874.2c48e8","name":"format search","func":"//var formatID = 4;\nformatID = msg.payload.formatID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//formats/\"+formatID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":490,"y":1375,"wires":[["40e7a47f.63b11c"]]},{"id":"67e15ebb.ececf","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event format","info":"","x":1073,"y":1229,"wires":[]},{"id":"40e7a47f.63b11c","type":"http request","z":"ff55e874.2c48e8","name":"get format","method":"use","ret":"txt","url":"","tls":"","x":571,"y":1283,"wires":[["7ef55232.49e05c"]]},{"id":"f95118c3.4b2518","type":"json","z":"ff55e874.2c48e8","name":"","x":768,"y":1367,"wires":[["fa76714c.bed85"]]},{"id":"fa76714c.bed85","type":"function","z":"ff55e874.2c48e8","name":"get format","func":"if(msg.hasOwnProperty('payload')){\n   format = msg.payload.name;\n}else{\n   format = \"\";\n}\nnode.log(\"format name = \"+ format+\"\\n\");\ntopic = \"format\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : format\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":976,"y":1502,"wires":[["12d00354.89ca5d"]]},{"id":"5be1780e.8b0998","type":"comment","z":"ff55e874.2c48e8","name":" take the format","info":"","x":966,"y":1404,"wires":[]},{"id":"f5c91617.8e2ee8","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1396,"y":445,"wires":[["3e100827.c64958"]]},{"id":"e5345aa5.58bb28","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1378,"y":746,"wires":[["3e100827.c64958"]]},{"id":"12d00354.89ca5d","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1369,"y":1107,"wires":[["3e100827.c64958"]]},{"id":"3e100827.c64958","type":"function","z":"ff55e874.2c48e8","name":"event Type Object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventType:{category : null,subcategory : null,format : null} }; \n\nswitch (msg.topic) {\n   case \"category\":\n   categoryName = msg.payload;\n   context.data.eventType.category = categoryName;\n   msg = null;\n   break;\n   case \"subcategory\":\n   subcategoryName = msg.payload;\n   context.data.eventType.subcategory = subcategoryName;\n   msg = null;\n   break;\n   case \"format\":\n   formatName = msg.payload;\n   context.data.eventType.format = formatName;\n   msg = null;\n   break;\n\n   default:\n   msg = null;\n}\n\nif (context.data.eventType.category !== null && context.data.eventType.subcategory !== null && context.data.eventType.format !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;","outputs":1,"noerr":0,"x":1810,"y":753,"wires":[[]]},{"id":"4371e589.c88d9c","type":"comment","z":"ff55e874.2c48e8","name":"newmsg","info":"newmsg = {\n   eventType:{\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   } \n};","x":1801,"y":667,"wires":[]},{"id":"2654d4c3.0baeec","type":"comment","z":"ff55e874.2c48e8","name":"create the eventType Object","info":"","x":355,"y":209,"wires":[]},{"id":"7ef55232.49e05c","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":686,"y":1451,"wires":[["f95118c3.4b2518"]]},{"id":"1062c721.6036b9","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if

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(statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n

\n\n","outputs":1,"noerr":0,"x":668,"y":976,"wires":[["8f47b3b.aad9d5"]]},{"id":"266e134.15704ec","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n

\n\n","outputs":1,"noerr":0,"x":661,"y":452,"wires":[["23667dcd.27f482"]]},{"id":"810af2e2.3a747","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["4f0b91d.031a77"],"x":507,"y":1054,"wires":[["574bc18a.8d73d"]]},{"id":"c2638965.0c4dd8","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["769f84b6.919d8c"],"x":484,"y":539,"wires":[["5ba3b0ab.c4554"]]},{"id":"e657a3b3.0e35e","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["40e7a47f.63b11c"],"x":441,"y":1540,"wires":[["568e2d67.9899f4"]]},{"id":"568e2d67.9899f4","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":621,"y":1539,"wires":[["f95118c3.4b2518"]]},{"id":"574bc18a.8d73d","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":662,"y":1055,"wires":[["8f47b3b.aad9d5"]]},{"id":"5ba3b0ab.c4554","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":655,"y":538,"wires":[["23667dcd.27f482"]]},{"id":"9a4b8229.58fb","type":"comment","z":"ff55e874.2c48e8","name":"event Type Object with handling the errors","info":"","x":667,"y":140,"wires":[]},{"id":"2c0151dc.b74c8e","type":"switch","z":"ff55e874.2c48e8","name":"check categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":565,"y":621,"wires":[["35e106e2.aac98a"],["12c54218.ab0c0e"]]},{"id":"eed9b526.8c69c8","type":"function","z":"ff55e874.2c48e8","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   categID:categoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":338,"y":622,"wires":[["2c0151dc.b74c8e"]]},{"id":"35e106e2.aac98a","type":"function","z":"ff55e874.2c48e8","name":"category ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":831,"y":596,"wires":[["23667dcd.27f482"]]},{"id":"e6d18f3b.79032","type":"switch","z":"ff55e874.2c48e8","name":"check subcategoryID","property":"payload.subcategID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":523,"y":1165,"wires":[["ded90b18.93b438"],["ce357ebf.a4c9e"]]},{"id":"30d248ff.c61128","type":"function","z":"ff55e874.2c48e8","name":"set subcategory ID","func":"//subcategoryID = 7003;\nsubcategoryID = msg.subcategoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   subcategID:subcategoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":296,"y":1166,"wires":[["e6d18f3b.79032"]]},{"id":"ded90b18.93b438","type":"function","z":"ff55e874.2c48e8","name":"subcategory ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":789,"y":1140,"wires":[["8f47b3b.aad9d5"]]},{"id":"16f0cbb1.424534","type":"switch","z":"ff55e874.2c48e8","name":"check formatID","property":"payload.formatID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":509,"y":1648,"wires":[["a3284a80.a4aad8"],["e8c73870.37c108"]]},{"id":"3a8010.06756ff","type":"function","z":"ff55e874.2c48e8","name":"set format ID","func":"//formatID = 4;\nformatID = msg.formatId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   formatID:formatID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":282,"y":1649,"wires":[["16f0cbb1.424534"]]},{"id":"a3284a80.a4aad8","type":"function","z":"ff55e874.2c48e8","name":"format ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":775,"y":1623,"wires":[["f95118c3.4b2518"]]},{"id":"50cce838.e77cc8","type":"comment","z":"ff55e874.2c48e8","name":" handle the case of optional ID fields","info":"","x":184,"y":138,"wires":[]},{"id":"79a21397.e36b3c","type":"comment","z":"ff55e874.2c48e8","name":" testing the flow-prepare the subflow","info":"","x":584,"y":63,"wires":[]},{"id":"bcbb5ac5.6c3e88","type":"subflow","name":"event Object subflow with flow context use","info":"the input\n\nan incoming message \nan object with the event's properties\n\n\nthe output \n\nan empty message\n \n or\n\na message including the following object \n \n eventObject : {\n \n   start : datetime,\n   end : datetime\n   eventType : {\n   category: string\n   subcategory: string\n   format : string\n   }\n \n\n}","in":[{"x":356,"y":170.99999237060547,"wires":[{"id":"3fa4333a.13a02c"}]}],"out":[{"x":1446,"y":528.0000228881836,"wires":[{"id":"8fedc223.2b384","port":0},{"id":"913891ce.469ec","port":0}]}]},{"id":"7fab015d.00a17","type":"function","z":"bcbb5ac5.6c3e88","name":"check status and online state","func":"status = msg.payload.status;\nonline_event = msg.payload.online_event;\nnode.log(\"status = \"+ status +\" online_event = \"+ online_event+\"\\n\");\n\nif (status === \"canceled\"|| status === \"cancelled\" || online_event === true) {\n   msg = {};\n}\n\nreturn msg;","outputs":1,"noerr":0,"x":523,"y":315,"wires":[["b778805d.bb4b1"]]},{"id":"74bb28f2.8bcb38","type":"function","z":"bcbb5ac5.6c3e88","name":"data processing","func":"\n\n\n\n//flow context object\n\nvar subflowContextData = flow.get('contextData') || {};\n//node.send(subflowContextData);\n\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\nsubflowContextData = {\n   start : startObject,\n   end : endObject\n

};\n//node.send(subflowContextData);\nflow.set('contextData',subflowContextData);\n//subtest = flow.get('contextData');\n//node.send(subtest);\nsubflowContextData = {};\n\n\n\n\n\n\nif (msg.payload.hasOwnProperty('category_id')) {\n   categoryID = msg.payload.category_id;\n} else {\n   categoryID =

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null;\n}\nif (msg.payload.hasOwnProperty('subcategory_id')) {\n   subcategoryID = msg.payload.subcategory_id;\n} else {\n   subcategoryID = null;\n}\nif (msg.payload.hasOwnProperty('format_id')) {\n   formatID = msg.payload.format_id;\n} else {\n   formatID = null;\n}\n\nmsg = {};\nmsg = {\n   categoryId : categoryID,\n   subcategoryId : subcategoryID,\n   formatId : formatID   }\nreturn msg;//call eventType subflow\n\n\n","outputs":1,"noerr":0,"x":803,"y":312,"wires":[["19eca5f5.6d59fa"]]},{"id":"b778805d.bb4b1","type":"switch","z":"bcbb5ac5.6c3e88","name":"","property":"payload","propertyType":"msg","rules":[{"t":"nnull"},{"t":"null"}],"checkall":"true","outputs":2,"x":576,"y":380.99999237060547,"wires":[["74bb28f2.8bcb38"],["913891ce.469ec"]]},{"id":"c000b765.ecafb8","type":"comment","z":"bcbb5ac5.6c3e88","name":"cancelled or online event ","info":"status === \"cancelled\" || online_event === true","x":545,"y":434.99999237060547,"wires":[]},{"id":"dd10d293.76023","type":"comment","z":"bcbb5ac5.6c3e88","name":"valid event","info":"keep to this subflow's context data \nthe datetime objects start and end \n\nget the ids from category,subcategory and format\nand set the needed parameters\nto call the eventTypeObject subflow","x":849,"y":378,"wires":[]},{"id":"19eca5f5.6d59fa","type":"subflow:ff55e874.2c48e8","z":"bcbb5ac5.6c3e88","x":1125,"y":312,"wires":[["8fedc223.2b384"]]},{"id":"8fedc223.2b384","type":"function","z":"bcbb5ac5.6c3e88","name":"combine and create an event object","func":"eventTypeObject = msg.payload.eventType;\n//node.send(eventTypeObject);\ncontextData = flow.get('contextData');\n//node.send(contextData);\nstartDatetime = contextData.start;\n//node.send(startDatetime);\nendDatetime = contextData.end;\n//node.send(endDatetime);\n\n\nmsg = {};\nmsg = { eventObject :{\n   start : startDatetime,\n   end : endDatetime,\n   eventType : eventTypeObject\n   }\n};\n\ncontextData = {};\nflow.set('contextData',contextData);\n//cD = flow.get('contextData');\n//node.send(cD);\n\n//finished = true;\n//flow.set('isFinished',finished);\n\nreturn msg;","outputs":1,"noerr":0,"x":1296,"y":393,"wires":[[]]},{"id":"913891ce.469ec","type":"function","z":"bcbb5ac5.6c3e88","name":"no event","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":561,"y":527.0000228881836,"wires":[[]]},{"id":"3fa4333a.13a02c","type":"json","z":"bcbb5ac5.6c3e88","name":"","x":433,"y":232.99999237060547,"wires":[["7fab015d.00a17"]]},{"id":"c01230ad.eb52c","type":"subflow:bcbb5ac5.6c3e88","z":"22a94d22.8d89e2","x":466,"y":135,"wires":[[]]}]

Κώδικας 14 : Ροή της υπορροής «event Object subflow with flow context use»

[{"id":"ff55e874.2c48e8","type":"subflow","name":"event Type Object Subflow","info":"create an event Type Object\n\n\neventType:{\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n} \n\n\ngets an incoming message \nwith parameters\n\nmsg.categoryId\n\nmsg.subcategoryId\n\nmsg.formatId\n\nall of them numbers or null","in":[{"x":44,"y":778,"wires":[{"id":"eed9b526.8c69c8"},{"id":"30d248ff.c61128"},{"id":"3a8010.06756ff"}]}],"out":[{"x":2065,"y":752,"wires":[{"id":"3e100827.c64958","port":0}]}]},{"id":"12c54218.ab0c0e","type":"function","z":"ff55e874.2c48e8","name":"category search","func":"//var categoryID = 107;\ncategoryID = msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":483,"y":374,"wires":[["769f84b6.919d8c"]]},{"id":"382931ce.446dfe","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event category","info":"","x":1066,"y":228,"wires":[]},{"id":"769f84b6.919d8c","type":"http request","z":"ff55e874.2c48e8","name":"get category","method":"use","ret":"txt","url":"","tls":"","x":599,"y":287,"wires":[["266e134.15704ec"]]},{"id":"23667dcd.27f482","type":"json","z":"ff55e874.2c48e8","name":"","x":761,"y":366,"wires":[["3fb4da05.103056"]]},{"id":"3fb4da05.103056","type":"function","z":"ff55e874.2c48e8","name":"get category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category = \"\";\n}\nnode.log(\"category name = \"+ category +\"\n\");\ntopic = \"category\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : category\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":970,"y":455,"wires":[["f5c91617.8e2ee8"]]},{"id":"9d021d6c.8edbe","type":"comment","z":"ff55e874.2c48e8","name":" take the category","info":"","x":967,"y":374,"wires":[]},{"id":"ce357ebf.a4c9e","type":"function","z":"ff55e874.2c48e8","name":"subcategory search","func":"//var subcategoryID = 7003;\nsubcategoryID = msg.payload.subcategID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//subcategories/\"+subcategoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":561,"y":881,"wires":[["4f0b91d.031a77"]]},{"id":"5f3da062.4ed36","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event subcategory","info":"","x":1072,"y":739,"wires":[]},{"id":"4f0b91d.031a77","type":"http request","z":"ff55e874.2c48e8","name":"get subcategory","method":"use","ret":"txt","url":"","tls":"","x":605,"y":798,"wires":[["1062c721.6036b9"]]},{"id":"8f47b3b.aad9d5","type":"json","z":"ff55e874.2c48e8","name":"","x":757,"y":877,"wires":[["7c5cb79e.9761a8"]]},{"id":"7c5cb79e.9761a8","type":"function","z":"ff55e874.2c48e8","name":"get subcategory","func":"if(msg.hasOwnProperty('payload')){\n   subcategory = msg.payload.name;\n}else{\n   subcategory = \"\";\n}\nnode.log(\"subcategory name = \"+subcategory +\"\n\");\ntopic = \"subcategory\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : subcategory\n   };\nreturn

newmsg;","outputs":1,"noerr":0,"x":957,"y":963,"wires":[["e5345aa5.58bb28"]]},{"id":"e04a3bd0.32c348","type":"comment","z":"ff55e874.2c48e8","name":" take the subcategory","info":"","x":951,"y":883,"wires":[]},{"id":"e8c73870.37c108","type":"function","z":"ff55e874.2c48e8","name":"format search","func":"//var formatID = 4;\nformatID = msg.payload.formatID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//formats/\"+formatID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":490,"y":1375,"wires":[["40e7a47f.63b11c"]]},{"id":"67e15ebb.ececf","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event format","info":"","x":1073,"y":1229,"wires":[]},{"id":"40e7a47f.63b11c","type":"http request","z":"ff55e874.2c48e8","name":"get format","method":"use","ret":"txt","url":"","tls":"","x":571,"y":1283,"wires":[["7ef55232.49e05c"]]},{"id":"f95118c3.4b2518","type":"json","z":"ff55e874.2c48e8","name":"","x":768,"y":1367,"wires":[["fa76714c.bed85"]]},{"id":"fa76714c.bed85","type":"function","z":"ff55e874.2c48e8","name":"get format","func":"if(msg.hasOwnProperty('payload')){\n format = msg.payload.name;\n}else{\n format = \"\";\n}\nnode.log(\"format name = \"+ format+\"\\n\");\ntopic = \"format\";\nmsg = {};\nnewmsg = {\n topic : topic,\n payload : format\n };\nreturn newmsg;","outputs":1,"noerr":0,"x":976,"y":1502,"wires":[["12d00354.89ca5d"]]},{"id":"5be1780e.8b0998","type":"comment","z":"ff55e874.2c48e8","name":" take the format","info":"","x":966,"y":1404,"wires":[]},{"id":"f5c91617.8e2ee8","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1396,"y":445,"wires":[["3e100827.c64958"]]},{"id":"e5345aa5.58bb28","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1378,"y":746,"wires":[["3e100827.c64958"]]},{"id":"12d00354.89ca5d","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1369,"y":1107,"wires":[["3e100827.c64958"]]},{"id":"3e100827.c64958","type":"function","z":"ff55e874.2c48e8","name":"event Type Object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventType:{category : null,subcategory : null,format : null} }; \n\nswitch (msg.topic) {\n case \"category\":\n categoryName = msg.payload;\n context.data.eventType.category = categoryName;\n msg = null;\n break;\n case \"subcategory\":\n subcategoryName = msg.payload;\n context.data.eventType.subcategory = subcategoryName;\n msg = null;\n break;\n case \"format\":\n formatName = msg.payload;\n context.data.eventType.format = formatName;\n msg = null;\n break;\n \n default:\n msg = null;\n}\n\nif (context.data.eventType.category !== null && context.data.eventType.subcategory !== null && context.data.eventType.format !== null) {\n newmsg = {payload : null};\n newmsg.payload = context.data;\n context.data = null;\n} else {\n newmsg = null;\n}\n\nreturn newmsg;","outputs":1,"noerr":0,"x":1810,"y":753,"wires":[[]]},{"id":"4371e589.c88d9c","type":"comment","z":"ff55e874.2c48e8","name":"newmsg","info":"newmsg = {\n eventType:{\n category : categoryName,\n subcategory : subcategoryName,\n format : formatName\n } \n };","x":1801,"y":667,"wires":[]},{"id":"2654d4c3.0baeec","type":"comment","z":"ff55e874.2c48e8","name":"create the eventType Object","info":"","x":355,"y":209,"wires":[]},{"id":"7ef55232.49e05c","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n statusCodeproperty = msg.statusCode;\n node.log(statusCodeproperty);\n if (statusCodeproperty == \"ETIMEDOUT\") {\n node.log(\"Error: connect ETIMEDOUT \");\n //msg = {};\n return;\n }\n if (statusCodeproperty == \"EAI_AGAIN\") {\n node.log(\"Error: getaddrinfo EAI_AGAIN\");\n //msg = {};\n return;\n }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":686,"y":1451,"wires":[["f95118c3.4b2518"]]},{"id":"1062c721.6036b9","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n statusCodeproperty = msg.statusCode\n node.log(statusCodeproperty);\n if (statusCodeproperty == \"ETIMEDOUT\") {\n node.log(\"Error: connect ETIMEDOUT \");\n //msg = {};\n return;\n }\n if (statusCodeproperty == \"EAI_AGAIN\") {\n node.log(\"Error: getaddrinfo EAI_AGAIN\");\n //msg = {};\n return;\n }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":668,"y":976,"wires":[["8f47b3b.aad9d5"]]},{"id":"266e134.15704ec","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n statusCodeproperty = msg.statusCode\n node.log(statusCodeproperty);\n if (statusCodeproperty == \"ETIMEDOUT\") {\n node.log(\"Error: connect ETIMEDOUT \");\n //msg = {};\n return;\n }\n if (statusCodeproperty == \"EAI_AGAIN\") {\n node.log(\"Error: getaddrinfo EAI_AGAIN\");\n //msg = {};\n return;\n }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":661,"y":452,"wires":[["23667dcd.27f482"]]},{"id":"810af2e2.3a747","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["4f0b91d.031a77"],"x":507,"y":1054,"wires":[["574bc18a.8d73d"]]},{"id":"c2638965.0c4dd8","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["769f84b6.919d8c"],"x":484,"y":539,"wires":[["5ba3b0ab.c4554"]]},{"id":"e657a3b3.0e35e","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["40e7a47f.63b11c"],"x":441,"y":1540,"wires":[["568e2d67.9899f4"]]},{"id":"568e2d67.9899f4","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":621,"y":1539,"wires":[["f95118c3.4b2518"]]},{"id":"574bc18a.8d73d","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":662,"y":1055,"wires":[["8f47b3b.aad9d5"]]},{"id":"5ba3b0ab.c4554","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn

msg;","outputs":1,"noerr":0,"x":655,"y":538,"wires":[["23667dcd.27f482"]]},{"id":"9a4b8229.58fb","type":"comment",
"z":"ff55e874.2c48e8","name":"event Type Object with handling the
errors","info":"","x":667,"y":140,"wires":[]},{"id":"2c0151dc.b74c8e","type":"switch","z":"ff55e874.2c48e8","name":"c
heck
categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","
outputs":2,"x":565,"y":621,"wires":[["35e106e2.aac98a"],["12c54218.ab0c0e"]]},{"id":"eed9b526.8c69c8","type":"func
tion","z":"ff55e874.2c48e8","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg
= {};\nmsg = {\n   payload:\n   {\n   categID:categoryID\n   }\n};\nreturn
msg;","outputs":1,"noerr":0,"x":338,"y":622,"wires":[["2c0151dc.b74c8e"]]},{"id":"35e106e2.aac98a","type":"function"
,"z":"ff55e874.2c48e8","name":"category ID is null","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":831,"y":596,"wires":[["23667dcd.27f482"]]},{"id":"e6d18f3b.79032","type":"switch","z
":"ff55e874.2c48e8","name":"check
subcategoryID","property":"payload.subcategID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"
true","outputs":2,"x":523,"y":1165,"wires":[["ded90b18.93b438"],["ce357ebf.a4c9e"]]},{"id":"30d248ff.c61128","type"
:"function","z":"ff55e874.2c48e8","name":"set subcategory ID","func":"//subcategoryID = 7003;\nsubcategoryID =
msg.subcategoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   subcategID:subcategoryID\n   }\n};\nreturn
msg;","outputs":1,"noerr":0,"x":296,"y":1166,"wires":[["e6d18f3b.79032"]]},{"id":"ded90b18.93b438","type":"function
","z":"ff55e874.2c48e8","name":"subcategory ID is null","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":789,"y":1140,"wires":[["8f47b3b.aad9d5"]]},{"id":"16f0cbb1.424534","type":"switch","
z":"ff55e874.2c48e8","name":"check
formatID","property":"payload.formatID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","o
utputs":2,"x":509,"y":1648,"wires":[["a3284a80.a4aad8"],["e8c73870.37c108"]]},{"id":"3a8010.06756ff","type":"functi
on","z":"ff55e874.2c48e8","name":"set format ID","func":"//formatID = 4;\nformatID = msg.formatId;\nmsg = {};\nmsg
= {\n   payload:\n   {\n   formatID:formatID\n   }\n};\nreturn
msg;","outputs":1,"noerr":0,"x":282,"y":1649,"wires":[["16f0cbb1.424534"]]},{"id":"a3284a80.a4aad8","type":"functio
n","z":"ff55e874.2c48e8","name":"format ID is null","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":775,"y":1623,"wires":[["f95118c3.4b2518"]]},{"id":"50cce838.e77cc8","type":"comme
nt","z":"ff55e874.2c48e8","name":" handle the case of optional ID
fields","info":"","x":184,"y":138,"wires":[]},{"id":"79a21397.e36b3c","type":"comment","z":"ff55e874.2c48e8","name"
:" testing the flow-prepare the
subflow","info":"","x":584,"y":63,"wires":[]},{"id":"4480fc2b.df3a84","type":"function","z":"c0140b5c.290ea8","name
":"check status and online state","func":"status = msg.payload.status;\nonline_event =
msg.payload.online_event;\nnode.log(\"status = \"+ status +\"online_event = \"+ online_event+\"\n\");\nif (status ===
\"canceled\"|| status === \"cancelled\" || online_event === true) {\n   msg = {};\n}\n\nreturn
msg;","outputs":1,"noerr":0,"x":523,"y":311,"wires":[["865eb7e0.fa7a08"]]},{"id":"2ad9ba9d.c105b6","type":"json","z"
:"c0140b5c.290ea8","name":"","x":358,"y":249,"wires":[["4480fc2b.df3a84"]]},{"id":"5baabb6a.d033f4","type":"functi
on","z":"c0140b5c.290ea8","name":"data processing","func":"//flow context object\n\nvar subflowContextData =
flow.get('contextData') || {};\n//node.send(subflowContextData);\n\nstartObject = msg.payload.start;\nendObject =
msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\nsubflowContextData = {\n   start :
startObject,\n   end : endObject\n
};\n//node.send(subflowContextData);\nflow.set('contextData',subflowContextData);\n//subtest =
flow.get('contextData');\n//node.send(subtest);\nsubflowContextData = {};\n\n\n\n\n\nif
(msg.payload.hasOwnProperty('category_id')) {\n   categoryID = msg.payload.category_id;\n} else {\n   categoryID =
null;\n}\nif (msg.payload.hasOwnProperty('subcategory_id')) {\n   subcategoryID = msg.payload.subcategory_id;\n}
else {\n   subcategoryID = null;\n}\nif (msg.payload.hasOwnProperty('format_id')) {\n   formatID =
msg.payload.format_id;\n} else {\n   formatID = null;\n}\n\nmsg = {};\nmsg = {\n   categoryId : categoryID,\n
subcategoryId : subcategoryID,\n   formatId : formatID\n   }\nreturn msg;//call eventType
subflow","outputs":1,"noerr":0,"x":803,"y":308,"wires":[["e97c43f3.171a9"]]},{"id":"865eb7e0.fa7a08","type":"switch"
,"z":"c0140b5c.290ea8","name":"","property":"payload","propertyType":"msg","rules":[{"t":"nnull"},{"t":"null"}],"chec
kall":"true","outputs":2,"x":637,"y":378,"wires":[["5baabb6a.d033f4"],["131225af.9569ea"]]},{"id":"925381bc.11d27","
type":"comment","z":"c0140b5c.290ea8","name":"cancelled or online event ","info":"status === \"cancelled\" ||
online_event ===
true","x":640,"y":456,"wires":[]},{"id":"52e615e9.daf45c","type":"comment","z":"c0140b5c.290ea8","name":"valid
event","info":"keep to this subflow's context data \nthe datetime objects start and end \n\nget the ids from
category,subcategory and format\nand set the needed parameters\nto call the eventTypeObject
subflow","x":849,"y":368,"wires":[]},{"id":"e97c43f3.171a9","type":"subflow:ff55e874.2c48e8","z":"c0140b5c.290ea8
","x":1125,"y":308,"wires":[["7660e101.cdb6"]]},{"id":"7660e101.cdb6","type":"function","z":"c0140b5c.290ea8","na
me":"combine and create an event object","func":"eventTypeObject =
msg.payload.eventType;\n//node.send(eventTypeObject);\ncontextData =
flow.get('contextData');\n//node.send(contextData);\nstartDatetime =
contextData.start;\n//node.send(startDatetime);\nendDatetime = contextData.end;\n//node.send(endDatetime);\n\n\nmsg
= {};\nmsg = { eventObject :{\n   start : startDatetime,\n   end : endDatetime,\n   eventType :
eventTypeObject\n   }\n};\n\ncontextData = {};\nflow.set('contextData',contextData);\n//cD =
flow.get('contextData');\n//node.send(cD);\nreturn
msg;","outputs":1,"noerr":0,"x":1296,"y":389,"wires":[[]]},{"id":"131225af.9569ea","type":"function","z":"c0140b5c.29
0ea8","name":"no event","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":649,"y":524,"wires":[[]]},{"id":"9b5213b6.5652b","type":"comment","z":"c0140b5c.29

0ea8","name":"flow of event object subflow","info":"one input in json node\none output from \"no event\" and \"combine...\" nodes","x":606,"y":63,"wires":[]}]

Κώδικας 15 : Κόμβος της υπορροής «event object subflow without the flow context»

[{"id":"ff55e874.2c48e8","type":"subflow","name":"event Type Object Subflow","info":"create an event Type Object\n\n\neventType:{\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n} \n\n\ngets an incoming message \nwith parameters\n\nmsg.categoryId\n\nmsg.subcategoryId\n\nmsg.formatId\n\nall   of   them   numbers   or null","in":[{"x":44,"y":778,"wires":[{"id":"eed9b526.8c69c8"},{"id":"30d248ff.c61128"},{"id":"3a8010.06756ff"}]}]," out":[{"x":2065,"y":752,"wires":[{"id":"3e100827.c64958","port":0}]}]},{"id":"12c54218.ab0c0e","type":"function","z":"ff55e874.2c48e8","name":"category   search","func":"//var   categoryID   =   107;\ncategoryID   = msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKE N\";\n\n\nmsg.method   =   \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":483,"y":374,"wires":[["769f84b6.919d8c"]]},{"id":"382931ce.446dfe","type":"comment ","z":"ff55e874.2c48e8","name":"   call   API   to   get   the   event category","info":"","x":1066,"y":228,"wires":[]},{"id":"769f84b6.919d8c","type":"http request","z":"ff55e874.2c48e8","name":"get category","method":"use","ret":"txt","url":"","tls":"","x":599,"y":287,"wires":[["266e134.15704ec"]]},{"id":"23667dcd. 27f482","type":"json","z":"ff55e874.2c48e8","name":"","x":761,"y":366,"wires":[["3fb4da05.103056"]]},{"id":"3fb4da 05.103056","type":"function","z":"ff55e874.2c48e8","name":"get category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category = \"\";\n}\nnode.log(\"category name = \"+ category +\"\n\");\ntopic = \"category\";\nmsg = {\n\nnewmsg = {\n   topic : topic,\n   payload   :   category\n   }\;\nreturn newmsg;","outputs":1,"noerr":0,"x":970,"y":455,"wires":[["f5c91617.8e2ee8"]]},{"id":"9d021d6c.8edbe","type":"comm ent","z":"ff55e874.2c48e8","name":"   take   the category","info":"","x":967,"y":374,"wires":[]},{"id":"ce357ebf.a4c9e","type":"function","z":"ff55e874.2c48e8","name" :"subcategory   search","func":"//var   subcategoryID   =   7003;\nsubcategoryID   = msg.payload.subcategID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//subcategories/\"+subcategoryID+\"/?token= MY_TOKEN\";\n\n\nmsg.method   =   \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":561,"y":881,"wires":[["4f0b91d.031a77"]]},{"id":"5f3da062.4ed36","type":"comment", "z":"ff55e874.2c48e8","name":"   call   API   to   get   the   event subcategory","info":"","x":1072,"y":739,"wires":[]},{"id":"4f0b91d.031a77","type":"http request","z":"ff55e874.2c48e8","name":"get subcategory","method":"use","ret":"txt","url":"","tls":"","x":605,"y":798,"wires":[["1062c721.6036b9"]]},{"id":"8f47b3 b.aad9d5","type":"json","z":"ff55e874.2c48e8","name":"","x":757,"y":877,"wires":[["7c5cb79e.9761a8"]]},{"id":"7c5cb 79e.9761a8","type":"function","z":"ff55e874.2c48e8","name":"get subcategory","func":"if(msg.hasOwnProperty('payload')){\n   subcategory = msg.payload.name;\n}else{\n subcategory = \"\";\n}\nnode.log(\"subcategory name = \"+subcategory +\"\n\");\ntopic = \"subcategory\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : subcategory\n   }\;\nreturn newmsg;","outputs":1,"noerr":0,"x":957,"y":963,"wires":[["e5345aa5.58bb28"]]},{"id":"e04a3bd0.32c348","type":"com ment","z":"ff55e874.2c48e8","name":"   take   the subcategory","info":"","x":951,"y":883,"wires":[]},{"id":"e8c73870.37c108","type":"function","z":"ff55e874.2c48e8"," name":"format   search","func":"//var   formatID   =   4;\nformatID   = msg.payload.formatID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//formats/\"+formatID+\"/?token=MY_TOKEN\ ";\n\n\nmsg.method   =   \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":490,"y":1375,"wires":[["40e7a47f.63b11c"]]},{"id":"67e15ebb.ececf","type":"comment ","z":"ff55e874.2c48e8","name":"   call   API   to   get   the   event format","info":"","x":1073,"y":1229,"wires":[]},{"id":"40e7a47f.63b11c","type":"http request","z":"ff55e874.2c48e8","name":"get format","method":"use","ret":"txt","url":"","tls":"","x":571,"y":1283,"wires":[["7ef55232.49e05c"]]},{"id":"f95118c3.4b 2518","type":"json","z":"ff55e874.2c48e8","name":"","x":768,"y":1367,"wires":[["fa76714c.bed85"]]},{"id":"fa76714c. bed85","type":"function","z":"ff55e874.2c48e8","name":"get   format","func":"if(msg.hasOwnProperty('payload')){\n format = msg.payload.name;\n}else{\n   format = \"\";\n}\nnode.log(\"format name = \"+ format+\"\n\");\ntopic = \"format\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : format\n   }\;\nreturn newmsg;","outputs":1,"noerr":0,"x":976,"y":1502,"wires":[["12d00354.89ca5d"]]},{"id":"5be1780e.8b0998","type":"co mment","z":"ff55e874.2c48e8","name":"   take   the format","info":"","x":966,"y":1404,"wires":[]},{"id":"f5c91617.8e2ee8","type":"delay","z":"ff55e874.2c48e8","name":" ","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","ran domLast":"5","randomUnits":"seconds","drop":false,"x":1396,"y":445,"wires":[["3e100827.c64958"]]},{"id":"e5345aa5 .58bb28","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"second s","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1378, "y":746,"wires":[["3e100827.c64958"]]},{"id":"12d00354.89ca5d","type":"delay","z":"ff55e874.2c48e8","name":"","pa useType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","random

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Last":"5","randomUnits":"seconds","drop":false,"x":1369,"y":1107,"wires":[["3e100827.c64958"]]},{"id":"3e100827.c64958","type":"function","z":"ff55e874.2c48e8","name":"event Type Object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventType:{category : null,subcategory : null,format : null} }; \n\nswitch (msg.topic) {\n   case \"category\":\n   categoryName = msg.payload;\n context.data.eventType.category = categoryName;\n   msg = null;\n   break;\n   case \"subcategory\":\n subcategoryName = msg.payload;\n   context.data.eventType.subcategory = subcategoryName;\n   msg = null;\n break;\n   case \"format\":\n   formatName = msg.payload;\n   context.data.eventType.format = formatName;\n msg = null;\n   break;\n   \n   default:\n   msg = null;\n}\n\nif (context.data.eventType.category !== null && context.data.eventType.subcategory !== null && context.data.eventType.format !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;","outputs":1,"noerr":0,"x":1810,"y":753,"wires":[[]]},{"id":"4371e589.c88d9c","type":"comment","z":"ff55e874.2c48e8","name":"newmsg","info":"newmsg = {\n   eventType:{\n   category : categoryName,\n subcategory : subcategoryName,\n   format : formatName\n   } \n };","x":1801,"y":667,"wires":[]},{"id":"2654d4c3.0baeec","type":"comment","z":"ff55e874.2c48e8","name":"create the eventType Object","info":"","x":355,"y":209,"wires":[]},{"id":"7ef55232.49e05c","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\n\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":686,"y":1451,"wires":[["f95118c3.4b2518"]]},{"id":"1062c721.6036b9","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n return;\n   }\n}\n\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":668,"y":976,"wires":[["8f47b3b.aad9d5"]]},{"id":"266e134.15704ec","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n return;\n   }\n}\n\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":661,"y":452,"wires":[["23667dcd.27f482"]]},{"id":"810af2e2.3a747","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["4f0b91d.031a77"],"x":507,"y":1054,"wires":[["574bc18a.8d73d"]]},{"id":"c2638965.0c4dd8","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["769f84b6.919d8c"],"x":484,"y":539,"wires":[["5ba3b0ab.c4554"]]},{"id":"e657a3b3.0e35e","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["40e7a47f.63b11c"],"x":441,"y":1540,"wires":[["568e2d67.9899f4"]]},{"id":"568e2d67.9899f4","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   = {};\nreturn msg;","outputs":1,"noerr":0,"x":621,"y":1539,"wires":[["f95118c3.4b2518"]]},{"id":"574bc18a.8d73d","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   = {};\nreturn msg;","outputs":1,"noerr":0,"x":662,"y":1055,"wires":[["8f47b3b.aad9d5"]]},{"id":"5ba3b0ab.c4554","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   = {};\nreturn msg;","outputs":1,"noerr":0,"x":655,"y":538,"wires":[["23667dcd.27f482"]]},{"id":"9a4b8229.58fb","type":"comment","z":"ff55e874.2c48e8","name":"event Type Object with handling the errors","info":"","x":667,"y":140,"wires":[]},{"id":"2c0151dc.b74c8e","type":"switch","z":"ff55e874.2c48e8","name":"check categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":565,"y":621,"wires":[["35e106e2.aac98a"],["12c54218.ab0c0e"]]},{"id":"eed9b526.8c69c8","type":"function","z":"ff55e874.2c48e8","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   categID:categoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":338,"y":622,"wires":[["2c0151dc.b74c8e"]]},{"id":"35e106e2.aac98a","type":"function","z":"ff55e874.2c48e8","name":"category ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":831,"y":596,"wires":[["23667dcd.27f482"]]},{"id":"e6d18f3b.79032","type":"switch","z":"ff55e874.2c48e8","name":"check subcategoryID","property":"payload.subcategID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":523,"y":1165,"wires":[["ded90b18.93b438"],["ce357ebf.a4c9e"]]},{"id":"30d248ff.c61128","type":"function","z":"ff55e874.2c48e8","name":"set subcategory ID","func":"//subcategoryID = 7003;\nsubcategoryID = msg.subcategoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   subcategID:subcategoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":296,"y":1166,"wires":[["e6d18f3b.79032"]]},{"id":"ded90b18.93b438","type":"function","z":"ff55e874.2c48e8","name":"subcategory ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":789,"y":1140,"wires":[["8f47b3b.aad9d5"]]},{"id":"16f0cbb1.424534","type":"switch","z":"ff55e874.2c48e8","name":"check formatID","property":"payload.formatID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":509,"y":1648,"wires":[["a3284a80.a4aad8"],["e8c73870.37c108"]]},{"id":"3a8010.06756ff","type":"function","z":"ff55e874.2c48e8","name":"set format ID","func":"//formatID = 4;\nformatID = msg.formatId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   formatID:formatID\n   }};\nreturn

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msg;","outputs":1,"noerr":0,"x":282,"y":1649,"wires":[["16f0cbb1.424534"]]},{"id":"a3284a80.a4aad8","type":"functio
n","z":"ff55e874.2c48e8","name":"format ID is null","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":775,"y":1623,"wires":[["f95118c3.4b2518"]]},{"id":"50cce838.e77cc8","type":"comme
nt","z":"ff55e874.2c48e8","name":" handle the case of optional ID
fields","info":"","x":184,"y":138,"wires":[]},{"id":"79a21397.e36b3c","type":"comment","z":"ff55e874.2c48e8","name
":" testing the flow-prepare the
subflow","info":"","x":584,"y":63,"wires":[]},{"id":"f169536f.2afc","type":"subflow","name":"event object subflow
without the flow context","info":"the input\n\nan incoming message \nin which the payload will include only\nan object
with the properties of only one event\n\n\n\nthe output \n\nan empty message\n \n or\n\na message including the
following object in payload \n \n\neventObject :{\n \n ID : id \n start : startDatetime,\n end :
endDatetime,\n eventType :{\n \n category : categoryName,\n subcategory : subcategoryName,\n
format : formatName\n \n }
\n\n}\n\n\n","in":[{"x":391.99998474121094,"y":149.0000228881836,"wires":[{"id":"3d15c2ae.279fae"}]}],"out":[{"x"
:1860,"y":584,"wires":[{"id":"fd4f2a48.a9d998","port":0},{"id":"5fe3e63a.4aa2d8","port":0}]}]},{"id":"da7a48cb.4bb2
b8","type":"function","z":"f169536f.2afc","name":"check status and online state","func":"status =
msg.payload.status;\nonline_event = msg.payload.online_event;\nnode.log(\"status = \"+ status +\"online_event = \"+
online_event+\"\n\");\nif (status === \"canceled\"|| status === \"cancelled\" || online_event === true) {\n msg =
{};\n}\n\nreturn
msg;","outputs":1,"noerr":0,"x":523,"y":306,"wires":[["df9db0af.7647d"]]},{"id":"3d15c2ae.279fae","type":"json","z":"
f169536f.2afc","name":"","x":475.99998474121094,"y":229.00000762939453,"wires":[["da7a48cb.4bb2b8"]]},{"id":"7
7fe6546.6d70ac","type":"function","z":"f169536f.2afc","name":"new data processing","func":"/*//flow context
object\n\nvar subflowContextData = flow.get('contextData') || {};\n//node.send(subflowContextData);\n\nstartObject =
msg.payload.start;\nendObject =
msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\nsubflowContextData = {\n start :
startObject,\n end : endObject\n
};\n//node.send(subflowContextData);\nflow.set('contextData',subflowContextData);\n//subtest =
flow.get('contextData');\n//node.send(subtest);\nsubflowContextData = {};\n\n*/\niD = msg.payload.id;\nstartObject =
msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\ntimemsg = {\n
start : startObject,\n end : endObject\n};\n\n\nif (msg.payload.hasOwnProperty('category_id')) {\n categoryID
= msg.payload.category_id;\n} else {\n categoryID = null;\n}\nif (msg.payload.hasOwnProperty('subcategory_id')) {\n
subcategoryID = msg.payload.subcategory_id;\n} else {\n subcategoryID = null;\n}\nif
(msg.payload.hasOwnProperty('format_id')) {\n formatID = msg.payload.format_id;\n} else {\n formatID =
null;\n}\n\nmsg = {};\nmsg = {\n categoryId : categoryID,\n subcategoryId : subcategoryID,\n formatId :
formatID\n };\n//return msg;//call eventType subflow\n//return [timemsg,msg];\nnewmsg = {\n payload : {\n
Id : iD,\n timeMessage : timemsg,\n eventParamMessage : msg\n }\n \n};\nreturn
newmsg;\n\n\n\n","outputs":1,"noerr":0,"x":823,"y":303,"wires":[["b87fe150.8e8e","896af8f7.cb16a8"]]},{"id":"df9d
b0af.7647d","type":"switch","z":"f169536f.2afc","name":"","property":"payload","propertyType":"msg","rules":[{"t":"n
null"},{"t":"null"}],"checkall":"true","outputs":2,"x":588.0000915527344,"y":387.99999237060547,"wires":[["77fe654
6.6d70ac"],["5fe3e63a.4aa2d8"]]},{"id":"a4930228.0bad8","type":"comment","z":"f169536f.2afc","name":"cancelled or
online event ","info":"status === \"cancelled\" || online_event ===
true","x":562.0000305175781,"y":477.99999237060547,"wires":[]},{"id":"33c84dc9.12f002","type":"comment","z":"f1
69536f.2afc","name":"valid event","info":"keep to this subflow's context data \nthe datetime objects start and end \n\nget
the ids from category,subcategory and format\nand set the needed parameters\nto call the eventTypeObject
subflow","x":849,"y":363,"wires":[]},{"id":"f78acafd.618198","type":"subflow:ff55e874.2c48e8","z":"f169536f.2afc","
x":1398,"y":229,"wires":[["ffd470f7.7e462"]]},{"id":"fd4f2a48.a9d998","type":"function","z":"f169536f.2afc","name":"
new combine and create an event object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto
restart\ncontext.data = context.data || { eventObject :{ID : null, start : null, end : null, eventType : null}}; \n\nswitch
(msg.topic) {\n case \"time\":\n iD = msg.id;\n startDatetime = msg.payload.start;\n endDatetime =
msg.payload.end;\n context.data.eventObject.start = startDatetime;\n context.data.eventObject.end =
endDatetime;\n context.data.eventObject.ID = iD;\n msg = null;\n break;\n case \"eventType\":\n
eventTypeObject = msg.payload.eventType;\n context.data.eventObject.eventType = eventTypeObject;\n msg =
null;\n break;\n \n \n default:\n msg = null;\n}\n\nif (context.data.eventObject.ID !== null &&
context.data.eventObject.start !== null && context.data.eventObject.end !== null &&
context.data.eventObject.eventType !== null) {\n newmsg = {payload : null};\n newmsg.payload = context.data;\n
context.data = null;\n} else {\n newmsg = null;\n}\n\nreturn
newmsg;\n\n","outputs":1,"noerr":0,"x":1912.9998168945312,"y":338.00000762939453,"wires":[[]]},{"id":"5fe3e63a.4
aa2d8","type":"function","z":"f169536f.2afc","name":"no event","func":"msg = {};\nreturn
msg;","outputs":1,"noerr":0,"x":558.0000305175781,"y":549.0000839233398,"wires":[[]]},{"id":"42418abb.97e524","t
ype":"comment","z":"f169536f.2afc","name":"event object subflow without the flow
context","info":"","x":656,"y":58,"wires":[]},{"id":"b87fe150.8e8e","type":"function","z":"f169536f.2afc","name":"eve
ntParamMessage","func":"eventParamMessage = msg.payload.eventParamMessage;\nmsg = {};\nreturn
eventParamMessage;\n\n\n\n","outputs":1,"noerr":0,"x":1084,"y":230,"wires":[["f78acafd.618198"]]},{"id":"896af8f7.
cb16a8","type":"function","z":"f169536f.2afc","name":"timeParamMessage","func":"timeParamMessage =
msg.payload.timeMessage;\niD = msg.payload.Id;\nmsg = {};\nmsg = {\n id : iD,\n topic : \"time\",\n
payload : timeParamMessage\n};\nreturn
msg;","outputs":1,"noerr":0,"x":1081,"y":383,"wires":[["5f56f87a.d88448"]]},{"id":"23b880a3.f3956","type":"comment
","z":"f169536f.2afc","name":"eventObject","info":"msg = {\n payload : {\n eventObject :{\n ID

: id,\n   start : startDatetime,\n   end : endDatetime,\n   eventType : eventTypeObject\n
}\n
}\n};","x":1990,"y":405,"wires":[]},{"id":"5f56f87a.d88448","type":"delay","z":"f169536f.2afc","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1759.9999389648438,"y":438.00000762939453,"wires":[["fd4f2a48.a9d998"]]},{"id":"ec3a8428.5de6d8","type":"delay","z":"f169536f.2afc","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1764.9999389648438,"y":245.00000762939453,"wires":[["fd4f2a48.a9d998"]]},{"id":"ffd470f7.7e462","type":"function","z":"f169536f.2afc","name":"set topic","func":"eventTypeObject = msg.payload;\nmsg = {};\nmsg = {\n   topic : \"eventType\",\n   payload : eventTypeObject\n};\nreturn msg;","outputs":1,"noerr":0,"x":1620.9999389648438,"y":161.00000762939453,"wires":[["ec3a8428.5de6d8"]]},{"id":"3845d666.3b0d6a","type":"subflow:f169536f.2afc","z":"c32e43b0.10972","x":437,"y":197,"wires":[[]]}]

Κώδικας 16 : Ροή της υπορροής «event object subflow without the flow context»

[{"id":"ff55e874.2c48e8","type":"subflow","name":"event Type Object Subflow","info":"create an event Type Object\n\n\neventType:{\n\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n} \n\n\ngets an incoming message \nwith parameters\n\nmsg.categoryId\n\nmsg.subcategoryId\n\nmsg.formatId\n\nall of them numbers or null","in":[{"x":44,"y":778,"wires":[{"id":"eed9b526.8c69c8"},{"id":"30d248ff.c61128"},{"id":"3a8010.06756ff"}]}],"out":[{"x":2065,"y":752,"wires":[{"id":"3e100827.c64958","port":0}]}]},{"id":"12c54218.ab0c0e","type":"function","z":"ff55e874.2c48e8","name":"category search","func":"//var categoryID = 107;\ncategoryID = msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":483,"y":374,"wires":[["769f84b6.919d8c"]]},{"id":"382931ce.446dfe","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event category","info":"","x":1066,"y":228,"wires":[]},{"id":"769f84b6.919d8c","type":"http request","z":"ff55e874.2c48e8","name":"get category","method":"use","ret":"txt","url":"","tls":"","x":599,"y":287,"wires":[["266e134.15704ec"]]},{"id":"23667dcd.27f482","type":"json","z":"ff55e874.2c48e8","name":"","x":761,"y":366,"wires":[["3fb4da05.103056"]]},{"id":"3fb4da05.103056","type":"function","z":"ff55e874.2c48e8","name":"get category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category = \"\";\n}\nnode.log(\"category name = \"+ category +\"\n\");\ntopic = \"category\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : category\n};\nreturn newmsg;","outputs":1,"noerr":0,"x":970,"y":455,"wires":[["f5c91617.8e2ee8"]]},{"id":"9d021d6c.8edbe","type":"comment","z":"ff55e874.2c48e8","name":" take the category","info":"","x":967,"y":374,"wires":[]},{"id":"ce357ebf.a4c9e","type":"function","z":"ff55e874.2c48e8","name":"subcategory search","func":"//var subcategoryID = 7003;\nsubcategoryID = msg.payload.subcategID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//subcategories/\"+subcategoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":561,"y":881,"wires":[["4f0b91d.031a77"]]},{"id":"5f3da062.4ed36","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event subcategory","info":"","x":1072,"y":739,"wires":[]},{"id":"4f0b91d.031a77","type":"http request","z":"ff55e874.2c48e8","name":"get subcategory","method":"use","ret":"txt","url":"","tls":"","x":605,"y":798,"wires":[["1062c721.6036b9"]]},{"id":"8f47b3b.aad9d5","type":"json","z":"ff55e874.2c48e8","name":"","x":757,"y":877,"wires":[["7c5cb79e.9761a8"]]},{"id":"7c5cb79e.9761a8","type":"function","z":"ff55e874.2c48e8","name":"get subcategory","func":"if(msg.hasOwnProperty('payload')){\n   subcategory = msg.payload.name;\n}else{\n   subcategory = \"\";\n}\nnode.log(\"subcategory name = \"+subcategory +\"\n\");\ntopic = \"subcategory\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : subcategory\n};\nreturn newmsg;","outputs":1,"noerr":0,"x":957,"y":963,"wires":[["e5345aa5.58bb28"]]},{"id":"e04a3bd0.32c348","type":"comment","z":"ff55e874.2c48e8","name":" take the subcategory","info":"","x":951,"y":883,"wires":[]},{"id":"e8c73870.37c108","type":"function","z":"ff55e874.2c48e8","name":"format search","func":"//var formatID = 4;\nformatID = msg.payload.formatID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//formats/\"+formatID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":490,"y":1375,"wires":[["40e7a47f.63b11c"]]},{"id":"67e15ebb.ececf","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event format","info":"","x":1073,"y":1229,"wires":[]},{"id":"40e7a47f.63b11c","type":"http request","z":"ff55e874.2c48e8","name":"get format","method":"use","ret":"txt","url":"","tls":"","x":571,"y":1283,"wires":[["7ef55232.49e05c"]]},{"id":"f95118c3.4b2518","type":"json","z":"ff55e874.2c48e8","name":"","x":768,"y":1367,"wires":[["fa76714c.bed85"]]},{"id":"fa76714c.bed85","type":"function","z":"ff55e874.2c48e8","name":"get format","func":"if(msg.hasOwnProperty('payload')){\n   format = msg.payload.name;\n}else{\n   format = \"\";\n}\nnode.log(\"format name = \"+ format+\"\n\");\ntopic =

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\"format\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : format\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":976,"y":1502,"wires":[["12d00354.89ca5d"]]},{"id":"5be1780e.8b0998","type":"comment","z":"ff55e874.2c48e8","name":"   take   the format","info":"","x":966,"y":1404,"wires":[]},{"id":"f5c91617.8e2ee8","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1396,"y":445,"wires":[["3e100827.c64958"]]},{"id":"e5345aa5.58bb28","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1378,"y":746,"wires":[["3e100827.c64958"]]},{"id":"12d00354.89ca5d","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1369,"y":1107,"wires":[["3e100827.c64958"]]},{"id":"3e100827.c64958","type":"function","z":"ff55e874.2c48e8","name":"event Type Object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventType:{category : null,subcategory : null,format : null} }; \n\nswitch (msg.topic) {\n   case \"category\":\n   categoryName = msg.payload;\n context.data.eventType.category = categoryName;\n   msg = null;\n   break;\n   case \"subcategory\":\n   subcategoryName = msg.payload;\n   context.data.eventType.subcategory = subcategoryName;\n   msg = null;\n break;\n   case \"format\":\n   formatName = msg.payload;\n   context.data.eventType.format = formatName;\n msg = null;\n   break;\n   \n   default:\n   msg = null;\n}\n\nif (context.data.eventType.category !== null && context.data.eventType.subcategory !== null && context.data.eventType.format !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;","outputs":1,"noerr":0,"x":1810,"y":753,"wires":[[]]},{"id":"4371e589.c88d9c","type":"comment","z":"ff55e874.2c48e8","name":"newmsg","info":"newmsg = {\n   eventType:{\n   category : categoryName,\n subcategory : subcategoryName,\n   format : formatName\n   } \n };","x":1801,"y":667,"wires":[]},{"id":"2654d4c3.0baeec","type":"comment","z":"ff55e874.2c48e8","name":"create the eventType Object","info":"","x":355,"y":209,"wires":[]},{"id":"7ef55232.49e05c","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":686,"y":1451,"wires":[["f95118c3.4b2518"]]},{"id":"1062c721.6036b9","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }}\nreturn   msg;\n\n\n","outputs":1,"noerr":0,"x":668,"y":976,"wires":[["8f47b3b.aad9d5"]]},{"id":"266e134.15704ec","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }}\nreturn   msg;\n\n\n","outputs":1,"noerr":0,"x":661,"y":452,"wires":[["23667dcd.27f482"]]},{"id":"810af2e2.3a747","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["4f0b91d.031a77"],"x":507,"y":1054,"wires":[["574bc18a.8d73d"]]},{"id":"c2638965.0c4dd8","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["769f84b6.919d8c"],"x":484,"y":539,"wires":[["5ba3b0ab.c4554"]]},{"id":"e657a3b3.0e35e","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["40e7a47f.63b11c"],"x":441,"y":1540,"wires":[["568e2d67.9899f4"]]},{"id":"568e2d67.9899f4","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   = {};\nreturn msg;","outputs":1,"noerr":0,"x":621,"y":1539,"wires":[["f95118c3.4b2518"]]},{"id":"574bc18a.8d73d","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   = {};\nreturn msg;","outputs":1,"noerr":0,"x":662,"y":1055,"wires":[["8f47b3b.aad9d5"]]},{"id":"5ba3b0ab.c4554","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   = {};\nreturn msg;","outputs":1,"noerr":0,"x":655,"y":538,"wires":[["23667dcd.27f482"]]},{"id":"9a4b8229.58fb","type":"comment","z":"ff55e874.2c48e8","name":"event   Type   Object   with   handling   the errors","info":"","x":667,"y":140,"wires":[]},{"id":"2c0151dc.b74c8e","type":"switch","z":"ff55e874.2c48e8","name":"check categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":565,"y":621,"wires":[["35e106e2.aac98a"],["12c54218.ab0c0e"]]},{"id":"eed9b526.8c69c8","type":"function","z":"ff55e874.2c48e8","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   categID:categoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":338,"y":622,"wires":[["2c0151dc.b74c8e"]]},{"id":"35e106e2.aac98a","type":"function","z":"ff55e874.2c48e8","name":"category ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":831,"y":596,"wires":[["23667dcd.27f482"]]},{"id":"e6d18f3b.79032","type":"switch","z":"ff55e874.2c48e8","name":"check subcategoryID","property":"payload.subcategID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":523,"y":1165,"wires":[["ded90b18.93b438"],["ce357ebf.a4c9e"]]},{"id":"30d248ff.c61128","type"

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:"function","z":"ff55e874.2c48e8","name":"set subcategory ID","func":"//subcategoryID = 7003;\nsubcategoryID = msg.subcategoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   subcategID:subcategoryID\n   }\n}\n;\nreturn msg;","outputs":1,"noerr":0,"x":296,"y":1166,"wires":[["e6d18f3b.79032"]]},{"id":"ded90b18.93b438","type":"function ","z":"ff55e874.2c48e8","name":"subcategory   ID   is   null","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":789,"y":1140,"wires":[["8f47b3b.aad9d5"]]},{"id":"16f0cbb1.424534","type":"switch","z":"ff55e874.2c48e8","name":"check

formatID","property":"payload.formatID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","o utputs":2,"x":509,"y":1648,"wires":[["a3284a80.a4aad8"],["e8c73870.37c108"]]},{"id":"3a8010.06756ff","type":"functi on","z":"ff55e874.2c48e8","name":"set format ID","func":"//formatID = 4;\nformatID = msg.formatId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   formatID:formatID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":282,"y":1649,"wires":[["16f0cbb1.424534"]]},{"id":"a3284a80.a4aad8","type":"functio n","z":"ff55e874.2c48e8","name":"format   ID   is   null","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":775,"y":1623,"wires":[["f95118c3.4b2518"]]},{"id":"50cce838.e77cc8","type":"comme nt","z":"ff55e874.2c48e8","name":"   handle   the   case   of   optional   ID fields","info":"","x":184,"y":138,"wires":[]},{"id":"79a21397.e36b3c","type":"comment","z":"ff55e874.2c48e8","name" :"   testing   the   flow-prepare   the subflow","info":"","x":584,"y":63,"wires":[]},{"id":"d2949f74.b66f9","type":"function","z":"12ec6482.3fb38b","name": "check   status   and   online   state","func":"status   =   msg.payload.status;\nonline_event   = msg.payload.online_event;\nnode.log(\"status = \"+ status +\"online_event = \"+ online_event+\"\\n\");\nif (status === \"canceled\"|| status === \"cancelled\" || online_event === true) {\n   msg = {};\n}\n\nreturn msg;","outputs":1,"noerr":0,"x":523,"y":330,"wires":[["34bd0a98.344ec6"]]},{"id":"7cff63a0.e1ee4c","type":"json","z": "12ec6482.3fb38b","name":"","x":358,"y":268,"wires":[["d2949f74.b66f9"]]},{"id":"34bd0a98.344ec6","type":"switch" ,"z":"12ec6482.3fb38b","name":"","property":"payload","propertyType":"msg","rules":[{"t":"nnull"},{"t":"null"}],"chec kall":"true","outputs":2,"x":637,"y":397,"wires":[["7a37c2d6.73916c"],["a99e6e62.7c72f"]]},{"id":"8970b68c.427f88"," type":"comment","z":"12ec6482.3fb38b","name":"cancelled or online event ","info":"status === \"cancelled\" || online_event   === true","x":1181,"y":489,"wires":[]},{"id":"36b9be30.72f532","type":"comment","z":"12ec6482.3fb38b","name":"valid event","info":"keep to this subflow's context data \nthe datetime objects start and end \nget the ids from category,subcategory   and   format\nand   set   the   needed   parameters\nto   call   the   eventTypeObject subflow","x":849,"y":387,"wires":[]},{"id":"163ad518.a01acb","type":"subflow:ff55e874.2c48e8","z":"12ec6482.3fb38 b","x":1398,"y":253,"wires":[["4665b5cd.74f29c"]]},{"id":"a99e6e62.7c72f","type":"function","z":"12ec6482.3fb38b"," name":"no   event","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":1757,"y":566,"wires":[[]]},{"id":"ea117536.90d768","type":"comment","z":"12ec6482. 3fb38b","name":"flow of event object subflow without the flow context","info":"the input\n\nan incoming message \nan object with the event's properties\n\n\nthe output \nan empty message\n \n or\n\na message including the following object in payload \n \n\neventObject :{\n   \n   start : startDatetime,\n   end : endDatetime,\n   eventType : eventTypeObject\n}\n\n\n","x":676,"y":82,"wires":[]},{"id":"33829c1f.508ea4","type":"function","z":"12ec6482.3fb38b ","name":"eventParamMessage","func":"eventParamMessage = msg.payload.eventParamMessage;\nmsg = {};\nreturn eventParamMessage;\n\n\n\n\n","outputs":1,"noerr":0,"x":1084,"y":254,"wires":[["163ad518.a01acb"]]},{"id":"f64fa1e0 .bea27","type":"delay","z":"12ec6482.3fb38b","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds ","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"10","randomUnits":"seconds","drop":false,"x":1822, "y":465,"wires":[["cdd623ff.02bea"]]},{"id":"1adb8502.12267b","type":"delay","z":"12ec6482.3fb38b","name":"","paus eType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLa st":"5","randomUnits":"seconds","drop":false,"x":1826,"y":272,"wires":[["cdd623ff.02bea"]]},{"id":"4665b5cd.74f29c", "type":"function","z":"12ec6482.3fb38b","name":"set topic","func":"eventTypeObject = msg.payload;\nmsg = {};\nmsg = {\n   topic : \"eventType\",\n   payload : eventTypeObject\n};\nreturn msg;","outputs":1,"noerr":0,"x":1644,"y":190,"wires":[["1adb8502.12267b"]]},{"id":"7a37c2d6.73916c","type":"functio n","z":"12ec6482.3fb38b","name":"new data processing","func":"/*//flow context object\n\nvar subflowContextData = flow.get('contextData') || {};\n//node.send(subflowContextData);\n\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\nsubflowContextData = {\n   start : startObject,\n   end : endObject\n }\n;\n//node.send(subflowContextData);\nflow.set('contextData',subflowContextData);\n//subtest   = flow.get('contextData');\n//node.send(subtest);\nsubflowContextData = {};\n\n*/\niD = msg.payload.id;\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\ntimemsg = {\n start : startObject,\n   end : endObject}\n;\n\n\nif (msg.payload.hasOwnProperty('category_id')) {\n   categoryID = msg.payload.category_id;\n} else {\n   categoryID = null;\n}\nif (msg.payload.hasOwnProperty('subcategory_id')) {\n subcategoryID   =   msg.payload.subcategory_id;\n}   else   {\n   subcategoryID   =   null;\n}\nif (msg.payload.hasOwnProperty('format_id')) {\n   formatID = msg.payload.format_id;\n} else {\n   formatID = null;\n}\n\nmsg = {};\nmsg = {\n   categoryId : categoryID,\n   subcategoryId : subcategoryID,\n   formatId : formatID\n   };\n//return msg;//call eventType subflow\n//return [timemsg,msg];\nnewmsg = {\n   payload : {\n Id : iD,\n   timeMessage : timemsg,\n   eventParamMessage : msg\n   }\n }\n;\nreturn newmsg;\n\n\n\n\n","outputs":1,"noerr":0,"x":828,"y":315,"wires":[["33829c1f.508ea4","97044823.6eb958"]]},{"id":"9 7044823.6eb958","type":"function","z":"12ec6482.3fb38b","name":"timeParamMessage","func":"timeParamMessage = msg.payload.timeMessage;\niD = msg.payload.Id;\nmsg = {};\nmsg = {\n   id : iD,\n   topic : \"time\",\n payload   :   timeParamMessage\n};\nreturn msg;","outputs":1,"noerr":0,"x":1089,"y":360,"wires":[["f64fa1e0.bea27"]]},{"id":"65a160cd.0057c","type":"comment", "z":"12ec6482.3fb38b","name":"eventObject","info":"msg = {\n   payload : {\n   eventObject :{\n

ID : id,\n   start : startDatetime,\n   end : endDatetime,\n   eventType : eventTypeObject\n   }\n }\n};",\"x":2011,"y":429,"wires":[]},{"id":"cdd623ff.02bea","type":"function","z":"12ec6482.3fb38b","name":"new combine and create an event object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventObject :{ID : null, start : null, end : null, eventType : null}}; \n\nswitch (msg.topic) {\n   case \"time\":\n   iD = msg.id;\n   startDatetime = msg.payload.start;\n   endDatetime = msg.payload.end;\n   context.data.eventObject.start = startDatetime;\n   context.data.eventObject.end = endDatetime;\n   context.data.eventObject.ID = iD;\n   msg = null;\n   break;\n   case \"eventType\":\n   eventTypeObject = msg.payload.eventType;\n   context.data.eventObject.eventType = eventTypeObject;\n   msg = null;\n   break;\n   \n   \n   default:\n   msg = null;\n}\n\nif (context.data.eventObject.ID !== null && context.data.eventObject.start !== null && context.data.eventObject.end !== null && context.data.eventObject.eventType !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;\n\n","outputs":1,"noerr":0,"x":2043,"y":360,"wires":[[]]}]

Κώδικας 17 : Κόμβος της υπορροής «Event Subflow»

[{"id":"ff55e874.2c48e8","type":"subflow","name":"event Type Object Subflow","info":"create an event Type Object\n\n\neventType:{\n\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   }\n \n\n\ngets an incoming message \nwith parameters\n\nmsg.categoryId\n\nmsg.subcategoryId\n\nmsg.formatId\n\nall of them numbers or null","in":[{"x":44,"y":778,"wires":[{"id":"eed9b526.8c69c8"},{"id":"30d248ff.c61128"},{"id":"3a8010.06756ff"}]}],"out":[{"x":2065,"y":752,"wires":[{"id":"3e100827.c64958","port":0}]}]},{"id":"12c54218.ab0c0e","type":"function","z":"ff55e874.2c48e8","name":"category search","func":"//var categoryID = 107;\ncategoryID = msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":483,"y":374,"wires":[["769f84b6.919d8c"]]},{"id":"382931ce.446dfe","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event category","info":"","x":1066,"y":228,"wires":[]},{"id":"769f84b6.919d8c","type":"http request","z":"ff55e874.2c48e8","name":"get category","method":"use","ret":"txt","url":"","tls":"","x":599,"y":287,"wires":[["266e134.15704ec"]]},{"id":"23667dcd.27f482","type":"json","z":"ff55e874.2c48e8","name":"","x":761,"y":366,"wires":[["3fb4da05.103056"]]},{"id":"3fb4da05.103056","type":"function","z":"ff55e874.2c48e8","name":"get category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category = \"\";\n}\n\nnode.log(\"category name = \"+ category +\"\\n\");\ntopic = \"category\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : category\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":970,"y":455,"wires":[["f5c91617.8e2ee8"]]},{"id":"9d021d6c.8edbe","type":"comment","z":"ff55e874.2c48e8","name":" take the category","info":"","x":967,"y":374,"wires":[]},{"id":"ce357ebf.a4c9e","type":"function","z":"ff55e874.2c48e8","name":"subcategory search","func":"//var subcategoryID = 7003;\nsubcategoryID = msg.payload.subcategID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//subcategories/\"+subcategoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":561,"y":881,"wires":[["4f0b91d.031a77"]]},{"id":"5f3da062.4ed36","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event subcategory","info":"","x":1072,"y":739,"wires":[]},{"id":"4f0b91d.031a77","type":"http request","z":"ff55e874.2c48e8","name":"get subcategory","method":"use","ret":"txt","url":"","tls":"","x":605,"y":798,"wires":[["1062c721.6036b9"]]},{"id":"8f47b3b.aad9d5","type":"json","z":"ff55e874.2c48e8","name":"","x":757,"y":877,"wires":[["7c5cb79e.9761a8"]]},{"id":"7c5cb79e.9761a8","type":"function","z":"ff55e874.2c48e8","name":"get subcategory","func":"if(msg.hasOwnProperty('payload')){\n   subcategory = msg.payload.name;\n}else{\n   subcategory = \"\";\n}\n\nnode.log(\"subcategory name = \"+subcategory +\"\\n\");\ntopic = \"subcategory\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : subcategory\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":957,"y":963,"wires":[["e5345aa5.58bb28"]]},{"id":"e04a3bd0.32c348","type":"comment","z":"ff55e874.2c48e8","name":" take the subcategory","info":"","x":951,"y":883,"wires":[]},{"id":"e8c73870.37c108","type":"function","z":"ff55e874.2c48e8","name":"format search","func":"//var formatID = 4;\nformatID = msg.payload.formatID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//formats/\"+formatID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":490,"y":1375,"wires":[["40e7a47f.63b11c"]]},{"id":"67e15ebb.ececf","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event format","info":"","x":1073,"y":1229,"wires":[]},{"id":"40e7a47f.63b11c","type":"http request","z":"ff55e874.2c48e8","name":"get format","method":"use","ret":"txt","url":"","tls":"","x":571,"y":1283,"wires":[["7ef55232.49e05c"]]},{"id":"f95118c3.4b2518","type":"json","z":"ff55e874.2c48e8","name":"","x":768,"y":1367,"wires":[["fa76714c.bed85"]]},{"id":"fa76714c.

bed85","type":"function","z":"ff55e874.2c48e8","name":"get   format","func":"if(msg.hasOwnProperty('payload')){\n   format = msg.payload.name;\n}else{\n   format = \"\";\n}\nnode.log(\"format name = \"+ format+\"\\n\");\ntopic = \"format\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : format\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":976,"y":1502,"wires":[["12d00354.89ca5d"]]},{"id":"5be1780e.8b0998","type":"comment","z":"ff55e874.2c48e8","name":"   take   the format","info":"","x":966,"y":1404,"wires":[]},{"id":"f5c91617.8e2ee8","type":"delay","z":"ff55e874.2c48e8","name":" ","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1396,"y":445,"wires":[["3e100827.c64958"]]},{"id":"e5345aa5.58bb28","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1378,"y":746,"wires":[["3e100827.c64958"]]},{"id":"12d00354.89ca5d","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1369,"y":1107,"wires":[["3e100827.c64958"]]},{"id":"3e100827.c64958","type":"function","z":"ff55e874.2c48e8","name":"event Type Object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventType:{category : null,subcategory : null,format : null} }; \n\nswitch (msg.topic) {\n   case \"category\":\n   categoryName = msg.payload;\n   context.data.eventType.category = categoryName;\n   msg = null;\n   break;\n   case \"subcategory\":\n   subcategoryName = msg.payload;\n   context.data.eventType.subcategory = subcategoryName;\n   msg = null;\n   break;\n   case \"format\":\n   formatName = msg.payload;\n   context.data.eventType.format = formatName;\n   msg = null;\n   break;\n   \n   default:\n   msg = null;\n}\n\nif (context.data.eventType.category !== null && context.data.eventType.subcategory !== null && context.data.eventType.format !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;","outputs":1,"noerr":0,"x":1810,"y":753,"wires":[[]]},{"id":"4371e589.c88d9c","type":"comment","z":"ff55e874.2c48e8","name":"newmsg","info":"newmsg = {\n   eventType:{\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   } \n};","x":1801,"y":667,"wires":[]},{"id":"2654d4c3.0baeec","type":"comment","z":"ff55e874.2c48e8","name":"create the eventType Object","info":"","x":355,"y":209,"wires":[]},{"id":"7ef55232.49e05c","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":686,"y":1451,"wires":[["f95118c3.4b2518"]]},{"id":"1062c721.6036b9","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":668,"y":976,"wires":[["8f47b3b.aad9d5"]]},{"id":"266e134.15704ec","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":661,"y":452,"wires":[["23667dcd.27f482"]]},{"id":"810af2e2.3a747","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["4f0b91d.031a77"],"x":507,"y":1054,"wires":[["574bc18a.8d73d"]]},{"id":"c2638965.0c4dd8","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["769f84b6.919d8c"],"x":484,"y":539,"wires":[["5ba3b0ab.c4554"]]},{"id":"e657a3b3.0e35e","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["40e7a47f.63b11c"],"x":441,"y":1540,"wires":[["568e2d67.9899f4"]]},{"id":"568e2d67.9899f4","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   = {};\nreturn msg;","outputs":1,"noerr":0,"x":621,"y":1539,"wires":[["f95118c3.4b2518"]]},{"id":"574bc18a.8d73d","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   = {};\nreturn msg;","outputs":1,"noerr":0,"x":662,"y":1055,"wires":[["8f47b3b.aad9d5"]]},{"id":"5ba3b0ab.c4554","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   = {};\nreturn msg;","outputs":1,"noerr":0,"x":655,"y":538,"wires":[["23667dcd.27f482"]]},{"id":"9a4b8229.58fb","type":"comment","z":"ff55e874.2c48e8","name":"event   Type   Object   with   handling   the errors","info":"","x":667,"y":140,"wires":[]},{"id":"2c0151dc.b74c8e","type":"switch","z":"ff55e874.2c48e8","name":"check categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":565,"y":621,"wires":[["35e106e2.aac98a"],["12c54218.ab0c0e"]]},{"id":"eed9b526.8c69c8","type":"function","z":"ff55e874.2c48e8","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   categID:categoryID\n   }};\nreturn msg;","outputs":1,"noerr":0,"x":338,"y":622,"wires":[["2c0151dc.b74c8e"]]},{"id":"35e106e2.aac98a","type":"function","z":"ff55e874.2c48e8","name":"category   ID   is   null","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":831,"y":596,"wires":[["23667dcd.27f482"]]},{"id":"e6d18f3b.79032","type":"switch","z":"ff55e874.2c48e8","name":"check

subcategoryID","property":"payload.subcategID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":523,"y":1165,"wires":[["ded90b18.93b438"],["ce357ebf.a4c9e"]]},{"id":"30d248ff.c61128","type":"function","z":"ff55e874.2c48e8","name":"set subcategory ID","func":"//subcategoryID = 7003;\nsubcategoryID = msg.subcategoryID;\nmsg = {};\nmsg = {\n   payload:\n   {\n   subcategID:subcategoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":296,"y":1166,"wires":[["e6d18f3b.79032"]]},{"id":"ded90b18.93b438","type":"function","z":"ff55e874.2c48e8","name":"subcategory ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":789,"y":1140,"wires":[["8f47b3b.aad9d5"]]},{"id":"16f0cbb1.424534","type":"switch","z":"ff55e874.2c48e8","name":"check formatID","property":"payload.formatID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":509,"y":1648,"wires":[["a3284a80.a4aad8"],["e8c73870.37c108"]]},{"id":"3a8010.06756ff","type":"function","z":"ff55e874.2c48e8","name":"set format ID","func":"//formatID = 4;\nformatID = msg.formatId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   formatID:formatID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":282,"y":1649,"wires":[["16f0cbb1.424534"]]},{"id":"a3284a80.a4aad8","type":"function","z":"ff55e874.2c48e8","name":"format ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":775,"y":1623,"wires":[["f95118c3.4b2518"]]},{"id":"50cce838.e77cc8","type":"comment","z":"ff55e874.2c48e8","name":" handle the case of optional ID fields","info":"","x":184,"y":138,"wires":[]},{"id":"79a21397.e36b3c","type":"comment","z":"ff55e874.2c48e8","name":" testing the flow-prepare the subflow","info":"","x":584,"y":63,"wires":[]},{"id":"f169536f.2afc","type":"subflow","name":"event object subflow without the flow context","info":"the input\n\nan incoming message \nin which the payload will include only\nan object with the properties of only one event\n\n\n\nthe output \n\nan empty message\n \n or\n\na message including the following object in payload \n \n\neventObject :{\n   \n   ID : id \n   start : startDatetime,\n   end : endDatetime,\n   eventType :{\n   \n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n   }\n\n}\n\n\n","in":[{"x":391.99998474121094,"y":149.0000228881836,"wires":[{"id":"3d15c2ae.279fae"}]}],"out":[{"x":1860,"y":584,"wires":[{"id":"fd4f2a48.a9d998","port":0},{"id":"5fe3e63a.4aa2d8","port":0}]}]},{"id":"da7a48cb.4bb2b8","type":"function","z":"f169536f.2afc","name":"check status and online state","func":"status = msg.payload.status;\nonline_event = msg.payload.online_event;\nnode.log(\"status = \"+ status +\"online_event = \"+ online_event+\"\\n\");\n\nif (status === \"canceled\"|| status === \"cancelled\" || online_event === true) {\n   msg = {};\n}\n\nreturn msg;","outputs":1,"noerr":0,"x":523,"y":306,"wires":[["df9db0af.7647d"]]},{"id":"3d15c2ae.279fae","type":"json","z":"f169536f.2afc","name":"","x":475.99998474121094,"y":229.00000762939453,"wires":[["da7a48cb.4bb2b8"]]},{"id":"77fe6546.6d70ac","type":"function","z":"f169536f.2afc","name":"new data processing","func":"/*//flow context object\n\nvar subflowContextData = flow.get('contextData') || {};\n//node.send(subflowContextData);\n\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\nsubflowContextData = {\n   start : startObject,\n   end : endObject\n};\n//node.send(subflowContextData);\nflow.set('contextData',subflowContextData);\n//subtest = flow.get('contextData');\n//node.send(subtest);\nsubflowContextData = {};\n\n*/\niD = msg.payload.id;\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\ntimemsg = {\n   start : startObject,\n   end : endObject};\n\n\nif (msg.payload.hasOwnProperty('category_id')) {\n   categoryID = msg.payload.category_id;\n} else {\n   categoryID = null;\n}\nif (msg.payload.hasOwnProperty('subcategory_id')) {\n   subcategoryID = msg.payload.subcategory_id;\n} else {\n   subcategoryID = null;\n}\nif (msg.payload.hasOwnProperty('format_id')) {\n   formatID = msg.payload.format_id;\n} else {\n   formatID = null;\n}\n\nmsg = {};\nmsg = {\n   categoryId : categoryID,\n   subcategoryId : subcategoryID,\n   formatId : formatID\n   };\n//return msg;//call eventType subflow\n//return [timemsg,msg];\n\nnewmsg = {\n   payload : {\n   Id : iD,\n   timeMessage : timemsg,\n   eventParamMessage : msg\n   }\n\n};\nreturn newmsg;\n\n\n\n","outputs":1,"noerr":0,"x":823,"y":303,"wires":[["b87fe150.8e8e","896af8f7.cb16a8"]]},{"id":"df9db0af.7647d","type":"switch","z":"f169536f.2afc","name":"","property":"payload","propertyType":"msg","rules":[{"t":"nnull"},{"t":"null"}],"checkall":"true","outputs":2,"x":588.0000915527344,"y":387.99999237060547,"wires":[["77fe6546.6d70ac"],["5fe3e63a.4aa2d8"]]},{"id":"a4930228.0bad8","type":"comment","z":"f169536f.2afc","name":"cancelled or online event ","info":"status === \"cancelled\" || online_event === true","x":562.0000305175781,"y":477.99999237060547,"wires":[]},{"id":"33c84dc9.12f002","type":"comment","z":"f169536f.2afc","name":"valid event","info":"keep to this subflow's context data \nthe datetime objects start and end \n\nget the ids from category,subcategory and format\nand set the needed parameters\nto call the eventTypeObject subflow","x":849,"y":363,"wires":[]},{"id":"f78acafd.618198","type":"subflow:ff55e874.2c48e8","z":"f169536f.2afc","x":1398,"y":229,"wires":[["ffd470f7.7e462"]]},{"id":"fd4f2a48.a9d998","type":"function","z":"f169536f.2afc","name":"new combine and create an event object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventObject :{ID : null, start : null, end : null, eventType : null}}; \n\nswitch (msg.topic) {\n   case \"time\":\n   iD = msg.id;\n   startDatetime = msg.payload.start;\n   endDatetime = msg.payload.end;\n   context.data.eventObject.start = startDatetime;\n   context.data.eventObject.end = endDatetime;\n   context.data.eventObject.ID = iD;\n   msg = null;\n   break;\n   case \"eventType\":\n   eventTypeObject = msg.payload.eventType;\n   context.data.eventObject.eventType = eventTypeObject;\n   msg = null;\n   break;\n \n \n   default:\n   msg = null;\n}\n\nif (context.data.eventObject.ID !== null && context.data.eventObject.start !== null && context.data.eventObject.end !== null && context.data.eventObject.eventType !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn

newmsg;\n\n","outputs":1,"noerr":0,"x":1912.9998168945312,"y":338.00000762939453,"wires":[[]]},{"id":"5fe3e63a.4aa2d8","type":"function","z":"f169536f.2afc","name":"no event","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":558.0000305175781,"y":549.0000839233398,"wires":[[]]},{"id":"42418abb.97e524","type":"comment","z":"f169536f.2afc","name":"event object subflow without the flow context","info":"","x":656,"y":58,"wires":[]},{"id":"b87fe150.8e8e","type":"function","z":"f169536f.2afc","name":"eventParamMessage","func":"eventParamMessage = msg.payload.eventParamMessage;\nmsg = {};\nreturn eventParamMessage;\n\n\n\n","outputs":1,"noerr":0,"x":1084,"y":230,"wires":[["f78acafd.618198"]]},{"id":"896af8f7.cb16a8","type":"function","z":"f169536f.2afc","name":"timeParamMessage","func":"timeParamMessage = msg.payload.timeMessage;\niD = msg.payload.Id;\nmsg = {};\nmsg = {\n id : iD,\n topic : \"time\",\n payload : timeParamMessage\n};\nreturn msg;","outputs":1,"noerr":0,"x":1081,"y":383,"wires":[["5f56f87a.d88448"]]},{"id":"23b880a3.f3956","type":"comment","z":"f169536f.2afc","name":"eventObject","info":"msg = {\n payload : {\n eventObject :{\n ID : id,\n start : startDatetime,\n end : endDatetime,\n eventType : eventTypeObject\n }\n }\n};","x":1990,"y":405,"wires":[]},{"id":"5f56f87a.d88448","type":"delay","z":"f169536f.2afc","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1759.9999389648438,"y":438.00000762939453,"wires":[["fd4f2a48.a9d998"]]},{"id":"ec3a8428.5de6d8","type":"delay","z":"f169536f.2afc","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1764.9999389648438,"y":245.00000762939453,"wires":[["fd4f2a48.a9d998"]]},{"id":"ffd470f7.7e462","type":"function","z":"f169536f.2afc","name":"set topic","func":"eventTypeObject = msg.payload;\nmsg = {};\nmsg = {\n topic : \"eventType\",\n payload : eventTypeObject\n};\nreturn msg;","outputs":1,"noerr":0,"x":1620.9999389648438,"y":161.00000762939453,"wires":[["ec3a8428.5de6d8"]]},{"id":"b6d3f28a.25ed8","type":"subflow","name":"Event Subflow","info":"Input\n\nan incoming message \n\nmsg = {\n\n time:{\n startYear : startYear,\n startMonth : startMonth,\n startDay : startDay,\n startHour : startHour,\n endYear : endYear,\n endMonth : endMonth,\n endDay : endDay,\n endHour : endHour\n },\n venue:{\n direction : direction\n }\n \n }\n \ntime parameters\n\nall strings and single numbers with zero //\"07\"\n\ndirection parameter\nnone of \"N\" or \"C\" or \"S\" string values\n(North,Center,South)\nto choose venue\none of \n\nMain Olympic Stadium,\nZappeion,\nPeace And Friendship Stadium\n\n\n\nOutput\n\nan array of the following objects \n\n\n{\n \n ID : id \n start : startDatetime,\n end : endDatetime,\n eventType :{\n \n category : categoryName,\n subcategory : subcategoryName,\n format : formatName\n \n }\n \n }\n\n\n\n\n\n","in":[{"x":25,"y":30,"wires":[{"id":"12b4f133.a43b1f"}]}],"out":[{"x":839,"y":515,"wires":[{"id":"a7200735.eb2cd8","port":0}]}]},{"id":"3c349149.6ccbae","type":"function","z":"b6d3f28a.25ed8","name":"i++","func":"var icount;\nicount = flow.get('i');\n\nnode.log (\"flow i = \"+ icount);\nicount++;\nflow.set('i',icount);\nnode.log (\"new flow i = \"+ icount);\n\nmsg = {};\nmsg = {\n topic : \"iterate\",\n count : icount\n};\nreturn msg;","outputs":1,"noerr":0,"x":378,"y":476,"wires":[["91fdb688.823fb8"]]},{"id":"91fdb688.823fb8","type":"function","z":"b6d3f28a.25ed8","name":" iterate","func":"\n//icontext = context.i || 0;\nicontext = flow.get('i') || 0;//initialize restart\nnode.log(\"icontext = \" + icontext);\n\n\nif(icontext === 0){\n\nThings = msg.payload.events;//array of {}\n\nthingsLength = Things.length;\n //newmsg = {things : Things};\n// node.send(newmsg);\nvar eventArray = context.get('contextArray')||[];\ncontext.set('contextArray',Things);\nvar arrayLength = context.get('arrayLength')||0;\ncontext.set('arrayLength',thingsLength);\n\n//for array node lengthOfEventArray\nlengthOfEventArray = flow.get('lengthOfEventArray') || 0;//initialize restart\nnode.log(\"lengthOfEventArray1 = \"+lengthOfEventArray);\nlengthOfEventArray = thingsLength;\nnode.log(\"lengthOfEventArray2 = \"+lengthOfEventArray);\nflow.set('lengthOfEventArray',lengthOfEventArray);\n\n\n}\neventArray = context.get('contextArray');\nnode.log(\"eventArray = \" + eventArray);\narrayLength = context.get('arrayLength');\nnode.log(\"arrayLength = \"+arrayLength);\n\n\nif (icontext < arrayLength) {\n \n //code\n \n //stamp = Things[icontext];\n stamp = eventArray[icontext];\n \n msg = {};\n msg = {payload : stamp};\n \n stamp = {};\n\n flow.set('i',icontext);\n context.set('arrayLength',arrayLength);\n \n return msg;\n \n} else {\n \n node.log(\"\\n\\n Not any other objects\\n\");\n Things = [];\ncontext.set('contextArray',Things);\n arrayLength = 0;\n context.set('arrayLength',arrayLength);\n icontext = 0;\nflow.set('i',icontext);\n return;\n \n}\n\n\n","outputs":1,"noerr":0,"x":242,"y":314,"wires":[["e9203538.d8ce78"]]},{"id":"5233cf6b.6129","type":"subflow:f169536f.2afc","z":"b6d3f28a.25ed8","x":538,"y":314,"wires":[["3c349149.6ccbae","a7200735.eb2cd8"]]},{"id":"e9203538.d8ce78","type":"json","z":"b6d3f28a.25ed8","name":"","x":336,"y":369,"wires":[["5233cf6b.6129"]]},{"id":"a7200735.eb2cd8","type":"function","z":"b6d3f28a.25ed8","name":"create event objects array","func":"\n//context value\nlengthCount = context.get('lengthCount') || 0;\nnode.log(\"lengthCount = \" + lengthCount+\"\\n\");\n//flow context array\ntheEventObjectArray = context.get('contextDataArray') || [];\n//theEventObjectArray = [];\nnode.log(\"theEventObjectArray = \"+theEventObjectArray+\" length = \"+theEventObjectArray.length+\"\\n\");\ntheEventObject = msg.payload.eventObject;\n\n//theEventObjectArray = flow.get('contextDataArray');\ntheEventObjectArray.push(theEventObject);\ncontext.set('contextDataArray',theEventObjectArray);\n\n\nnode.log(\"lengthCount = \" + lengthCount+\"\\n\");\nlengthEventArray = flow.get('lengthOfEventArray');\nnode.log(\"lengthEventArray3 = \" + lengthEventArray+\"\\n\");\n\nif (lengthCount + 1 == lengthEventArray) {\n \n msg = {};\n msg = {payload : theEventObjectArray};\n \n lengthCount = 0;\ntheEventObjectArray = [];\n context.set('lengthCount',lengthCount);\ncontext.set('contextDataArray',theEventObjectArray);\n lengthEventArray = 0;\n

flow.set('lengthOfEventArray',lengthEventArray);\n   \n   return msg;\n} else {\n   lengthCount++;\n context.set('lengthCount',lengthCount);\n   flow.set('lengthOfEventArray',lengthEventArray);\n return;\n}\n\n\n\n\n\n\n\n\n\n\n","outputs":1,"noerr":0,"x":861,"y":417,"wires":[[]]},{"id":"677568cd.cf83d8","type" :"http   request","z":"b6d3f28a.25ed8","name":"get events","method":"use","ret":"txt","url":"","tls":"","x":187,"y":184,"wires":[["8887bd9a.6245f"]]},{"id":"12b4f133.a43b 1f","type":"function","z":"b6d3f28a.25ed8","name":"event   search","func":"var latPeaceAndFriendshipStadium = 37.942391; \nvar lonPeaceAndFriendshipStadium = 23.667726;\nvar latZappeion = 37.971341;\nvar lonZappeion = 23.736554;\nvar latMainOlympicStadium = 38.036129;\nvar lonMainOlympicStadium = 23.787591;\n\n//var startDateLocal = \"2016-01-01T00:00:00\";\n//var endDateLocal = \"2018-07-01T23:00:00\";\n/*startYear = 2016;\nstartMonth = \"01\";\nstartDay = \"01\";\nstartHour = \"00\";\nendYear = 2019;\nendMonth = \"07\";\nendDay = \"01\";\nendHour = \"23\";*/\nstartYear = msg.time.startYear;\nstartMonth = msg.time.startMonth;\nstartDay = msg.time.startDay;\nstartHour = msg.time.startHour;\nendYear = msg.time.endYear;\nendMonth = msg.time.endMonth;\nendDay = msg.time.endDay;\nendHour = msg.time.endHour;\n\nif((typeof startYear === 'undefined') ||(typeof startMonth === 'undefined') || (typeof startDay === 'undefined') || (typeof startHour === 'undefined') || (typeof endYear === 'undefined') || (typeof endMonth === 'undefined') || (typeof endDay === 'undefined') || (typeof endHour === 'undefined'))\n{\n   node.log(\"undefined parameter\\n\");\n   return;\n}\nvar startDateLocal = \"\" + startYear + \"-\" + startMonth + \"-\" + startDay + \"T\" + startHour + \":00:00\";\nvar endDateLocal = \"\" + endYear + \"-\" + endMonth + \"-\" + endDay + \"T\" + endHour + \":00:00\";\n\n\nvar latNEpeaceAndFrienshipStadium = 37.94308912;\nvar lonNEpeaceAndFrienshipStadium = 23.66852582;\nvar latSWpeaceAndFrienshipStadium = 37.94169304;\nvar lonSWpeaceAndFrienshipStadium = 23.66582215;\n\nvar latNEzappeion = 37.97193545;\nvar lonNEzappeion = 23.73745859;\nvar latSWzappeion = 37.97117425;\nvar lonSWzappeion = 23.73568833;\n\nvar latNEmainOlympicStadium = 38.03741089;\nvar lonNEmainOlympicStadium = 23.78917158;\nvar latSWmainOlympicStadium = 38.03469835;\nvar lonSWmainOlympicStadium = 23.78643572;\n\nnameOfPeaceAndFriendshipStadium = \"Peace And Friendship Stadium\";\nnameOfZappeion = \"Zappeion\";\nnameOfMainOlympicStadium = \"Main Olympic Stadium\";\n\n//direction = \"N\";\ndirection = msg.venue.direction;\n\nif(typeof direction === 'undefined'){\n   node.log(\"undefined parameter\");\n   return;\n}\n\nif (direction == \"S\") {\n   //South\n   name = nameOfPeaceAndFriendshipStadium;\n}else{\n   if (direction == \"C\") {\n   //Center\n   name = nameOfZappeion;\n   }else{\n   if (direction == \"N\") {\n   //North\n   name = nameOfMainOlympicStadium;\n   }else{\n   node.log(\"no valid venue direction\");\n   return;\n   }\n   }\n}\n\n//maybe direction switch statement\n\n\nswitch (name) {\n case \"Peace And Friendship Stadium\":\n   //viewport\n   latNE = latNEpeaceAndFriendshipStadium;\n   lonNE = lonNEpeaceAndFriendshipStadium;\n   latSW = latSWpeaceAndFriendshipStadium;\n   lonSW = lonSWpeaceAndFriendshipStadium;\n   break;\n   case \"Zappeion\":\n   // viewport\n   latNE = latNEzappeion;\n   lonNE = lonNEzappeion;\n   latSW = latSWzappeion;\n   lonSW = lonSWzappeion;\n break;\n   case \"Main Olympic Stadium\":\n   // viewport\n   latNE = latNEmainOlympicStadium;\n   lonNE = lonNEmainOlympicStadium;\n   latSW = latSWmainOlympicStadium;\n   lonSW = lonSWmainOlympicStadium;\n   break;\n   default:\n   // code\n   node.log(\"no valid venue\");\n return;\n}\n\n\n\n\n\n\n\n\n\n\n\n//viewport\n//latNE = latNEpeaceAndFrienshipStadium;//zappeion;\n//lonNE = lonNEpeaceAndFrienshipStadium;//zappeion;\n//latSW = latSWpeaceAndFrienshipStadium;//zappeion;\n//lonSW = lonSWpeaceAndFrienshipStadium;//zappeion;\n//distance = 1; //integer\n//lat = latZappeion;\n//lon = lonZappeion;\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?token=MY_TOKEN&location.latitude=\"+lat+\"&location.longitude =\"+lon+\"&location.within=0km\"+\"&start_date.range_start=\"+startDateLocal+\"&start_date.range_end=\"+endDate Local+\"\";\n\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location. within=\"+distance+\"km\"+\"&include_unavailable_events=true\"+\"&start_date.range_start=\"+startDateLocal+\"&tok en=MY_TOKEN\";\n\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location.v iewport.northeast.latitude=\"+latNE+\"&location.viewport.northeast.longitude=\"+lonNE+\"&location.viewport.southwe st.latitude=\"+latSW+\"&location.viewport.southwest.longitude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal +\"&token=MY_TOKEN\";\n\n//works\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.viewport.northeast.latitude=\"+latNE+\"&location.viewport. northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.long itude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&include_unavailable_events=true\"+\"&token=MY_T OKEN\";\n\nmsgUrl = \"https://www.eventbriteapi.com/v3/events/search/?location.viewport.northeast.latitude=\"+latNE+\"&location.viewport. northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.long itude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&start_date.range_end=\"+endDateLocal+\"&include_ unavailable_events=true\"+\"&token=MY_TOKEN\";\n\n\nmsgMethod = \"GET\";\n\n\nmsg ={};\nmsg = {\n   url : msgUrl,\n   method : msgMethod\n};\n\nreturn msg;\n\n\n\n","outputs":1,"noerr":0,"x":126,"y":125,"wires":[["677568cd.cf83d8"]]},{"id":"64e7a343.c8850c","type":"j son","z":"b6d3f28a.25ed8","name":"","x":565,"y":177,"wires":[["91fdb688.823fb8"]]},{"id":"8887bd9a.6245f","type":" function","z":"b6d3f28a.25ed8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n return;\n   }\n}\nreturn msg;\n

\n\n","outputs":1,"noerr":0,"x":574,"y":85,"wires":[["64e7a343.c8850c"]]},{"id":"d132cb5b.ccc3e8","type":"catch","z":"b6d3f28a.25ed8","name":"","scope":["677568cd.cf83d8"],"x":488,"y":20,"wires":[["989484ad.52deb8"]]},{"id":"989484ad.52deb8","type":"function","z":"b6d3f28a.25ed8","name":"handle","func":"msg = {};\nnode.log(\"error occured - halt the flow - try again\");\nreturn;","outputs":1,"noerr":0,"x":653,"y":21,"wires":[["64e7a343.c8850c"]]},{"id":"733ab1b1.17a73","type":"subflow:b6d3f28a.25ed8","z":"4f6d1a2a.227144","x":494,"y":206,"wires":[[]]}]

Κώδικας 18 : Ροή της υπορροής «Event Subflow»

[{"id":"ff55e874.2c48e8","type":"subflow","name":"event Type Object Subflow","info":"create an event Type Object\n\n\neventType:{\n\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n} \n\n\ngets an incoming message \nwith parameters\n\nmsg.categoryId\n\nmsg.subcategoryId\n\nmsg.formatId\n\nall of them numbers or null","in":[{"x":44,"y":778,"wires":[{"id":"eed9b526.8c69c8"},{"id":"30d248ff.c61128"},{"id":"3a8010.06756ff"}]}],"out":[{"x":2065,"y":752,"wires":[{"id":"3e100827.c64958","port":0}]}]},{"id":"12c54218.ab0c0e","type":"function","z":"ff55e874.2c48e8","name":"category search","func":"//var categoryID = 107;\ncategoryID = msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":483,"y":374,"wires":[["769f84b6.919d8c"]]},{"id":"382931ce.446dfe","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event category","info":"","x":1066,"y":228,"wires":[]},{"id":"769f84b6.919d8c","type":"http request","z":"ff55e874.2c48e8","name":"get category","method":"use","ret":"txt","url":"","tls":"","x":599,"y":287,"wires":[["266e134.15704ec"]]},{"id":"23667dcd.27f482","type":"json","z":"ff55e874.2c48e8","name":"","x":761,"y":366,"wires":[["3fb4da05.103056"]]},{"id":"3fb4da05.103056","type":"function","z":"ff55e874.2c48e8","name":"get category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category = \"\";\n}\nnode.log(\"category name = \"+ category +\"\n\");\ntopic = \"category\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : category\n};\nreturn newmsg;","outputs":1,"noerr":0,"x":970,"y":455,"wires":[["f5c91617.8e2ee8"]]},{"id":"9d021d6c.8edbe","type":"comment","z":"ff55e874.2c48e8","name":" take the category","info":"","x":967,"y":374,"wires":[]},{"id":"ce357ebf.a4c9e","type":"function","z":"ff55e874.2c48e8","name":"subcategory search","func":"//var subcategoryID = 7003;\nsubcategoryID = msg.payload.subcategID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//subcategories/\"+subcategoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":561,"y":881,"wires":[["4f0b91d.031a77"]]},{"id":"5f3da062.4ed36","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event subcategory","info":"","x":1072,"y":739,"wires":[]},{"id":"4f0b91d.031a77","type":"http request","z":"ff55e874.2c48e8","name":"get subcategory","method":"use","ret":"txt","url":"","tls":"","x":605,"y":798,"wires":[["1062c721.6036b9"]]},{"id":"8f47b3b.aad9d5","type":"json","z":"ff55e874.2c48e8","name":"","x":757,"y":877,"wires":[["7c5cb79e.9761a8"]]},{"id":"7c5cb79e.9761a8","type":"function","z":"ff55e874.2c48e8","name":"get subcategory","func":"if(msg.hasOwnProperty('payload')){\n   subcategory = msg.payload.name;\n}else{\n   subcategory = \"\";\n}\nnode.log(\"subcategory name = \"+subcategory +\"\n\");\ntopic = \"subcategory\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : subcategory\n};\nreturn newmsg;","outputs":1,"noerr":0,"x":957,"y":963,"wires":[["e5345aa5.58bb28"]]},{"id":"e04a3bd0.32c348","type":"comment","z":"ff55e874.2c48e8","name":" take the subcategory","info":"","x":951,"y":883,"wires":[]},{"id":"e8c73870.37c108","type":"function","z":"ff55e874.2c48e8","name":"format search","func":"//var formatID = 4;\nformatID = msg.payload.formatID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//formats/\"+formatID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":490,"y":1375,"wires":[["40e7a47f.63b11c"]]},{"id":"67e15ebb.ececf","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event format","info":"","x":1073,"y":1229,"wires":[]},{"id":"40e7a47f.63b11c","type":"http request","z":"ff55e874.2c48e8","name":"get format","method":"use","ret":"txt","url":"","tls":"","x":571,"y":1283,"wires":[["7ef55232.49e05c"]]},{"id":"f95118c3.4b2518","type":"json","z":"ff55e874.2c48e8","name":"","x":768,"y":1367,"wires":[["fa76714c.bed85"]]},{"id":"fa76714c.bed85","type":"function","z":"ff55e874.2c48e8","name":"get format","func":"if(msg.hasOwnProperty('payload')){\n   format = msg.payload.name;\n}else{\n   format = \"\";\n}\nnode.log(\"format name = \"+ format+\"\n\");\ntopic = \"format\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : format\n};\nreturn newmsg;","outputs":1,"noerr":0,"x":976,"y":1502,"wires":[["12d00354.89ca5d"]]},{"id":"5be1780e.8b0998","type":"comment","z":"ff55e874.2c48e8","name":" take the format","info":"","x":966,"y":1404,"wires":[]},{"id":"f5c91617.8e2ee8","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1396,"y":445,"wires":[["3e100827.c64958"]]},{"id":"e5345aa5

.58bb28","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"second s","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1378, "y":746,"wires":[["3e100827.c64958"]]},{"id":"12d00354.89ca5d","type":"delay","z":"ff55e874.2c48e8","name":"","pa useType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","random Last":"5","randomUnits":"seconds","drop":false,"x":1369,"y":1107,"wires":[["3e100827.c64958"]]},{"id":"3e100827.c6 4958","type":"function","z":"ff55e874.2c48e8","name":"event Type Object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventType:{category : null,subcategory : null,format : null} }; \n\nswitch (msg.topic) {\n   case \"category\":\n   categoryName = msg.payload;\n context.data.eventType.category = categoryName;\n   msg = null;\n   break;\n   case \"subcategory\":\n subcategoryName = msg.payload;\n   context.data.eventType.subcategory = subcategoryName;\n   msg = null;\n break;\n   case \"format\":\n   formatName = msg.payload;\n   context.data.eventType.format = formatName;\n msg = null;\n   break;\n \n   default:\n   msg = null;\n}\n\nif (context.data.eventType.category !== null && context.data.eventType.subcategory !== null && context.data.eventType.format !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;","outputs":1,"noerr":0,"x":1810,"y":753,"wires":[[]]},{"id":"4371e589.c88d9c","type":"comment","z":"ff55e8 74.2c48e8","name":"newmsg","info":"newmsg = {\n   eventType:{\n   category : categoryName,\n subcategory : subcategoryName,\n   format : formatName\n   } \n };","x":1801,"y":667,"wires":[]},{"id":"2654d4c3.0baeec","type":"comment","z":"ff55e874.2c48e8","name":"create the eventType Object","info":"","x":355,"y":209,"wires":[]},{"id":"7ef55232.49e05c","type":"function","z":"ff55e874.2c48e8","name" :"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n \n\n","outputs":1,"noerr":0,"x":686,"y":1451,"wires":[["f95118c3.4b2518"]]},{"id":"1062c721.6036b9","type":"function ","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n return;\n   }\n}\nreturn   msg;\n \n\n","outputs":1,"noerr":0,"x":668,"y":976,"wires":[["8f47b3b.aad9d5"]]},{"id":"266e134.15704ec","type":"function"," z":"ff55e874.2c48e8","name":"handle   connection   error","func":"if   (msg.hasOwnProperty(\"statusCode\"))   {\n statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n return;\n   }\n}\nreturn   msg;\n \n\n","outputs":1,"noerr":0,"x":661,"y":452,"wires":[["23667dcd.27f482"]]},{"id":"810af2e2.3a747","type":"catch","z": "ff55e874.2c48e8","name":"","scope":["4f0b91d.031a77"],"x":507,"y":1054,"wires":[["574bc18a.8d73d"]]},{"id":"c263 8965.0c4dd8","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["769f84b6.919d8c"],"x":484,"y":539,"wires":[["5ba3b0ab.c4554"]]},{"id":"e657a3b3.0e35e","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["40e7a47f.63b1 1c"],"x":441,"y":1540,"wires":[["568e2d67.9899f4"]]},{"id":"568e2d67.9899f4","type":"function","z":"ff55e874.2c48e 8","name":"handle","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":621,"y":1539,"wires":[["f95118c3.4b2518"]]},{"id":"574bc18a.8d73d","type":"function ","z":"ff55e874.2c48e8","name":"handle","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":662,"y":1055,"wires":[["8f47b3b.aad9d5"]]},{"id":"5ba3b0ab.c4554","type":"function", "z":"ff55e874.2c48e8","name":"handle","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":655,"y":538,"wires":[["23667dcd.27f482"]]},{"id":"9a4b8229.58fb","type":"comment", "z":"ff55e874.2c48e8","name":"event   Type   Object   with   handling   the errors","info":"","x":667,"y":140,"wires":[]},{"id":"2c0151dc.b74c8e","type":"switch","z":"ff55e874.2c48e8","name":"c heck categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true"," outputs":2,"x":565,"y":621,"wires":[["35e106e2.aac98a"],["12c54218.ab0c0e"]]},{"id":"eed9b526.8c69c8","type":"func tion","z":"ff55e874.2c48e8","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   categID:categoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":338,"y":622,"wires":[["2c0151dc.b74c8e"]]},{"id":"35e106e2.aac98a","type":"function" ,"z":"ff55e874.2c48e8","name":"category   ID   is   null","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":831,"y":596,"wires":[["23667dcd.27f482"]]},{"id":"e6d18f3b.79032","type":"switch","z ":"ff55e874.2c48e8","name":"check subcategoryID","property":"payload.subcategID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":" true","outputs":2,"x":523,"y":1165,"wires":[["ded90b18.93b438"],["ce357ebf.a4c9e"]]},{"id":"30d248ff.c61128","type" :"function","z":"ff55e874.2c48e8","name":"set subcategory ID","func":"//subcategoryID = 7003;\nsubcategoryID = msg.subcategoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   subcategID:subcategoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":296,"y":1166,"wires":[["e6d18f3b.79032"]]},{"id":"ded90b18.93b438","type":"function ","z":"ff55e874.2c48e8","name":"subcategory   ID   is   null","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":789,"y":1140,"wires":[["8f47b3b.aad9d5"]]},{"id":"16f0cbb1.424534","type":"switch"," z":"ff55e874.2c48e8","name":"check

formatID","property":"payload.formatID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","o utputs":2,"x":509,"y":1648,"wires":[["a3284a80.a4aad8"],["e8c73870.37c108"]]},{"id":"3a8010.06756ff","type":"functi on","z":"ff55e874.2c48e8","name":"set format ID","func":"//formatID = 4;\nformatID = msg.formatId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   formatID:formatID   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":282,"y":1649,"wires":[["16f0cbb1.424534"]]},{"id":"a3284a80.a4aad8","type":"functio n","z":"ff55e874.2c48e8","name":"format ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":775,"y":1623,"wires":[["f95118c3.4b2518"]]},{"id":"50cce838.e77cc8","type":"comme nt","z":"ff55e874.2c48e8","name":"   handle the case of optional ID fields","info":"","x":184,"y":138,"wires":[]},{"id":"79a21397.e36b3c","type":"comment","z":"ff55e874.2c48e8","name" :"   testing the   flow-prepare the subflow","info":"","x":584,"y":63,"wires":[]},{"id":"f169536f.2afc","type":"subflow","name":"event object subflow without the flow context","info":"the input\n\nan incoming message \nin which the payload will include only\nan object with the properties of only one event\n\n\n\nthe output \n\nan empty message\n \n or\n\na message including the following object in payload \n \n\neventObject :{\n   \n   ID : id \n   start : startDatetime,\n   end : endDatetime,\n   eventType :{\n   \n   category : categoryName,\n   subcategory : subcategoryName,\n format : formatName\n   \n   } \n\n}\n\n\n","in":[{"x":391.99998474121094,"y":149.0000228881836,"wires":[{"id":"3d15c2ae.279fae"}]}],"out":[{"x" :1860,"y":584,"wires":[{"id":"fd4f2a48.a9d998","port":0},{"id":"5fe3e63a.4aa2d8","port":0}]}]},{"id":"da7a48cb.4bb2 b8","type":"function","z":"f169536f.2afc","name":"check status and online state","func":"status = msg.payload.status;\nonline_event = msg.payload.online_event;\nnode.log(\"status = \"+ status +\"online_event = \"+ online_event+\"\\n\");\n\nif (status === \"canceled\"|| status === \"cancelled\" || online_event === true) {\n   msg = {};\n}\n\nreturn msg;","outputs":1,"noerr":0,"x":523,"y":306,"wires":[["df9db0af.7647d"]]},{"id":"3d15c2ae.279fae","type":"json","z":" f169536f.2afc","name":"","x":475.99998474121094,"y":229.00000762939453,"wires":[["da7a48cb.4bb2b8"]]},{"id":"7 7fe6546.6d70ac","type":"function","z":"f169536f.2afc","name":"new data processing","func":"/*//flow context object\n\nvar subflowContextData = flow.get('contextData') || {};\n//node.send(subflowContextData);\n\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\nsubflowContextData = {\n   start : startObject,\n   end : endObject\n };\n//node.send(subflowContextData);\nflow.set('contextData',subflowContextData);\n//subtest = flow.get('contextData');\n//node.send(subtest);\nsubflowContextData = {};\n\n*/\niD = msg.payload.id;\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\ntimemsg = {\n start : startObject,\n   end : endObject\n};\n\n\nif (msg.payload.hasOwnProperty('category_id')) {\n categoryID = msg.payload.category_id;\n} else {\n   categoryID = null;\n}\nif (msg.payload.hasOwnProperty('subcategory_id')) {\n subcategoryID = msg.payload.subcategory_id;\n} else {\n   subcategoryID = null;\n}\nif (msg.payload.hasOwnProperty('format_id')) {\n   formatID = msg.payload.format_id;\n} else {\n   formatID = null;\n}\n\nmsg = {};\nmsg = {\n   categoryId : categoryID,\n   subcategoryId : subcategoryID,\n   formatId : formatID\n   };\n//return msg;//call eventType subflow\n//return [timemsg,msg];\nnewmsg = {\n   payload : {\n Id : iD,\n   timeMessage : timemsg,\n   eventParamMessage : msg\n   }\n   }};\nreturn newmsg;\n\n\n\n","outputs":1,"noerr":0,"x":823,"y":303,"wires":[["b87fe150.8e8e","896af8f7.cb16a8"]]},{"id":"df9d b0af.7647d","type":"switch","z":"f169536f.2afc","name":"","property":"payload","propertyType":"msg","rules":[{"t":"n null"},{"t":"null"}],"checkall":"true","outputs":2,"x":588.0000915527344,"y":387.99999237060547,"wires":[["77fe654 6.6d70ac"],["5fe3e63a.4aa2d8"]]},{"id":"a4930228.0bad8","type":"comment","z":"f169536f.2afc","name":"cancelled or online event ","info":"status === \"cancelled\" || online_event === true","x":562.0000305175781,"y":477.99999237060547,"wires":[]},{"id":"33c84dc9.12f002","type":"comment","z":"f1 69536f.2afc","name":"valid event","info":"keep to this subflow's context data \nthe datetime objects start and end \n\nget the ids from category,subcategory and format\nand set the needed parameters\nto call the eventTypeObject subflow","x":849,"y":363,"wires":[]},{"id":"f78acafd.618198","type":"subflow:ff55e874.2c48e8","z":"f169536f.2afc"," x":1398,"y":229,"wires":[["ffd470f7.7e462"]]},{"id":"fd4f2a48.a9d998","type":"function","z":"f169536f.2afc","name":" new combine and create an event object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventObject :{ID : null, start : null, end : null, eventType : null}}; \n\nswitch (msg.topic) {\n   case \"time\":\n   iD = msg.id;\n   startDatetime = msg.payload.start;\n   endDatetime = msg.payload.end;\n   context.data.eventObject.start = startDatetime;\n   context.data.eventObject.end = endDatetime;\n   context.data.eventObject.ID = iD;\n   msg = null;\n   break;\n   case \"eventType\":\n eventTypeObject = msg.payload.eventType;\n   context.data.eventObject.eventType = eventTypeObject;\n   msg = null;\n   break;\n   \n   default:\n   msg = null;\n}\n\nif (context.data.eventObject.ID !== null && context.data.eventObject.start !== null && context.data.eventObject.end !== null && context.data.eventObject.eventType !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;\n\n","outputs":1,"noerr":0,"x":1912.9998168945312,"y":338.00000762939453,"wires":[[]]},{"id":"5fe3e63a.4 aa2d8","type":"function","z":"f169536f.2afc","name":"no event","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":558.0000305175781,"y":549.0000839233398,"wires":[[]]},{"id":"42418abb.97e524","t ype":"comment","z":"f169536f.2afc","name":"event object subflow without the flow context","info":"","x":656,"y":58,"wires":[]},{"id":"b87fe150.8e8e","type":"function","z":"f169536f.2afc","name":"eve ntParamMessage","func":"eventParamMessage = msg.payload.eventParamMessage;\nmsg = {};\nreturn eventParamMessage;\n\n\n\n\n","outputs":1,"noerr":0,"x":1084,"y":230,"wires":[["f78acafd.618198"]]},{"id":"896af8f7. cb16a8","type":"function","z":"f169536f.2afc","name":"timeParamMessage","func":"timeParamMessage =

msg.payload.timeMessage;\niD = msg.payload.Id;\nmsg = {};\nmsg = {\n   id : iD,\n   topic : \"time\",\n payload   :   timeParamMessage\n};\nreturn msg;","outputs":1,"noerr":0,"x":1081,"y":383,"wires":[["5f56f87a.d88448"]]},{"id":"23b880a3.f3956","type":"comment","z":"f169536f.2afc","name":"eventObject","info":"msg = {\n   payload : {\n   eventObject :{\n   ID : id,\n   start : startDatetime,\n   end : endDatetime,\n   eventType : eventTypeObject\n }\n }\n};","x":1990,"y":405,"wires":[]},{"id":"5f56f87a.d88448","type":"delay","z":"f169536f.2afc","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1759.9999389648438,"y":438.00000762939453,"wires":[["fd4f2a48.a9d998"]]},{"id":"ec3a8428.5de6d8","type":"delay","z":"f169536f.2afc","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1764.9999389648438,"y":245.00000762939453,"wires":[["fd4f2a48.a9d998"]]},{"id":"ffd470f7.7e462","type":"function","z":"f169536f.2afc","name":"set topic","func":"eventTypeObject = msg.payload;\nmsg = {};\nmsg = {\n   topic : \"eventType\",\n   payload : eventTypeObject\n};\nreturn msg;","outputs":1,"noerr":0,"x":1620.9999389648438,"y":161.00000762939453,"wires":[["ec3a8428.5de6d8"]]},{"id":"1bcc3986.e5a766","type":"function","z":"38183f02.1041d","name":"i++","func":"var icount;\nicount = flow.get('i');\nnode.log (\"flow i = \"+ icount);\nicount++;\nflow.set('i',icount);\nnode.log (\"new flow i = \"+ icount);\n\nmsg = {};\nmsg = {\n   topic : \"iterate\",\n   count : icount\n};\nreturn msg;","outputs":1,"noerr":0,"x":400,"y":540,"wires":[["365fd0a4.43056"]]},{"id":"365fd0a4.43056","type":"function","z":"38183f02.1041d","name":" iterate","func":"\n\n//icontext = context.i || 0;\nicontext = flow.get('i') || 0;//initialize restart\nnode.log(\"icontext = \" + icontext);\n\n\nif(icontext === 0){\n\nThings = msg.payload.events;//array of {}\n\nthingsLength = Things.length;\n //newmsg = {things : Things};\n// node.send(newmsg);\nvar eventArray = context.get('contextArray')||[];\ncontext.set('contextArray',Things);\nvar   arrayLength   = context.get('arrayLength')||0;\ncontext.set('arrayLength',thingsLength);\n\n//for   array   node lengthOfEventArray\nlengthOfEventArray   =   flow.get('lengthOfEventArray') || 0;//initialize restart\nnode.log(\"lengthOfEventArray1   =   \"+lengthOfEventArray);\nlengthOfEventArray   = thingsLength;\nnode.log(\"lengthOfEventArray2   =   \"+lengthOfEventArray);\nflow.set('lengthOfEventArray',lengthOfEventArray);\n\n\n}\neventArray   =   context.get('contextArray');\nnode.log(\"eventArray   =   \"   +   eventArray);\narrayLength   = context.get('arrayLength');\nnode.log(\"arrayLength = \"+arrayLength);\n\n\nif (icontext < arrayLength) {\n   \n //code\n   \n //stamp = Things[icontext];\n   stamp = eventArray[icontext];\n   \n msg = {};\n   msg = {payload : stamp};\n   \n stamp = {};\n\n   flow.set('i',icontext);\n   context.set('arrayLength',arrayLength);\n   \n return msg;\n   \n} else {\n   \n node.log(\"\\n\\n   Not any other objects\\n\");\n   Things = [];\n context.set('contextArray',Things);\n   arrayLength = 0;\n   context.set('arrayLength',arrayLength);\n   icontext = 0;\n flow.set('i',icontext);\n   return;\n \n}\n\n\n","outputs":1,"noerr":0,"x":264,"y":378,"wires":[["72aed734.5c8308"]]},{"id":"cdd98c54.7ae58","type":"subflow:f169536f.2afc","z":"38183f02.1041d","x":560,"y":378,"wires":[["1bcc3986.e5a766","86b249f1.1e01b8"]]},{"id":"72aed734.5c8308","type":"json","z":"38183f02.1041d","name":"","x":358,"y":433,"wires":[["cdd98c54.7ae58"]]},{"id":"86b249f1.1e01b8","type":"function","z":"38183f02.1041d","name":"create event objects array","func":"\n//context value\nlengthCount = context.get('lengthCount') || 0;\nnode.log(\"lengthCount = \" + lengthCount+\"\\n\");\n//flow context array\ntheEventObjectArray   =   context.get('contextDataArray') || [];\n//theEventObjectArray   = [];\nnode.log(\"theEventObjectArray   =   \"+theEventObjectArray+\"   length   = \"+theEventObjectArray.length+\"\\n\");\ntheEventObject   =   msg.payload.eventObject;\n\n//theEventObjectArray   = flow.get('contextDataArray');\ntheEventObjectArray.push(theEventObject);\ncontext.set('contextDataArray',theEventObjectArray);\n\n\nnode.log(\"lengthCount   =   \"   +   lengthCount+\"\\n\");\nlengthEventArray   = flow.get('lengthOfEventArray');\nnode.log(\"lengthEventArray3 = \" + lengthEventArray+\"\\n\");\n\nif (lengthCount + 1 == lengthEventArray) {\n   \n msg = {};\n   msg = {payload : theEventObjectArray};\n   \n lengthCount = 0;\ntheEventObjectArray   =   [];\n   context.set('lengthCount',lengthCount);\ncontext.set('contextDataArray',theEventObjectArray);\n   lengthEventArray   =   0;\nflow.set('lengthOfEventArray',lengthEventArray);\n   \n return msg;\n} else {\n   lengthCount++;\ncontext.set('lengthCount',lengthCount);\n   flow.set('lengthOfEventArray',lengthEventArray);\nreturn;\n}\n\n\n\n\n\n\n\n\n","outputs":1,"noerr":0,"x":883,"y":481,"wires":[[]]},{"id":"23ad911.ca9416e","type":"http request","z":"38183f02.1041d","name":"get events","method":"use","ret":"txt","url":"","tls":"","x":209,"y":248,"wires":[["d2903720.0f1388"]]},{"id":"2e8aad.527d0554","type":"function","z":"38183f02.1041d","name":"event search","func":"var latPeaceAndFriendshipStadium = 37.942391; \nvar lonPeaceAndFriendshipStadium = 23.667726;\nvar latZappeion = 37.971341;\nvar lonZappeion = 23.736554;\nvar latMainOlympicStadium = 38.036129;\nvar lonMainOlympicStadium = 23.787591;\n\n\n//var startDateLocal = \"2016-01-01T00:00:00\";\n//var endDateLocal = \"2018-07-01T23:00:00\";\n/*startYear = 2016;\nstartMonth = \"01\";\nstartDay = \"01\";\nstartHour = \"00\";\nendYear = 2019;\nendMonth = \"07\";\nendDay = \"01\";\nendHour = \"23\";*/\nstartYear = msg.time.startYear;\nstartMonth = msg.time.startMonth;\nstartDay = msg.time.startDay;\nstartHour = msg.time.startHour;\nendYear = msg.time.endYear;\nendMonth = msg.time.endMonth;\nendDay = msg.time.endDay;\nendHour = msg.time.endHour;\nif((typeof startYear === 'undefined') ||(typeof startMonth === 'undefined') || (typeof startDay === 'undefined') || (typeof startHour === 'undefined') || (typeof endYear === 'undefined') || (typeof endMonth === 'undefined') || (typeof endDay === 'undefined') || (typeof endHour === 'undefined'))\n{\n   node.log(\"undefined parameter\\n\");\n   return;\n}\nvar startDateLocal = \"\" + startYear + \"-\" + startMonth + \"-\" + startDay + \"T\" + startHour + \":00:00\";\nvar endDateLocal = \"\" + endYear + \"-\" + endMonth + \"-\" + endDay + \"T\" + endHour + \":00:00\";\n\n\nvar latNEpeaceAndFrienshipStadium

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= 37.94308912;\nvar lonNEpeaceAndFrienshipStadium = 23.66852582;\nvar latSWpeaceAndFrienshipStadium = 37.94169304;\nvar lonSWpeaceAndFrienshipStadium = 23.66582215;\n\nvar latNEzappeion = 37.97193545;\nvar lonNEzappeion = 23.73745859;\nvar latSWzappeion = 23.97117425;\nvar lonSWzappeion = 23.73568833;\n\nvar latNEmainOlympicStadium = 38.03741089;\nvar lonNEmainOlympicStadium = 23.78917158;\nvar latSWmainOlympicStadium = 38.03469835;\nvar lonSWmainOlympicStadium = 23.78643572;\n\nnameOfPeaceAndFriendshipStadium = \"Peace And Friendship Stadium\";\nnameOfZappeion = \"Zappeion\";\nnameOfMainOlympicStadium = \"Main Olympic Stadium\";\n\n//direction = \"N\";\ndirection = msg.venue.direction;\n\nif(typeof direction === 'undefined'){\n   node.log(\"undefined parameter\");\n   return;\n}\n\nif (direction == \"S\") {\n   //South\n   name = nameOfPeaceAndFriendshipStadium;\n}else{\n   if (direction == \"C\") {\n   //Center\n   name = nameOfZappeion;\n   }else{\n   if (direction == \"N\") {\n   //North\n   name = nameOfMainOlympicStadium;\n   }else{\n   node.log(\"no valid venue direction\");\n   return;\n   }\n   }\n}\n//maybe direction switch statement\n\n\nswitch (name) {\n   case \"Peace And Friendship Stadium\":\n   //viewport\n   latNE = latNEpeaceAndFriendshipStadium;\n   lonNE = lonNEpeaceAndFriendshipStadium;\n   latSW = latSWpeaceAndFriendshipStadium;\n   lonSW = lonSWpeaceAndFriendshipStadium;\n   break;\n   case \"Zappeion\":\n   // viewport\n   latNE = latNEzappeion;\n   lonNE = lonNEzappeion;\n   latSW = latSWzappeion;\n   lonSW = lonSWzappeion;\n   break;\n   case \"Main Olympic Stadium\":\n   // viewport\n   latNE = latNEmainOlympicStadium;\n   lonNE = lonNEmainOlympicStadium;\n   latSW = latSWmainOlympicStadium;\n   lonSW = lonSWmainOlympicStadium;\n   break;\n   default:\n   // code\n   node.log(\"no valid venue\");\n   return;\n}\n\n\n\n\n\n\n\n\n//viewport\n//latNE = latNEpeaceAndFriendshipStadium;//zappeion;\n//lonNE = lonNEpeaceAndFriendshipStadium;//zappeion;\n//latSW = latSWpeaceAndFriendshipStadium;//zappeion;\n//lonSW = lonSWpeaceAndFriendshipStadium;//zappeion;\n//distance = 1; //integer\n//lat = latZappeion;\n//lon = lonZappeion;\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?token=MY_TOKEN&location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location.within=0km\"+\"&start_date.range_start=\"+startDateLocal+\"&start_date.range_end=\"+endDateLocal+\"\";\n\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location.within=\"+distance+\"km\"+\"&include_unavailable_events=true\"+\"&start_date.range_start=\"+startDateLocal+\"&token=MY_TOKEN\";\n\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location.viewport.northeast.latitude=\"+latNE+\"&location.viewport.northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.longitude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&token=MY_TOKEN\";\n\n//works\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.viewport.northeast.latitude=\"+latNE+\"&location.viewport.northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.longitude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&include_unavailable_events=true\"+\"&token=MY_TOKEN\";\n\nmsgUrl = \"https://www.eventbriteapi.com/v3/events/search/?location.viewport.northeast.latitude=\"+latNE+\"&location.viewport.northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.longitude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&start_date.range_end=\"+endDateLocal+\"&include_unavailable_events=true\"+\"&token=MY_TOKEN\";\n\n\nmsgMethod = \"GET\";\n\n\nmsg ={};\nmsg = {\n   url : msgUrl,\n   method : msgMethod\n};\n\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":148,"y":189,"wires":[["23ad911.ca9416e"]]},{"id":"820798f9.6d33d8","type":"json","z":"38183f02.1041d","name":"","x":587,"y":241,"wires":[["365fd0a4.43056"]]},{"id":"d2903720.0f1388","type":"function","z":"38183f02.1041d","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":596,"y":149,"wires":[["820798f9.6d33d8"]]},{"id":"4855a1f9.04682","type":"catch","z":"38183f02.1041d","name":"","scope":["23ad911.ca9416e"],"x":510,"y":84,"wires":[["295e6977.804df6"]]},{"id":"295e6977.804df6","type":"function","z":"38183f02.1041d","name":"handle","func":"msg = {};\nnode.log(\"error occured - halt the flow - try again\");\nreturn;","outputs":1,"noerr":0,"x":675,"y":85,"wires":[["820798f9.6d33d8"]]},{"id":"705ca5e6.476fdc","type":"comment","z":"38183f02.1041d","name":"subflow properties","info":"Input\n\nan incoming message \n\nmsg = {\n\n   time:{\n   startYear : startYear,\n   startMonth : startMonth,\n   startDay : startDay,\n   startHour : startHour,\n   endYear : endYear,\n   endMonth : endMonth,\n   endDay : endDay,\n   endHour : endHour\n   },\n   venue:{\n   direction : direction\n   }\n   \n}\n \ntime parameters\n\nall strings and single numbers with zero //\"07\"\n\ndirection parameter\n\nnone of \"N\" or \"C\" or \"S\" string values\n(North,Center,South)\nto choose venue\nnone of \n\nMain Olympic Stadium,\nZappeion,\nPeace And Friendship Stadium\n\n\n\nOutput\n\nan array of the following objects \n\n\n{\n   \n   ID : id \n   start : startDatetime,\n   end : endDatetime,\n   eventType :{\n   \n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n   } \n\n}\n\n\n\n","x":166,"y":72,"wires":[]}]

Κώδικας 19 : Τελική ροή γεγονότων-εκδηλώσεων

[{"id":"ff55e874.2c48e8","type":"subflow","name":"event Type Object Subflow","info":"create an event Type Object\n\n\neventType:{\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n} \n\n\ngets an incoming message \nwith parameters\n\nmsg.categoryId\n\nmsg.subcategoryId\n\nmsg.formatId\n\nall of them numbers or null","in":[{"x":44,"y":778,"wires":[{"id":"eed9b526.8c69c8"},{"id":"30d248ff.c61128"},{"id":"3a8010.06756ff"}]}],"out":[{"x":2065,"y":752,"wires":[{"id":"3e100827.c64958","port":0}]}]},{"id":"12c54218.ab0c0e","type":"function","z":"ff55e874.2c48e8","name":"category search","func":"//var categoryID = 107;\ncategoryID = msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":483,"y":374,"wires":[["769f84b6.919d8c"]]},{"id":"382931ce.446dfe","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event category","info":"","x":1066,"y":228,"wires":[]},{"id":"769f84b6.919d8c","type":"http request","z":"ff55e874.2c48e8","name":"get category","method":"use","ret":"txt","url":"","tls":"","x":599,"y":287,"wires":[["266e134.15704ec"]]},{"id":"23667dcd.27f482","type":"json","z":"ff55e874.2c48e8","name":"","x":761,"y":366,"wires":[["3fb4da05.103056"]]},{"id":"3fb4da05.103056","type":"function","z":"ff55e874.2c48e8","name":"get category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category = \"\";\n}\nnode.log(\"category name = \"+ category +\"\n\");\ntopic = \"category\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : category\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":970,"y":455,"wires":[["f5c91617.8e2ee8"]]},{"id":"9d021d6c.8edbe","type":"comment","z":"ff55e874.2c48e8","name":" take the category","info":"","x":967,"y":374,"wires":[]},{"id":"ce357ebf.a4c9e","type":"function","z":"ff55e874.2c48e8","name":"subcategory search","func":"//var subcategoryID = 7003;\nsubcategoryID = msg.payload.subcategID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//subcategories/\"+subcategoryID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":561,"y":881,"wires":[["4f0b91d.031a77"]]},{"id":"5f3da062.4ed36","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event subcategory","info":"","x":1072,"y":739,"wires":[]},{"id":"4f0b91d.031a77","type":"http request","z":"ff55e874.2c48e8","name":"get subcategory","method":"use","ret":"txt","url":"","tls":"","x":605,"y":798,"wires":[["1062c721.6036b9"]]},{"id":"8f47b3b.aad9d5","type":"json","z":"ff55e874.2c48e8","name":"","x":757,"y":877,"wires":[["7c5cb79e.9761a8"]]},{"id":"7c5cb79e.9761a8","type":"function","z":"ff55e874.2c48e8","name":"get subcategory","func":"if(msg.hasOwnProperty('payload')){\n   subcategory = msg.payload.name;\n}else{\n   subcategory = \"\";\n}\nnode.log(\"subcategory name = \"+subcategory +\"\n\");\ntopic = \"subcategory\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : subcategory\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":957,"y":963,"wires":[["e5345aa5.58bb28"]]},{"id":"e04a3bd0.32c348","type":"comment","z":"ff55e874.2c48e8","name":" take the subcategory","info":"","x":951,"y":883,"wires":[]},{"id":"e8c73870.37c108","type":"function","z":"ff55e874.2c48e8","name":"format search","func":"//var formatID = 4;\nformatID = msg.payload.formatID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//formats/\"+formatID+\"/?token=MY_TOKEN\";\n\n\nmsg.method = \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":490,"y":1375,"wires":[["40e7a47f.63b11c"]]},{"id":"67e15ebb.ececf","type":"comment","z":"ff55e874.2c48e8","name":" call API to get the event format","info":"","x":1073,"y":1229,"wires":[]},{"id":"40e7a47f.63b11c","type":"http request","z":"ff55e874.2c48e8","name":"get format","method":"use","ret":"txt","url":"","tls":"","x":571,"y":1283,"wires":[["7ef55232.49e05c"]]},{"id":"f95118c3.4b2518","type":"json","z":"ff55e874.2c48e8","name":"","x":768,"y":1367,"wires":[["fa76714c.bed85"]]},{"id":"fa76714c.bed85","type":"function","z":"ff55e874.2c48e8","name":"get format","func":"if(msg.hasOwnProperty('payload')){\n   format = msg.payload.name;\n}else{\n   format = \"\";\n}\nnode.log(\"format name = \"+ format+\"\n\");\ntopic = \"format\";\nmsg = {};\nnewmsg = {\n   topic : topic,\n   payload : format\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":976,"y":1502,"wires":[["12d00354.89ca5d"]]},{"id":"5be1780e.8b0998","type":"comment","z":"ff55e874.2c48e8","name":" take the format","info":"","x":966,"y":1404,"wires":[]},{"id":"f5c91617.8e2ee8","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1396,"y":445,"wires":[["3e100827.c64958"]]},{"id":"e5345aa5.58bb28","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1378,"y":746,"wires":[["3e100827.c64958"]]},{"id":"12d00354.89ca5d","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1369,"y":1107,"wires":[["3e100827.c64958"]]},{"id":"3e100827.c64958","type":"function","z":"ff55e874.2c48e8","name":"event Type Object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventType:{category : null,subcategory : null,format : null} }; \n\nswitch (msg.topic) {\n   case \"category\":\n   categoryName = msg.payload;\n   context.data.eventType.category = categoryName;\n   msg = null;\n   break;\n   case \"subcategory\":\n   subcategoryName = msg.payload;\n   context.data.eventType.subcategory = subcategoryName;\n   msg = null;\n

break;\n   case \"format\":\n   formatName = msg.payload;\n   context.data.eventType.format = formatName;\n msg = null;\n   break;\n \n default:\n   msg = null;\n}\n\nif (context.data.eventType.category !== null && context.data.eventType.subcategory !== null && context.data.eventType.format !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;","outputs":1,"noerr":0,"x":1810,"y":753,"wires":[[]]},{"id":"4371e589.c88d9c","type":"comment","z":"ff55e874.2c48e8","name":"newmsg","info":"newmsg = {\n   eventType:{\n   category : categoryName,\n subcategoryName,\n   format : formatName\n   } \n };","x":1801,"y":667,"wires":[]},{"id":"2654d4c3.0baeec","type":"comment","z":"ff55e874.2c48e8","name":"create the eventType Object","info":"","x":355,"y":209,"wires":[]},{"id":"7ef55232.49e05c","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":686,"y":1451,"wires":[["f95118c3.4b2518"]]},{"id":"1062c721.6036b9","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":668,"y":976,"wires":[["8f47b3b.aad9d5"]]},{"id":"266e134.15704ec","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":661,"y":452,"wires":[["23667dcd.27f482"]]},{"id":"810af2e2.3a747","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["4f0b91d.031a77"],"x":507,"y":1054,"wires":[["574bc18a.8d73d"]]},{"id":"c2638965.0c4dd8","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["769f84b6.919d8c"],"x":484,"y":539,"wires":[["5ba3b0ab.c4554"]]},{"id":"e657a3b3.0e35e","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["40e7a47f.63b11c"],"x":441,"y":1540,"wires":[["568e2d67.9899f4"]]},{"id":"568e2d67.9899f4","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":621,"y":1539,"wires":[["f95118c3.4b2518"]]},{"id":"574bc18a.8d73d","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":662,"y":1055,"wires":[["8f47b3b.aad9d5"]]},{"id":"5ba3b0ab.c4554","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":655,"y":538,"wires":[["23667dcd.27f482"]]},{"id":"9a4b8229.58fb","type":"comment","z":"ff55e874.2c48e8","name":"event Type Object with handling the errors","info":"","x":667,"y":140,"wires":[]},{"id":"2c0151dc.b74c8e","type":"switch","z":"ff55e874.2c48e8","name":"check categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":565,"y":621,"wires":[["35e106e2.aac98a"],["12c54218.ab0c0e"]]},{"id":"eed9b526.8c69c8","type":"function","z":"ff55e874.2c48e8","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   categID:categoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":338,"y":622,"wires":[["2c0151dc.b74c8e"]]},{"id":"35e106e2.aac98a","type":"function","z":"ff55e874.2c48e8","name":"category ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":831,"y":596,"wires":[["23667dcd.27f482"]]},{"id":"e6d18f3b.79032","type":"switch","z":"ff55e874.2c48e8","name":"check subcategoryID","property":"payload.subcategID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":523,"y":1165,"wires":[["ded90b18.93b438"],["ce357ebf.a4c9e"]]},{"id":"30d248ff.c61128","type":"function","z":"ff55e874.2c48e8","name":"set subcategory ID","func":"//subcategoryID = 7003;\nsubcategoryID = msg.subcategoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   subcategID:subcategoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":296,"y":1166,"wires":[["e6d18f3b.79032"]]},{"id":"ded90b18.93b438","type":"function","z":"ff55e874.2c48e8","name":"subcategory ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":789,"y":1140,"wires":[["8f47b3b.aad9d5"]]},{"id":"16f0cbb1.424534","type":"switch","z":"ff55e874.2c48e8","name":"check formatID","property":"payload.formatID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":509,"y":1648,"wires":[["a3284a80.a4aad8"],["e8c73870.37c108"]]},{"id":"3a8010.06756ff","type":"function","z":"ff55e874.2c48e8","name":"set format ID","func":"//formatID = 4;\nformatID = msg.formatId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   formatID:formatID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":282,"y":1649,"wires":[["16f0cbb1.424534"]]},{"id":"a3284a80.a4aad8","type":"function","z":"ff55e874.2c48e8","name":"format ID is null","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":775,"y":1623,"wires":[["f95118c3.4b2518"]]},{"id":"50cce838.e77cc8","type":"comment","z":"ff55e874.2c48e8","name":" handle the case of optional ID fields","info":"","x":184,"y":138,"wires":[]},{"id":"79a21397.e36b3c","type":"comment","z":"ff55e874.2c48e8","name":" testing the flow-prepare the

subflow","info":"","x":584,"y":63,"wires":[]},{"id":"f169536f.2afc","type":"subflow","name":"event object subflow without the flow context","info":"the input\n\nan incoming message \nin which the payload will include only\nan object with the properties of only one event\n\n\n\nthe output \n\nan empty message\n \n or\n\na message including the following object in payload \n \n\neventObject :{\n   \n   ID : id \n   start : startDatetime,\n   end : endDatetime,\n   eventType :{\n   \n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n   }\n\n}\n\n\n","in":[{"x":391.99998474121094,"y":149.0000228881836,"wires":[{"id":"3d15c2ae.279fae"}]}],"out":[{"x":1860,"y":584,"wires":[{"id":"fd4f2a48.a9d998","port":0},{"id":"5fe3e63a.4aa2d8","port":0}]}]},{"id":"da7a48cb.4bb2b8","type":"function","z":"f169536f.2afc","name":"check status and online state","func":"status = msg.payload.status;\nonline_event = msg.payload.online_event;\nnode.log(\"status = \"+ status +\"online_event = \"+ online_event+\"\\n\");\nif (status === \"canceled\"|| status === \"cancelled\" || online_event === true) {\n   msg = {};\n}\n\nreturn msg;","outputs":1,"noerr":0,"x":523,"y":306,"wires":[["df9db0af.7647d"]]},{"id":"3d15c2ae.279fae","type":"json","z":"f169536f.2afc","name":"","x":475.99998474121094,"y":229.00000762939453,"wires":[["da7a48cb.4bb2b8"]]},{"id":"77fe6546.6d70ac","type":"function","z":"f169536f.2afc","name":"new data processing","func":"/*//flow context object\n\nvar subflowContextData = flow.get('contextData') || {};\n//node.send(subflowContextData);\n\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\nsubflowContextData = {\n   start : startObject,\n   end : endObject\n };\n//node.send(subflowContextData);\nflow.set('contextData',subflowContextData);\n//subtest = flow.get('contextData');\n//node.send(subtest);\nsubflowContextData = {};\n\n*/\niD = msg.payload.id;\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\ntimemsg = {\n start : startObject,\n   end : endObject\n};\n\n\nif (msg.payload.hasOwnProperty('category_id')) {\n   categoryID = msg.payload.category_id;\n} else {\n   categoryID = null;\n}\nif (msg.payload.hasOwnProperty('subcategory_id')) {\n   subcategoryID = msg.payload.subcategory_id;\n} else {\n   subcategoryID = null;\n}\nif (msg.payload.hasOwnProperty('format_id')) {\n   formatID = msg.payload.format_id;\n} else {\n   formatID = null;\n}\n\nmsg = {};\nmsg = {\n   categoryId : categoryID,\n   subcategoryId : subcategoryID,\n   formatId : formatID\n   };\n//return msg;//call eventType subflow\n//return [timemsg,msg];\nnewmsg = {\n   payload : {\n Id : iD,\n   timeMessage : timemsg,\n   eventParamMessage : msg\n   }\n };\nreturn newmsg;\n\n\n\n","outputs":1,"noerr":0,"x":823,"y":303,"wires":[["b87fe150.8e8e","896af8f7.cb16a8"]]},{"id":"df9db0af.7647d","type":"switch","z":"f169536f.2afc","name":"","property":"payload","propertyType":"msg","rules":[{"t":"null"},{"t":"null"}],"checkall":"true","outputs":2,"x":588.0000915527344,"y":387.99999237060547,"wires":[["77fe6546.6d70ac"],["5fe3e63a.4aa2d8"]]},{"id":"a4930228.0bad8","type":"comment","z":"f169536f.2afc","name":"cancelled or online event ","info":"status === \"cancelled\" || online_event === true","x":562.0000305175781,"y":477.99999237060547,"wires":[]},{"id":"33c84dc9.12f002","type":"comment","z":"f169536f.2afc","name":"valid event","info":"keep to this subflow's context data \nthe datetime objects start and end \n\nget the ids from category,subcategory and format\nand set the needed parameters\nto call the eventTypeObject subflow","x":849,"y":363,"wires":[]},{"id":"f78acafd.618198","type":"subflow:ff55e874.2c48e8","z":"f169536f.2afc","x":1398,"y":229,"wires":[["ffd470f7.7e462"]]},{"id":"fd4f2a48.a9d998","type":"function","z":"f169536f.2afc","name":"new combine and create an event object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventObject :{ID : null, start : null, end : null, eventType : null}}; \n\nswitch (msg.topic) {\n   case \"time\":\n   iD = msg.id;\n   startDatetime = msg.payload.start;\n   endDatetime = msg.payload.end;\n   context.data.eventObject.start = startDatetime;\n   context.data.eventObject.end = endDatetime;\n   context.data.eventObject.ID = iD;\n   msg = null;\n   break;\n   case \"eventType\":\n   eventTypeObject = msg.payload.eventType;\n   context.data.eventObject.eventType = eventTypeObject;\n   msg = null;\n   break;\n   \n   \n   default:\n   msg = null;\n}\n\nif (context.data.eventObject.ID !== null && context.data.eventObject.start !== null && context.data.eventObject.end !== null && context.data.eventObject.eventType !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;\n\n","outputs":1,"noerr":0,"x":1912.9998168945312,"y":338.00000762939453,"wires":[[]]},{"id":"5fe3e63a.4aa2d8","type":"function","z":"f169536f.2afc","name":"no event","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":558.0000305175781,"y":549.0000839233398,"wires":[[]]},{"id":"42418abb.97e524","type":"comment","z":"f169536f.2afc","name":"event object subflow without the flow context","info":"","x":656,"y":58,"wires":[]},{"id":"b87fe150.8e8e","type":"function","z":"f169536f.2afc","name":"eventParamMessage","func":"eventParamMessage = msg.payload.eventParamMessage;\nmsg = {};\nreturn eventParamMessage;\n\n\n\n","outputs":1,"noerr":0,"x":1084,"y":230,"wires":[["f78acafd.618198"]]},{"id":"896af8f7.cb16a8","type":"function","z":"f169536f.2afc","name":"timeParamMessage","func":"timeParamMessage = msg.payload.timeMessage;\niD = msg.payload.Id;\nmsg = {};\nmsg = {\n   id : iD,\n   topic : \"time\",\n   payload : timeParamMessage\n};\nreturn msg;","outputs":1,"noerr":0,"x":1081,"y":383,"wires":[["5f56f87a.d88448"]]},{"id":"23b880a3.f3956","type":"comment","z":"f169536f.2afc","name":"eventObject","info":"msg = {\n   payload : {\n   eventObject :{\n   ID : id,\n   start : startDatetime,\n   end : endDatetime,\n   eventType : eventTypeObject\n   }\n }\n}","x":1990,"y":405,"wires":[]},{"id":"5f56f87a.d88448","type":"delay","z":"f169536f.2afc","name":"","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1759.9999389648438,"y":438.00000762939453,"wires":[["fd4f2a48.a9d998"]]},{"id":"ec3a8428.5de6d8","type":"delay","z":"f169536f.2afc","name":"","pauseType":"random","timeout":"5","tim

eoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","dr
op":false,"x":1764.9999389648438,"y":245.00000762939453,"wires":[["fd4f2a48.a9d998"]]},{"id":"ffd470f7.7e462","t
ype":"function","z":"f169536f.2afc","name":"set topic","func":"eventTypeObject = msg.payload;\nmsg = {};\nmsg =
{\n   topic : \"eventType\",\n   payload : eventTypeObject\n};\nreturn
msg;","outputs":1,"noerr":0,"x":1620.9999389648438,"y":161.00000762939453,"wires":[["ec3a8428.5de6d8"]]},{"id":"
3cae0d27.20a2f2","type":"function","z":"4af982a3.7f00dc","name":"i++","func":"var icount;\nicount =
flow.get('i');\nnode.log (\"flow i = \"+ icount);\nicount++;\nflow.set('i',icount);\nnode.log (\"new flow i = \"+
icount);\n\nmsg = {};\nmsg = {\n   topic : \"iterate\",\n   count : icount\n};\nreturn
msg;","outputs":1,"noerr":0,"x":382,"y":522,"wires":[["cb5d60e.f099ba","1d4736cb.8a4089"]]},{"id":"1d4736cb.8a408
9","type":"function","z":"4af982a3.7f00dc","name":" iterate","func":"\n\n//icontext = context.i || 0;\nicontext =
flow.get('i') || 0;//initialize restart\nnode.log(\"icontext = \" + icontext);\n\n\nif(icontext === 0){\n\nThings =
msg.payload.events;//array of {}\n\nthingsLength = Things.length;\n //newmsg = {things : Things};\n//
node.send(newmsg);\nvar eventArray = context.get('contextArray')||[];\ncontext.set('contextArray',Things);\nvar
arrayLength = context.get('arrayLength')||0;\ncontext.set('arrayLength',thingsLength);\n\n//for array node
lengthOfEventArray\nlengthOfEventArray = flow.get('lengthOfEventArray') || 0;//initialize
restart\nnode.log(\"lengthOfEventArray1 = \"+lengthOfEventArray);\nlengthOfEventArray =
thingsLength;\nnode.log(\"lengthOfEventArray2 =
\"+lengthOfEventArray);\nflow.set('lengthOfEventArray',lengthOfEventArray);\n\n\n}\neventArray =
context.get('contextArray');\nnode.log(\"eventArray = \" + eventArray);\narrayLength =
context.get('arrayLength');\nnode.log(\"arrayLength = \"+arrayLength);\n\n\nif (icontext < arrayLength) {\n   \n
//code\n   \n //stamp = Things[icontext];\n   stamp = eventArray[icontext];\n   \n   msg = {};\n   msg = {payload :
stamp};\n   \n   stamp = {};\n\n   flow.set('i',icontext);\n   context.set('arrayLength',arrayLength);\n   \n   return
msg;\n   \n} else {\n   \n   node.log(\"\n\n   Not any other objects\n\");\n   Things = [];\n
context.set('contextArray',Things);\n   arrayLength = 0;\n   context.set('arrayLength',arrayLength);\n   icontext = 0;\n
flow.set('i',icontext);\n   return;\n
\n}\n\n\n","outputs":1,"noerr":0,"x":246,"y":360,"wires":[["9fe006c8.553cb8","341ad4a4.f84a0c"]]},{"id":"9fe006c8.55
3cb8","type":"debug","z":"4af982a3.7f00dc","name":"","active":true,"console":"false","complete":"true","x":160,"y":44
9,"wires":[]},{"id":"cb5d60e.f099ba","type":"debug","z":"4af982a3.7f00dc","name":"","active":true,"console":"false","c
omplete":"true","x":556,"y":522,"wires":[]},{"id":"a83070bf.df3cb","type":"subflow:f169536f.2afc","z":"4af982a3.7f00
dc","x":542,"y":360,"wires":[["3cae0d27.20a2f2","8e832146.dc045","c4cb98bb.03d368"]]},{"id":"8e832146.dc045","ty
pe":"debug","z":"4af982a3.7f00dc","name":"","active":true,"console":"false","complete":"true","x":767,"y":295,"wires":
[]},{"id":"341ad4a4.f84a0c","type":"json","z":"4af982a3.7f00dc","name":"","x":340,"y":415,"wires":[["a83070bf.df3cb
"]]},{"id":"c4cb98bb.03d368","type":"function","z":"4af982a3.7f00dc","name":"create event objects
array","func":"\n//context value\nlengthCount = context.get('lengthCount') || 0;\nnode.log(\"lengthCount = \" +
lengthCount+\"\n\");\n//flow context array\ntheEventObjectArray = context.get('contextDataArray') ||
[];\n//theEventObjectArray = [];\nnode.log(\"theEventObjectArray = \"+theEventObjectArray+\" length =
\"+theEventObjectArray.length+\"\n\");\ntheEventObject = msg.payload.eventObject;\n\n//theEventObjectArray =
flow.get('contextDataArray');\ntheEventObjectArray.push(theEventObject);\ncontext.set('contextDataArray',theEventOb
jectArray);\n\n\nnode.log(\"lengthCount = \" + lengthCount+\"\n\");\nlengthEventArray =
flow.get('lengthOfEventArray');\nnode.log(\"lengthEventArray3 = \" + lengthEventArray+\"\n\");\nif (lengthCount +
1 == lengthEventArray) {\n   \n   msg = {};\n   msg = {payload : theEventObjectArray};\n   \n   lengthCount = 0;\n
theEventObjectArray = [];\n   context.set('lengthCount',lengthCount);\n
context.set('contextDataArray',theEventObjectArray);\n   lengthEventArray = 0;\n
flow.set('lengthOfEventArray',lengthEventArray);\n   \n   return msg;\n} else {\n   lengthCount++;\n
context.set('lengthCount',lengthCount);\n   flow.set('lengthOfEventArray',lengthEventArray);\n
return;\n}\n\n\n\n\n\n\n\n\n\n\n\n\n","outputs":1,"noerr":0,"x":865,"y":463,"wires":[["d712cd04.52036","4e84d176.02c8
e"]]},{"id":"d712cd04.52036","type":"debug","z":"4af982a3.7f00dc","name":"","active":true,"console":"false","complet
e":"true","x":842,"y":522,"wires":[]},{"id":"4e84d176.02c8e","type":"file","z":"4af982a3.7f00dc","name":"","filename"
:"Desktop/testarray","appendNewline":true,"createDir":true,"overwriteFile":"true","x":845,"y":557,"wires":[]},{"id":"b0
f08dd3.3c492","type":"inject","z":"4af982a3.7f00dc","name":"","topic":"","payload":"","payloadType":"date","repeat":"
","crontab":"","once":false,"x":91,"y":20,"wires":[["c7a2b2d1.fd786"]]},{"id":"7daf1211.60368c","type":"http
request","z":"4af982a3.7f00dc","name":"get
events","method":"use","ret":"txt","url":"","tls":"","x":191,"y":230,"wires":[["ae9e91d1.e64da","9d4d163b.453178","ae
da9c17.3d201"]]},{"id":"ae9e91d1.e64da","type":"debug","z":"4af982a3.7f00dc","name":"","active":true,"console":"fal
se","complete":"true","x":288,"y":146,"wires":[]},{"id":"1079c8d0.4b6497","type":"function","z":"4af982a3.7f00dc","n
ame":"event search","func":"var latPeaceAndFriendshipStadium = 37.942391; \nvar lonPeaceAndFriendshipStadium =
23.667726;\nvar latZappeion = 37.971341;\nvar lonZappeion = 23.736554;\nvar latMainOlympicStadium =
38.036129;\nvar lonMainOlympicStadium = 23.787591;\n\n//var startDateLocal = \"2016-01-01T00:00:00\";\n//var
endDateLocal = \"2018-07-01T23:00:00\";\n/*startYear = 2016;\nstartMonth = \"01\";\nstartDay = \"01\";\nstartHour =
\"00\";\nendYear = 2019;\nendMonth = \"07\";\nendDay = \"01\";\nendHour = \"23\";*/\nstartYear =
msg.time.startYear;\nstartMonth = msg.time.startMonth;\nstartDay = msg.time.startDay;\nstartHour =
msg.time.startHour;\nendYear = msg.time.endYear;\nendMonth = msg.time.endMonth;\nendDay =
msg.time.endDay;\nendHour = msg.time.endHour;\n\nif((typeof startYear === 'undefined') ||(typeof startMonth ===
'undefined') || (typeof startDay === 'undefined') || (typeof startHour === 'undefined') || (typeof endYear === 'undefined')
|| (typeof endMonth === 'undefined') || (typeof endDay === 'undefined') || (typeof endHour === 'undefined'))\n{\n
node.log(\"undefined parameter\n\");\n   return;\n}\nvar startDateLocal = \"\" + startYear + \"-\" + startMonth + \"-\" +
startDay + \"T\" + startHour + \":00:00\";\nvar endDateLocal = \"\" + endYear + \"-\" + endMonth + \"-\" + endDay +

\"T\" + endHour + \":00:00\";\n\nvar latNEpeaceAndFrienshipStadium = 37.94308912;\nvar lonNEpeaceAndFrienshipStadium = 23.66852582;\nvar latSWpeaceAndFrienshipStadium = 37.94169304;\nvar lonSWpeaceAndFrienshipStadium = 23.66582215;\n\nvar latNEzappeion = 37.97193545;\nvar lonNEzappeion = 23.73745859;\nvar latSWzappeion = 37.97117425;\nvar lonSWzappeion = 23.73568833;\n\nvar latNEmainOlympicStadium = 38.03741089;\nvar lonNEmainOlympicStadium = 23.78917158;\nvar latSWmainOlympicStadium = 38.03469835;\nvar lonSWmainOlympicStadium = 23.78643572;\n\nnameOfPeaceAndFriendshipStadium = \"Peace And Friendship Stadium\";\nnameOfZappeion = \"Zappeion\";\nnameOfMainOlympicStadium = \"Main Olympic Stadium\";\n\n//direction = \"N\";\ndirection = msg.venue.direction;\nif(typeof direction === 'undefined'){\n   node.log(\"undefined parameter\");\n   return;\n}\n\nif (direction == \"S\") {\n   //South\n   name = nameOfPeaceAndFriendshipStadium;\n}else{\n   if (direction == \"C\") {\n   //Center\n   name = nameOfZappeion;\n   }else{\n   if (direction == \"N\") {\n   //North\n   name = nameOfMainOlympicStadium;\n   }else{\n   node.log(\"no valid venue direction\");\n   return;\n   }\n   }\n}\n\n//maybe direction switch statement\n\n\nswitch (name) {\n   case \"Peace And Friendship Stadium\":\n   //viewport\n   latNE = latNEpeaceAndFrienshipStadium;\n   lonNE = lonNEpeaceAndFrienshipStadium;\n   latSW = latSWpeaceAndFrienshipStadium;\n   lonSW = lonSWpeaceAndFrienshipStadium;\n   break;\n   case \"Zappeion\":\n   // viewport\n   latNE = latNEzappeion;\n   lonNE = lonNEzappeion;\n   latSW = latSWzappeion;\n   lonSW = lonSWzappeion;\n   break;\n   case \"Main Olympic Stadium\":\n   // viewport\n   latNE = latNEmainOlympicStadium;\n   lonNE = lonNEmainOlympicStadium;\n   latSW = latSWmainOlympicStadium;\n   lonSW = lonSWmainOlympicStadium;\n   break;\n   default:\n   // code\n   node.log(\"no valid venue\");\n   return;\n}\n\n\n\n\n\n\n\n\n\n\n//viewport\n//latNE = latNEpeaceAndFrienshipStadium;//zappeion;\n//lonNE = lonNEpeaceAndFrienshipStadium;//zappeion;\n//latSW = latSWpeaceAndFrienshipStadium;//zappeion;\n//lonSW = lonSWpeaceAndFrienshipStadium;//zappeion;\n//distance = 1; //integer\n//lat = latZappeion;\n//lon = lonZappeion;\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?token=MY_TOKEN&location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location.within=0km\"+\"&start_date.range_start=\"+startDateLocal+\"&start_date.range_end=\"+endDateLocal+\"\";\n\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location.within=\"+distance+\"km\"+\"&include_unavailable_events=true\"+\"&start_date.range_start=\"+startDateLocal+\"&token=MY_TOKEN\";\n\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location.viewport.northeast.latitude=\"+latNE+\"&location.viewport.northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.longitude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&token=MY_TOKEN\";\n\n//works\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.viewport.northeast.latitude=\"+latNE+\"&location.viewport.northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.longitude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&include_unavailable_events=true\"+\"&token=MY_TOKEN\";\n\nmsgUrl = \"https://www.eventbriteapi.com/v3/events/search/?location.viewport.northeast.latitude=\"+latNE+\"&location.viewport.northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.longitude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&start_date.range_end=\"+endDateLocal+\"&include_unavailable_events=true\"+\"&token=MY_TOKEN\";\n\n\nmsgMethod = \"GET\";\n\n\n\nmsg ={};\nmsg = {\n   url : msgUrl,\n   method : msgMethod\n};\n\nreturn msg;\n\n\n\n","outputs":1,"noerr":0,"x":130,"y":171,"wires":[["7daf1211.60368c"]]},{"id":"6b173a43.4b8d14","type":"json","z":"4af982a3.7f00dc","name":"","x":569,"y":261,"wires":[["1d4736cb.8a4089"]]},{"id":"9d4d163b.453178","type":"function","z":"4af982a3.7f00dc","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n\n","outputs":1,"noerr":0,"x":578,"y":169,"wires":[["6b173a43.4b8d14"]]},{"id":"41d00a23.2940a4","type":"catch","z":"4af982a3.7f00dc","name":"","scope":["7daf1211.60368c"],"x":492,"y":104,"wires":[["628bbf9f.da80d"]]},{"id":"628bbf9f.da80d","type":"function","z":"4af982a3.7f00dc","name":"handle","func":"msg = {};\n\nnode.log(\"error occured - halt the flow - try again\");\n\nreturn;","outputs":1,"noerr":0,"x":657,"y":105,"wires":[["6b173a43.4b8d14"]]},{"id":"c7a2b2d1.fd786","type":"function","z":"4af982a3.7f00dc","name":"setting the time","func":"msg = {};\n\nvar startYear = 2016;\nvar startMonth = \"01\";\nvar startDay = \"01\";\nvar startHour = \"00\";\nvar endYear = 2019;\nvar endMonth = \"07\";\nvar endDay = \"01\";\nvar endHour = \"23\";\n\nvar direction = \"S\";//\"S\", C\",\"N\"\n\nmsg = {\n   time:{\n   startYear : startYear,\n   startMonth : startMonth,\n   startDay : startDay,\n   startHour : startHour,\n   endYear : endYear,\n   endMonth : endMonth,\n   endDay : endDay,\n   endHour : endHour\n   },\n   venue:{\n   direction : direction\n   }\n   \n};\nreturn msg;","outputs":1,"noerr":0,"x":191,"y":66,"wires":[["1079c8d0.4b6497"]]},{"id":"aeda9c17.3d201","type":"file","z":"4af982a3.7f00dc","name":"","filename":"Desktop/testApi","appendNewline":true,"createDir":false,"overwriteFile":"true","x":144,"y":277,"wires":[]}]

Κώδικας 20 : Σύνθεση ροής με χρήση της υπορροής «Event Subflow»

[{"id":"ff55e874.2c48e8","type":"subflow","name":"event Type Object Subflow","info":"create an event Type Object\n\n\neventType:{\n\n   category : categoryName,\n   subcategory : subcategoryName,\n   format : formatName\n   \n} \n\n\ngets an incoming message \nwith parameters\n\nmsg.categoryId\n\nmsg.subcategoryId\n\nmsg.formatId\n\nall of them numbers or null","in":[{"x":44,"y":778,"wires":[{"id":"eed9b526.8c69c8"},{"id":"30d248ff.c61128"},{"id":"3a8010.06756ff"}]}]," out":[{"x":2065,"y":752,"wires":[{"id":"3e100827.c64958","port":0}]}]},{"id":"12c54218.ab0c0e","type":"function","z ":"ff55e874.2c48e8","name":"category   search","func":"//var   categoryID   =   107;\ncategoryID   = msg.payload.categID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//categories/\"+categoryID+\"/?token=MY_TOKE N\";\n\n\nmsg.method   \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":483,"y":374,"wires":[["769f84b6.919d8c"]]},{"id":"382931ce.446dfe","type":"comment ","z":"ff55e874.2c48e8","name":"   call   API   to   get   the   event category","info":"","x":1066,"y":228,"wires":[]},{"id":"769f84b6.919d8c","type":"http request","z":"ff55e874.2c48e8","name":"get category","method":"use","ret":"txt","url":"","tls":"","x":599,"y":287,"wires":[["266e134.15704ec"]]},{"id":"23667dcd. 27f482","type":"json","z":"ff55e874.2c48e8","name":"","x":761,"y":366,"wires":[["3fb4da05.103056"]]},{"id":"3fb4da 05.103056","type":"function","z":"ff55e874.2c48e8","name":"get category","func":"if(msg.hasOwnProperty('payload')){\n   category = msg.payload.name;\n}else{\n   category = \"\";\n}\n\nnode.log(\"category name = \"+ category +\"\\n\");\ntopic = \"category\";\nmsg = {};\n\nnewmsg = {\n   topic : topic,\n   payload :   category\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":970,"y":455,"wires":[["f5c91617.8e2ee8"]]},{"id":"9d021d6c.8edbe","type":"comm ent","z":"ff55e874.2c48e8","name":"   take   the category","info":"","x":967,"y":374,"wires":[]},{"id":"ce357ebf.a4c9e","type":"function","z":"ff55e874.2c48e8","name" :"subcategory   search","func":"//var   subcategoryID   =   7003;\nsubcategoryID   = msg.payload.subcategID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//subcategories/\"+subcategoryID+\"/?token= MY_TOKEN\";\n\n\nmsg.method   \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":561,"y":881,"wires":[["4f0b91d.031a77"]]},{"id":"5f3da062.4ed36","type":"comment", "z":"ff55e874.2c48e8","name":"   call   API   to   get   the   event subcategory","info":"","x":1072,"y":739,"wires":[]},{"id":"4f0b91d.031a77","type":"http request","z":"ff55e874.2c48e8","name":"get subcategory","method":"use","ret":"txt","url":"","tls":"","x":605,"y":798,"wires":[["1062c721.6036b9"]]},{"id":"8f47b3 b.aad9d5","type":"json","z":"ff55e874.2c48e8","name":"","x":757,"y":877,"wires":[["7c5cb79e.9761a8"]]},{"id":"7c5cb 79e.9761a8","type":"function","z":"ff55e874.2c48e8","name":"get subcategory","func":"if(msg.hasOwnProperty('payload')){\n   subcategory = msg.payload.name;\n}else{\n subcategory = \"\";\n}\n\nnode.log(\"subcategory name = \"+subcategory +\"\\n\");\ntopic = \"subcategory\";\nmsg = {};\n\nnewmsg = {\n   topic : topic,\n   payload : subcategory\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":957,"y":963,"wires":[["e5345aa5.58bb28"]]},{"id":"e04a3bd0.32c348","type":"com ment","z":"ff55e874.2c48e8","name":"   take   the subcategory","info":"","x":951,"y":883,"wires":[]},{"id":"e8c73870.37c108","type":"function","z":"ff55e874.2c48e8"," name":"format   search","func":"//var   formatID   =   4;\nformatID   = msg.payload.formatID;\n\nmsg.url=\"https://www.eventbriteapi.com/v3//formats/\"+formatID+\"/?token=MY_TOKEN\ ";\n\n\nmsg.method   \"GET\";\nreturn msg;","outputs":1,"noerr":0,"x":490,"y":1375,"wires":[["40e7a47f.63b11c"]]},{"id":"67e15ebb.ececf","type":"comment ","z":"ff55e874.2c48e8","name":"   call   API   to   get   the   event format","info":"","x":1073,"y":1229,"wires":[]},{"id":"40e7a47f.63b11c","type":"http request","z":"ff55e874.2c48e8","name":"get format","method":"use","ret":"txt","url":"","tls":"","x":571,"y":1283,"wires":[["7ef55232.49e05c"]]},{"id":"f95118c3.4b 2518","type":"json","z":"ff55e874.2c48e8","name":"","x":768,"y":1367,"wires":[["fa76714c.bed85"]]},{"id":"fa76714c. bed85","type":"function","z":"ff55e874.2c48e8","name":"get   format","func":"if(msg.hasOwnProperty('payload')){\n format = msg.payload.name;\n}else{\n   format = \"\";\n}\n\nnode.log(\"format name = \"+ format+\"\\n\");\ntopic = \"format\";\nmsg = {};\n\nnewmsg = {\n   topic : topic,\n   payload : format\n   };\nreturn newmsg;","outputs":1,"noerr":0,"x":976,"y":1502,"wires":[["12d00354.89ca5d"]]},{"id":"5be1780e.8b0998","type":"co mment","z":"ff55e874.2c48e8","name":"   take   the format","info":"","x":966,"y":1404,"wires":[]},{"id":"f5c91617.8e2ee8","type":"delay","z":"ff55e874.2c48e8","name":" ","pauseType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","ran domLast":"5","randomUnits":"seconds","drop":false,"x":1396,"y":445,"wires":[["3e100827.c64958"]]},{"id":"e5345aa5 .58bb28","type":"delay","z":"ff55e874.2c48e8","name":"","pauseType":"random","timeout":"5","timeoutUnits":"second s","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","drop":false,"x":1378, "y":746,"wires":[["3e100827.c64958"]]},{"id":"12d00354.89ca5d","type":"delay","z":"ff55e874.2c48e8","name":"","pa useType":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","random Last":"5","randomUnits":"seconds","drop":false,"x":1369,"y":1107,"wires":[["3e100827.c64958"]]},{"id":"3e100827.c6 4958","type":"function","z":"ff55e874.2c48e8","name":"event Type Object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventType:{category : null,subcategory : null,format : null} }; \n\nswitch (msg.topic) {\n   case \"category\":\n   categoryName = msg.payload;\n context.data.eventType.category = categoryName;\n   msg = null;\n   break;\n   case \"subcategory\":\n subcategoryName = msg.payload;\n   context.data.eventType.subcategory = subcategoryName;\n   msg = null;\n

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break;\n   case \"format\":\n   formatName = msg.payload;\n   context.data.eventType.format = formatName;\n msg = null;\n   break;\n   default:\n   msg = null;\n}\n\nif (context.data.eventType.category !== null && context.data.eventType.subcategory !== null && context.data.eventType.format !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n   context.data = null;\n}\n\nreturn newmsg;","outputs":1,"noerr":0,"x":1810,"y":753,"wires":[[]]},{"id":"4371e589.c88d9c","type":"comment","z":"ff55e874.2c48e8","name":"newmsg","info":"newmsg = {\n   eventType:{\n   category : categoryName,\n subcategory : subcategoryName,\n   format : formatName\n   } \n };","x":1801,"y":667,"wires":[]},{"id":"2654d4c3.0baeec","type":"comment","z":"ff55e874.2c48e8","name":"create the eventType Object","info":"","x":355,"y":209,"wires":[]},{"id":"7ef55232.49e05c","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n   statusCodeproperty = msg.statusCode;\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n   return;\n   }\n}\nreturn msg;\n\n\n","outputs":1,"noerr":0,"x":686,"y":1451,"wires":[["f95118c3.4b2518"]]},{"id":"1062c721.6036b9","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n return;\n   }\n}\nreturn   msg;\n\n\n","outputs":1,"noerr":0,"x":668,"y":976,"wires":[["8f47b3b.aad9d5"]]},{"id":"266e134.15704ec","type":"function","z":"ff55e874.2c48e8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n statusCodeproperty = msg.statusCode\n   node.log(statusCodeproperty);\n   if (statusCodeproperty == \"ETIMEDOUT\") {\n   node.log(\"Error: connect ETIMEDOUT \");\n   //msg = {};\n   return;\n   }\n   if (statusCodeproperty == \"EAI_AGAIN\") {\n   node.log(\"Error: getaddrinfo EAI_AGAIN\");\n   //msg = {};\n return;\n   }\n}\nreturn   msg;\n\n\n","outputs":1,"noerr":0,"x":661,"y":452,"wires":[["23667dcd.27f482"]]},{"id":"810af2e2.3a747","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["4f0b91d.031a77"],"x":507,"y":1054,"wires":[["574bc18a.8d73d"]]},{"id":"c2638965.0c4dd8","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["769f84b6.919d8c"],"x":484,"y":539,"wires":[["5ba3b0ab.c4554"]]},{"id":"e657a3b3.0e35e","type":"catch","z":"ff55e874.2c48e8","name":"","scope":["40e7a47f.63b11c"],"x":441,"y":1540,"wires":[["568e2d67.9899f4"]]},{"id":"568e2d67.9899f4","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":621,"y":1539,"wires":[["f95118c3.4b2518"]]},{"id":"574bc18a.8d73d","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":662,"y":1055,"wires":[["8f47b3b.aad9d5"]]},{"id":"5ba3b0ab.c4554","type":"function","z":"ff55e874.2c48e8","name":"handle","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":655,"y":538,"wires":[["23667dcd.27f482"]]},{"id":"9a4b8229.58fb","type":"comment","z":"ff55e874.2c48e8","name":"event Type Object with handling the errors","info":"","x":667,"y":140,"wires":[]},{"id":"2c0151dc.b74c8e","type":"switch","z":"ff55e874.2c48e8","name":"check categoryID","property":"payload.categID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":565,"y":621,"wires":[["35e106e2.aac98a"],["12c54218.ab0c0e"]]},{"id":"eed9b526.8c69c8","type":"function","z":"ff55e874.2c48e8","name":"set category ID","func":"//categoryID = 107;\ncategoryID = msg.categoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   categID:categoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":338,"y":622,"wires":[["2c0151dc.b74c8e"]]},{"id":"35e106e2.aac98a","type":"function","z":"ff55e874.2c48e8","name":"category ID is null","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":831,"y":596,"wires":[["23667dcd.27f482"]]},{"id":"e6d18f3b.79032","type":"switch","z":"ff55e874.2c48e8","name":"check subcategoryID","property":"payload.subcategID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":523,"y":1165,"wires":[["ded90b18.93b438"],["ce357ebf.a4c9e"]]},{"id":"30d248ff.c61128","type":"function","z":"ff55e874.2c48e8","name":"set subcategory ID","func":"//subcategoryID = 7003;\nsubcategoryID = msg.subcategoryId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   subcategID:subcategoryID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":296,"y":1166,"wires":[["e6d18f3b.79032"]]},{"id":"ded90b18.93b438","type":"function","z":"ff55e874.2c48e8","name":"subcategory ID is null","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":789,"y":1140,"wires":[["8f47b3b.aad9d5"]]},{"id":"16f0cbb1.424534","type":"switch","z":"ff55e874.2c48e8","name":"check formatID","property":"payload.formatID","propertyType":"msg","rules":[{"t":"null"},{"t":"nnull"}],"checkall":"true","outputs":2,"x":509,"y":1648,"wires":[["a3284a80.a4aad8"],["e8c73870.37c108"]]},{"id":"3a8010.06756ff","type":"function","z":"ff55e874.2c48e8","name":"set format ID","func":"//formatID = 4;\nformatID = msg.formatId;\nmsg = {};\nmsg = {\n   payload:\n   {\n   formatID:formatID\n   }\n};\nreturn msg;","outputs":1,"noerr":0,"x":282,"y":1649,"wires":[["16f0cbb1.424534"]]},{"id":"a3284a80.a4aad8","type":"function","z":"ff55e874.2c48e8","name":"format ID is null","func":"msg   =   {};\nreturn msg;","outputs":1,"noerr":0,"x":775,"y":1623,"wires":[["f95118c3.4b2518"]]},{"id":"50cce838.e77cc8","type":"comment","z":"ff55e874.2c48e8","name":" handle the case of optional ID fields","info":"","x":184,"y":138,"wires":[]},{"id":"79a21397.e36b3c","type":"comment","z":"ff55e874.2c48e8","name":" testing the flow-prepare the

subflow","info":"","x":584,"y":63,"wires":[]},{"id":"f169536f.2afc","type":"subflow","name":"event object subflow without the flow context","info":"the input\n\nan incoming message \nin which the payload will include only\nan object with the properties of only one event\n\n\n\nthe output \n\nan empty message\n \n or\n\na message including the following object in payload \n \n\neventObject :{\n   \n   ID : id \n   start : startDatetime,\n   end : endDatetime,\n   eventType :{\n   \n   category : categoryName,\n   subcategory : subcategoryName,\n   format :   formatName\n   \n   }
\n\n}\n\n\n","in":[{"x":391.99998474121094,"y":149.0000228881836,"wires":[{"id":"3d15c2ae.279fae"}]}],"out":[{"x":1860,"y":584,"wires":[{"id":"fd4f2a48.a9d998","port":0},{"id":"5fe3e63a.4aa2d8","port":0}]}]},{"id":"da7a48cb.4bb2 b8","type":"function","z":"f169536f.2afc","name":"check   status   and   online   state","func":"status = msg.payload.status;\nonline_event = msg.payload.online_event;\nnode.log(\"status = \"+ status +\"online_event = \"+ online_event+\"\n\");\n\nif (status === \"canceled\"|| status === \"cancelled\" || online_event === true) {\n   msg = {};\n}\n\nreturn msg;","outputs":1,"noerr":0,"x":523,"y":306,"wires":[["df9db0af.7647d"]]},{"id":"3d15c2ae.279fae","type":"json","z":"f169536f.2afc","name":"","x":475.99998474121094,"y":229.00000762939453,"wires":[["da7a48cb.4bb2b8"]]},{"id":"77fe6546.6d70ac","type":"function","z":"f169536f.2afc","name":"new   data   processing","func":"/*//flow context object\n\nvar subflowContextData = flow.get('contextData') || {};\n//node.send(subflowContextData);\n\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\nsubflowContextData = {\n   start : startObject,\n   end : endObject\n };\n//node.send(subflowContextData);\nflow.set('contextData',subflowContextData);\n//subtest = flow.get('contextData');\n//node.send(subtest);\nsubflowContextData = {};\n\n*/\niD = msg.payload.id;\nstartObject = msg.payload.start;\nendObject = msg.payload.end;\n//node.send(startObject);\n//node.send(endObject);\ntimemsg = {\n start : startObject,\n   end : endObject\n};\n\n\nif (msg.payload.hasOwnProperty('category_id')) {\n categoryID = msg.payload.category_id;\n} else {\n   categoryID = null;\n}\nif (msg.payload.hasOwnProperty('subcategory_id')) {\n subcategoryID = msg.payload.subcategory_id;\n} else {\n   subcategoryID = null;\n}\nif (msg.payload.hasOwnProperty('format_id')) {\n   formatID = msg.payload.format_id;\n} else {\n   formatID = null;\n}\n\nmsg = {};\nmsg = {\n   categoryId : categoryID,\n   subcategoryId : subcategoryID,\n   formatId : formatID\n   };\n//return msg;//call eventType subflow\n//return [timemsg,msg];\nnewmsg = {\n   payload : {\n Id : iD,\n   timeMessage : timemsg,\n   eventParamMessage : msg\n   }\n \n};\nreturn newmsg;\n\n\n\n","outputs":1,"noerr":0,"x":823,"y":303,"wires":[["b87fe150.8e8e","896af8f7.cb16a8"]]},{"id":"df9d b0af.7647d","type":"switch","z":"f169536f.2afc","name":"","property":"payload","propertyType":"msg","rules":[{"t":"n null"},{"t":"null"}],"checkall":"true","outputs":2,"x":588.0000915527344,"y":387.99999237060547,"wires":[["77fe654 6.6d70ac"],["5fe3e63a.4aa2d8"]]},{"id":"a4930228.0bad8","type":"comment","z":"f169536f.2afc","name":"cancelled or online   event   ","info":"status   ===   \"cancelled\" || online_event   === true","x":562.0000305175781,"y":477.99999237060547,"wires":[]},{"id":"33c84dc9.12f002","type":"comment","z":"f1 69536f.2afc","name":"valid event","info":"keep to this subflow's context data \nthe datetime objects start and end \n\nget the ids from category,subcategory and format\nand set the needed parameters\nto call the eventTypeObject subflow","x":849,"y":363,"wires":[]},{"id":"f78acafd.618198","type":"subflow:ff55e874.2c48e8","z":"f169536f.2afc"," x":1398,"y":229,"wires":[["ffd470f7.7e462"]]},{"id":"fd4f2a48.a9d998","type":"function","z":"f169536f.2afc","name":" new combine and create an event object","func":"//arxikopoieitai mono sthn prwth klhsh,sto deploy kai sto restart\ncontext.data = context.data || { eventObject :{ID : null, start : null, end : null, eventType : null}}; \n\nswitch (msg.topic) {\n case \"time\":\n   iD = msg.id;\n   startDatetime = msg.payload.start;\n   endDatetime = msg.payload.end;\n   context.data.eventObject.start = startDatetime;\n   context.data.eventObject.end = endDatetime;\n   context.data.eventObject.ID = iD;\n   msg = null;\n   break;\n   case \"eventType\":\n eventTypeObject = msg.payload.eventType;\n   context.data.eventObject.eventType = eventTypeObject;\n   msg = null;\n   break;\n \n \n default:\n   msg = null;\n}\n\nif (context.data.eventObject.ID !== null && context.data.eventObject.start !== null && context.data.eventObject.end !== null && context.data.eventObject.eventType !== null) {\n   newmsg = {payload : null};\n   newmsg.payload = context.data;\n context.data = null;\n} else {\n   newmsg = null;\n}\n\nreturn newmsg;\n\n","outputs":1,"noerr":0,"x":1912.9998168945312,"y":338.00000762939453,"wires":[[]]},{"id":"5fe3e63a.4 aa2d8","type":"function","z":"f169536f.2afc","name":"no   event","func":"msg = {};\nreturn msg;","outputs":1,"noerr":0,"x":558.0000305175781,"y":549.0000839233398,"wires":[[]]},{"id":"42418abb.97e524","t ype":"comment","z":"f169536f.2afc","name":"event   object   subflow   without   the   flow context","info":"","x":656,"y":58,"wires":[]},{"id":"b87fe150.8e8e","type":"function","z":"f169536f.2afc","name":"eve ntParamMessage","func":"eventParamMessage = msg.payload.eventParamMessage;\nmsg = {};\nreturn eventParamMessage;\n\n\n\n","outputs":1,"noerr":0,"x":1084,"y":230,"wires":[["f78acafd.618198"]]},{"id":"896af8f7. cb16a8","type":"function","z":"f169536f.2afc","name":"timeParamMessage","func":"timeParamMessage = msg.payload.timeMessage;\niD = msg.payload.Id;\nmsg = {};\nmsg = {\n   id : iD,\n   topic : \"time\",\n payload :   timeParamMessage\n};\nreturn msg;","outputs":1,"noerr":0,"x":1081,"y":383,"wires":[["5f56f87a.d88448"]]},{"id":"23b880a3.f3956","type":"comment ","z":"f169536f.2afc","name":"eventObject","info":"msg = {\n   payload : {\n   eventObject :{\n   ID : id,\n   start : startDatetime,\n   end : endDatetime,\n   eventType : eventTypeObject\n }\n }\n};","x":1990,"y":405,"wires":[]},{"id":"5f56f87a.d88448","type":"delay","z":"f169536f.2afc","name":"","pauseType ":"random","timeout":"5","timeoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5 ","randomUnits":"seconds","drop":false,"x":1759.9999389648438,"y":438.00000762939453,"wires":[["fd4f2a48.a9d99 8"]]},{"id":"ec3a8428.5de6d8","type":"delay","z":"f169536f.2afc","name":"","pauseType":"random","timeout":"5","tim

eoutUnits":"seconds","rate":"1","rateUnits":"second","randomFirst":"1","randomLast":"5","randomUnits":"seconds","dr
op":false,"x":1764.9999389648438,"y":245.00000762939453,"wires":[["fd4f2a48.a9d998"]]},{"id":"ffd470f7.7e462","t
ype":"function","z":"f169536f.2afc","name":"set topic","func":"eventTypeObject = msg.payload;\nmsg = {};\nmsg =
{\n   topic : \"eventType\",\n   payload : eventTypeObject\n};\nreturn
msg;","outputs":1,"noerr":0,"x":1620.9999389648438,"y":161.00000762939453,"wires":[["ec3a8428.5de6d8"]]},{"id":"
b6d3f28a.25ed8","type":"subflow","name":"Event Subflow","info":"Input\n\nan incoming message \n\nmsg = {\n\n
time:{\n   startYear : startYear,\n   startMonth : startMonth,\n   startDay : startDay,\n   startHour :
startHour,\n   endYear : endYear,\n   endMonth : endMonth,\n   endDay : endDay,\n   endHour :
endHour\n   },\n   venue:{\n   direction : direction\n   }\n \n   }\n   \ntime parameters\n\nall strings and
single numbers with zero //\"07\"\n\ndirection parameter\n\nnone of \"N\" or \"C\" or \"S\" string values\n
(North,Center,South)\nto choose venue\none of \n\nMain Olympic Stadium,\nZappeion,\nPeace And Friendship
Stadium\n\n\n\nOutput\n\nan array of the following objects \n\n\n{\n   \n   ID : id \n   start : startDatetime,\n   end :
endDatetime,\n   eventType :{\n   \n   category : categoryName,\n   subcategory : subcategoryName,\n   format
:   formatName\n   \n   }
\n\n}\n\n\n\n\n\n","in":[{"x":25,"y":30,"wires":[{"id":"12b4f133.a43b1f"}]}],"out":[{"x":839,"y":515,"wires":[{"id":"a72
00735.eb2cd8","port":0}]}]}]},{"id":"3c349149.6ccbae","type":"function","z":"b6d3f28a.25ed8","name":"i++","func":"va
r icount;\nicount = flow.get('i');\nnode.log (\"flow i = \"+ icount);\nicount++;\nflow.set('i',icount);\nnode.log (\"new flow
i = \"+ icount);\n\nmsg = {};\nmsg = {\n   topic : \"iterate\",\n   count : icount\n};\nreturn
msg;","outputs":1,"noerr":0,"x":378,"y":476,"wires":[["91fdb688.823fb8"]]},{"id":"91fdb688.823fb8","type":"function"
,"z":"b6d3f28a.25ed8","name":" iterate","func":"\n\n//icontext = context.i || 0;\nicontext = flow.get('i') || 0;//initialize
restart\nnode.log(\"icontext = \" + icontext);\n\nif(icontext === 0){\n\nThings = msg.payload.events;//array of
{}\n\nthingsLength = Things.length;\n //newmsg = {things : Things};\n// node.send(newmsg);\nvar eventArray =
context.get('contextArray')||[];\ncontext.set('contextArray',Things);\nvar   arrayLength   =
context.get('arrayLength')||0;\ncontext.set('arrayLength',thingsLength);\n\n//for   array   node
lengthOfEventArray\nlengthOfEventArray   =   flow.get('lengthOfEventArray') || 0;//initialize
restart\nnode.log(\"lengthOfEventArray1   =   \"+lengthOfEventArray);\nlengthOfEventArray   =
thingsLength;\nnode.log(\"lengthOfEventArray2   =
\"+lengthOfEventArray);\nflow.set('lengthOfEventArray',lengthOfEventArray);\n\n\n}\neventArray   =
context.get('contextArray');\nnode.log(\"eventArray   =   \"   +   eventArray);\narrayLength   =
context.get('arrayLength');\nnode.log(\"arrayLength = \"+arrayLength);\n\n\nif (icontext < arrayLength) {\n   \n
//code\n   \n   //stamp = Things[icontext];\n   stamp = eventArray[icontext];\n   \n   msg = {};\n   msg = {payload :
stamp};\n   \n   stamp = {};\n\n   flow.set('i',icontext);\n   context.set('arrayLength',arrayLength);\n   \n   return
msg;\n   \n} else {\n   \n   node.log(\"\\n\\n   Not any other objects\\n\");\n   Things = [];\n
context.set('contextArray',Things);\n   arrayLength = 0;\n   context.set('arrayLength',arrayLength);\n   icontext = 0;\n
flow.set('i',icontext);\n   return;\n
\n}\n\n\n","outputs":1,"noerr":0,"x":242,"y":314,"wires":[["e9203538.d8ce78"]]},{"id":"5233cf6b.6129","type":"subflo
w:f169536f.2afc","z":"b6d3f28a.25ed8","x":538,"y":314,"wires":[["3c349149.6ccbae","a7200735.eb2cd8"]]},{"id":"e92
03538.d8ce78","type":"json","z":"b6d3f28a.25ed8","name":"","x":336,"y":369,"wires":[["5233cf6b.6129"]]},{"id":"a72
00735.eb2cd8","type":"function","z":"b6d3f28a.25ed8","name":"create   event   objects   array","func":"\n\n//context
value\nlengthCount = context.get('lengthCount') || 0;\nnode.log(\"lengthCount = \" + lengthCount+\"\\n\");\n\n//flow
context   array\ntheEventObjectArray   =   context.get('contextDataArray') || [];\n//theEventObjectArray   =
[];\nnode.log(\"theEventObjectArray   =   \"+theEventObjectArray+\"   length   =
\"+theEventObjectArray.length+\"\\n\");\ntheEventObject = msg.payload.eventObject;\n\n//theEventObjectArray =
flow.get('contextDataArray');\ntheEventObjectArray.push(theEventObject);\ncontext.set('contextDataArray',theEventOb
jectArray);\n\n\nnode.log(\"lengthCount   =   \"   +   lengthCount+\"\\n\");\nlengthEventArray   =
flow.get('lengthOfEventArray');\nnode.log(\"lengthEventArray3 = \" + lengthEventArray+\"\\n\");\n\nif (lengthCount +
1 == lengthEventArray) {\n   \n   msg = {};\n   msg = {payload : theEventObjectArray};\n   \n   lengthCount = 0;\n
theEventObjectArray   =   [];\n   context.set('lengthCount',lengthCount);\n
context.set('contextDataArray',theEventObjectArray);\n   lengthEventArray   =   0;\n
flow.set('lengthOfEventArray',lengthEventArray);\n   \n   return msg;\n} else {\n   lengthCount++;\n
context.set('lengthCount',lengthCount);\n   flow.set('lengthOfEventArray',lengthEventArray);\n
return;\n}\n\n\n\n\n\n\n\n\n\n\n","outputs":1,"noerr":0,"x":861,"y":417,"wires":[[]]},{"id":"677568cd.cf83d8","type"
:"http   request","z":"b6d3f28a.25ed8","name":"get
events","method":"use","ret":"txt","url":"","tls":"","x":187,"y":184,"wires":[["8887bd9a.6245f"]]},{"id":"12b4f133.a43b
1f","type":"function","z":"b6d3f28a.25ed8","name":"event   search","func":"var   latPeaceAndFriendshipStadium   =
37.942391; \nvar lonPeaceAndFriendshipStadium = 23.667726;\nvar latZappeion = 37.971341;\nvar lonZappeion =
23.736554;\nvar   latMainOlympicStadium   =   38.036129;\nvar   lonMainOlympicStadium   =   23.787591;\n\n//var
startDateLocal   =   \"2016-01-01T00:00:00\";\n//var   endDateLocal   =   \"2018-07-01T23:00:00\";\n/*startYear   =
2016;\nstartMonth = \"01\";\nstartDay = \"01\";\nstartHour = \"00\";\nendYear = 2019;\nendMonth = \"07\";\nendDay =
\"01\";\nendHour   =   \"23\";*/\nstartYear   =   msg.time.startYear;\nstartMonth   =   msg.time.startMonth;\nstartDay   =
msg.time.startDay;\nstartHour   =   msg.time.startHour;\nendYear   =   msg.time.endYear;\nendMonth   =
msg.time.endMonth;\nendDay = msg.time.endDay;\nendHour = msg.time.endHour;\nif((typeof startYear ===
'undefined') ||(typeof startMonth === 'undefined') || (typeof startDay === 'undefined') || (typeof startHour ===
'undefined') || (typeof endYear === 'undefined') || (typeof endMonth === 'undefined') || (typeof endDay === 'undefined')
|| (typeof endHour === 'undefined'))\n{\n   node.log(\"undefined parameter\\n\");\n   return;\n}\nvar startDateLocal =
\"\" + startYear + \"-\" + startMonth + \"-\" + startDay + \"T\" + startHour + \":00:00\";\nvar endDateLocal = \"\" +
endYear + \"-\" + endMonth + \"-\" + endDay + \"T\" + endHour + \":00:00\";\n\n\nvar latNEpeaceAndFrienshipStadium

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= 37.94308912;\nvar lonNEpeaceAndFrienshipStadium = 23.66852582;\nvar latSWpeaceAndFrienshipStadium = 37.94169304;\nvar lonSWpeaceAndFrienshipStadium = 23.66582215;\n\nvar latNEzappeion = 37.97193545;\nvar lonNEzappeion = 23.73745859;\nvar latSWzappeion = 37.97117425;\nvar lonSWzappeion = 23.73568833;\n\nvar latNEmainOlympicStadium = 38.03741089;\nvar lonNEmainOlympicStadium = 23.78917158;\nvar latSWmainOlympicStadium = 38.03469835;\nvar lonSWmainOlympicStadium = 23.78643572;\n\nnameOfPeaceAndFriendshipStadium = \"Peace And Friendship Stadium\";\nnameOfZappeion = \"Zappeion\";\nnameOfMainOlympicStadium = \"Main Olympic Stadium\";\n\n//direction = \"N\";\ndirection = msg.venue.direction;\n\nif(typeof direction === 'undefined'){\n  node.log(\"undefined parameter\");\n  return;\n}\n\nif (direction == \"S\") {\n  //South\n  name = nameOfPeaceAndFriendshipStadium;\n}else{\n    if (direction == \"C\") {\n    //Center\n    name = nameOfZappeion;\n    }else{\n      if (direction == \"N\") {\n      //North\n      name = nameOfMainOlympicStadium;\n      }else{\n        node.log(\"no valid venue direction\");\n        return;\n      }\n  }\n}\n//maybe direction switch statement\n\n\nswitch (name) {\n  case \"Peace And Friendship Stadium\":\n    //viewport\n    latNE = latNEpeaceAndFrienshipStadium;\n    lonNE = lonNEpeaceAndFrienshipStadium;\n    latSW = latSWpeaceAndFrienshipStadium;\n    lonSW = lonSWpeaceAndFrienshipStadium;\n    break;\n  case \"Zappeion\":\n    // viewport\n    latNE = latNEzappeion;\n    lonNE = lonNEzappeion;\n    latSW = latSWzappeion;\n    lonSW = lonSWzappeion;\n    break;\n  case \"Main Olympic Stadium\":\n    // viewport\n    latNE = latNEmainOlympicStadium;\n    lonNE = lonNEmainOlympicStadium;\n    latSW = latSWmainOlympicStadium;\n    lonSW = lonSWmainOlympicStadium;\n    break;\n  default:\n    // code\n    node.log(\"no valid venue\");\n    return;\n}\n\n\n\n\n\n\n\n\n\n\n//viewport\n//latNE = latNEpeaceAndFrienshipStadium;//zappeion;\n//lonNE = lonNEpeaceAndFrienshipStadium;//zappeion;\n//latSW = latSWpeaceAndFrienshipStadium;//zappeion;\n//lonSW = lonSWpeaceAndFrienshipStadium;//zappeion;\n//distance = 1; //integer\n//lat = latZappeion;\n//lon = lonZappeion;\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?token=MY_TOKEN&location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location.within=0km\"+\"&start_date.range_start=\"+startDateLocal+\"&start_date.range_end=\"+endDateLocal+\"\";\n\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location.within=\"+distance+\"km\"+\"&include_unavailable_events=true\"+\"&start_date.range_start=\"+startDateLocal+\"&token=MY_TOKEN\";\n\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.latitude=\"+lat+\"&location.longitude=\"+lon+\"&location.viewport.northeast.latitude=\"+latNE+\"&location.viewport.northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.longitude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&token=MY_TOKEN\";\n\n//works\n//msg.url = \"https://www.eventbriteapi.com/v3/events/search/?location.viewport.northeast.latitude=\"+latNE+\"&location.viewport.northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.longitude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&include_unavailable_events=true\"+\"&token=MY_TOKEN\";\n\nmsgUrl = \"https://www.eventbriteapi.com/v3/events/search/?location.viewport.northeast.latitude=\"+latNE+\"&location.viewport.northeast.longitude=\"+lonNE+\"&location.viewport.southwest.latitude=\"+latSW+\"&location.viewport.southwest.longitude=\"+lonSW+\"&start_date.range_start=\"+startDateLocal+\"&start_date.range_end=\"+endDateLocal+\"&include_unavailable_events=true\"+\"&token=MY_TOKEN\";\n\n\nmsgMethod = \"GET\";\n\n\nmsg ={};\nmsg = {\n  url : msgUrl,\n  method : msgMethod\n};\n\nreturn msg;\n\n\n\n","outputs":1,"noerr":0,"x":126,"y":125,"wires":[["677568cd.cf83d8"]]},{"id":"64e7a343.c8850c","type":"json","z":"b6d3f28a.25ed8","name":"","x":565,"y":177,"wires":[["91fdb688.823fb8"]]},{"id":"8887bd9a.6245f","type":"function","z":"b6d3f28a.25ed8","name":"handle connection error","func":"if (msg.hasOwnProperty(\"statusCode\")) {\n    statusCodeproperty = msg.statusCode;\n    node.log(statusCodeproperty);\n    if (statusCodeproperty == \"ETIMEDOUT\") {\n      node.log(\"Error: connect ETIMEDOUT \");\n      //msg = {};\n      return;\n    }\n    if (statusCodeproperty == \"EAI_AGAIN\") {\n      node.log(\"Error: getaddrinfo EAI_AGAIN\");\n      //msg = {};\n      return;\n    }\n}\n\nreturn msg;\n\n\n\n","outputs":1,"noerr":0,"x":574,"y":85,"wires":[["64e7a343.c8850c"]]},{"id":"d132cb5b.ccc3e8","type":"catch","z":"b6d3f28a.25ed8","name":"","scope":["677568cd.cf83d8"],"x":488,"y":20,"wires":[["989484ad.52deb8"]]},{"id":"989484ad.52deb8","type":"function","z":"b6d3f28a.25ed8","name":"handle","func":"msg = {};\n\nnode.log(\"error occured - halt the flow - try again\");\nreturn;","outputs":1,"noerr":0,"x":653,"y":21,"wires":[["64e7a343.c8850c"]]},{"id":"65da1097.ea387","type":"inject","z":"ebc20289.74ed4","name":"","topic":"","payload":"","payloadType":"date","repeat":"","crontab":"","once":false,"x":104,"y":147,"wires":[["4137279b.c47858"]]},{"id":"4137279b.c47858","type":"function","z":"ebc20289.74ed4","name":"setting the time","func":"msg = {};\n\nvar startYear = 2016;\nvar startMonth = \"01\";\nvar startDay = \"01\";\nvar startHour = \"00\";\nvar endYear = 2019;\nvar endMonth = \"07\";\nvar endDay = \"01\";\nvar endHour = \"23\";\n\nvar direction = \"S\";//\"S\", C\",\"N\"\n\nmsg = {\n    time:{\n      startYear : startYear,\n      startMonth : startMonth,\n      startDay : startDay,\n      startHour : startHour,\n      endYear : endYear,\n      endMonth : endMonth,\n      endDay : endDay,\n      endHour : endHour\n    },\n    venue:{\n      direction : direction\n    }\n    \n};\n\nreturn msg;","outputs":1,"noerr":0,"x":275,"y":55,"wires":[["1617708e.600e4f"]]},{"id":"1617708e.600e4f","type":"subflow:b6d3f28a.25ed8","z":"ebc20289.74ed4","x":426,"y":147,"wires":[["c917440f.08ff88"]]},{"id":"c917440f.08ff88","type":"debug","z":"ebc20289.74ed4","name":"","active":true,"console":"false","complete":"true","x":594,"y":63,"wires":[]}]
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Κώδικας 21 : Σχεδίαση υλοποίησης στο θέμα των γεγονότων-εκδηλώσεων

[{"id":"cecfd841.b6cae8","type":"comment","z":"33bc0e7.6857cf2","name":"1 call api","info":"","x":84,"y":137,"wires":[]},{"id":"36a81cf1.4a6474","type":"comment","z":"33bc0e7.6857cf2","name":"2 for each event -> node send msg","info":"","x":291,"y":135,"wires":[]},{"id":"b66a7666.55d598","type":"comment","z":"33bc0e7.6857cf2","name":"3 call event object subflow","info":"","x":565,"y":136,"wires":[]},{"id":"4e7ad359.92e15c","type":"comment","z":"33bc0e7.6857cf2","name":"4 push event objects to array-the output","info":"","x":858,"y":132,"wires":[]},{"id":"a561fc94.e516f","type":"comment","z":"33bc0e7.6857cf2","name":"event subflow","info":"","x":488,"y":61,"wires":[]},{"id":"90cb1667.48dbc8","type":"comment","z":"33bc0e7.6857cf2","name":"3 event object subflow","info":"","x":500,"y":251,"wires":[]},{"id":"8b498b3b.ea1de8","type":"comment","z":"33bc0e7.6857cf2","name":"3a1 check status","info":"not cancelled","x":110,"y":333.99999237060547,"wires":[]},{"id":"a5fd0d4c.fd645","type":"comment","z":"33bc0e7.6857cf2","name":"3a2 check online_event","info":"false","x":117,"y":375.99999237060547,"wires":[]},{"id":"d6bab590.d426c8","type":"comment","z":"33bc0e7.6857cf2","name":"3b keep datetime objects","info":"start object \nand\nend object \nto subflow's context data","x":339,"y":347,"wires":[]},{"id":"b6309100.a5f92","type":"comment","z":"33bc0e7.6857cf2","name":"3c call event Type Object subflow","info":"create an event Type Object\n\n15 steps","x":597,"y":348,"wires":[]},{"id":"8a30e632.7bcb28","type":"comment","z":"33bc0e7.6857cf2","name":"3d combine the eventTypeObject with the datetime objects --> create an event object - the output","info":"eventObject : {\n \n start : datetime,\n end : datetime\n eventType : {\n category: string\n subcategory: string\n format : string\n }\n \n}","x":1080,"y":349,"wires":[]},{"id":"f1f93dbb.248a4","type":"comment","z":"33bc0e7.6857cf2","name":"3c event Type Object subflow","info":"create an event Type Object\n\n15 steps","x":617,"y":478,"wires":[]},{"id":"382cf6a6.a2f9fa","type":"comment","z":"33bc0e7.6857cf2","name":"3c1 call API to get the event response","info":"define the correct url\n\nuse viewport","x":156,"y":617.0000228881836,"wires":[]},{"id":"4f0ffe07.d7784","type":"comment","z":"33bc0e7.6857cf2","name":"3c2 check venue","info":"call API check the venue with venue id","x":126,"y":660.0000228881836,"wires":[]},{"id":"75082a49.f9d534","type":"comment","z":"33bc0e7.6857cf2","name":"3c3 call API to get the event category","info":"","x":454,"y":583.0000228881836,"wires":[]},{"id":"7391bed.dfb464","type":"comment","z":"33bc0e7.6857cf2","name":"3c4 call API to get the event subcategory","info":"","x":473,"y":621.0000228881836,"wires":[]},{"id":"fdb92750.3b9d68","type":"comment","z":"33bc0e7.6857cf2","name":"3c5 call API to get the event format","info":"","x":436.9999694824219,"y":663.0000228881836,"wires":[]},{"id":"f89dc002.2021b","type":"comment","z":"33bc0e7.6857cf2","name":"3c6 take the category","info":"","x":727.9999694824219,"y":584.0000228881836,"wires":[]},{"id":"df52864d.d458b8","type":"comment","z":"33bc0e7.6857cf2","name":"3c7 take the subcategory","info":"","x":753.9999694824219,"y":624.0000228881836,"wires":[]},{"id":"fd10804b.04eda","type":"comment","z":"33bc0e7.6857cf2","name":" 3c8 take the format","info":"","x":709.9999694824219,"y":663.0000228881836,"wires":[]},{"id":"10f70a13.772626","type":"comment","z":"33bc0e7.6857cf2","name":"3c9 create the eventType Object","info":"","x":989.9999694824219,"y":585.0000228881836,"wires":[]},{"id":"e5c0b2a5.c56cd","type":"comment","z":"33bc0e7.6857cf2","name":"3c10 error check response","info":"","x":999.9999694824219,"y":625.0000228881836,"wires":[]},{"id":"e2b8785a.8f4cc8","type":"comment","z":"33bc0e7.6857cf2","name":"3c11 event Type Object with handling the errors","info":"","x":993.9999694824219,"y":670.0000228881836,"wires":[]},{"id":"a2409927.622fb8","type":"comment","z":"33bc0e7.6857cf2","name":"3c12 checking the category ID ","info":"the switch node\npasses the msg to the prefered output flow","x":1313.9999694824219,"y":561.0000839233398,"wires":[]},{"id":"30391199.1946ee","type":"comment","z":"33bc0e7.6857cf2","name":"3c13 handle the case of optional category ID field ","info":"","x":1322.9999694824219,"y":601.0000839233398,"wires":[]},{"id":"64ec56d5.57c078","type":"comment","z":"33bc0e7.6857cf2","name":"3c14 handle the case of optional ID fields","info":"","x":1345.9999694824219,"y":639.0000839233398,"wires":[]},{"id":"5968b647.f8b328","type":"comment","z":"33bc0e7.6857cf2","name":"3c15 testing the flow-prepare the subflow","info":"","x":1345.9999694824219,"y":679.0000839233398,"wires":[]}]

Τέλος Εργασίας