**GA Project   
Demo App Prototyping Plan**

2018.11.07   
based on ver. of 2018.10.19

**Introduction**

* Abstract
  + TBD
  + iOS App
* Demo App’s Usecase
  + Note: Write down some user scenarios want to test in UK
    - e.g. When a user arrives at the station, the information about train service will be pushed to the user.
      * Information want to push: focused on the train service information related to the station
    - When some kinds of disruption occurs, the disruption information will be pushed to the user
      * Information want to push: focused on train service disruption where you usually use
* Schedule
  + TBD

**Request**

1. **Web API Research**
   1. Research APIs which could retrieve UK’s train service information. Paid methods are also in the scope.
   2. Deep dive and compare each Web APIs in the point of provided data
      * train operation
        1. what platform number the train will stop at certain station
        2. time table
        3. which station to stop
        4. number of carriages
      * train distruption
        1. delay
           1. how much delay
           2. why it delays
           3. new time table
           4. new “which station to stop”
           5. estimaiton of when it will back to the normal operation
        2. short carriage
           1. number of carriages
   3. Deep dive and compare each web APIs in the point of how to aquire the new information when the train distruptions happen
   4. Make comparison chart of each Web APIs. Even same data, there might be difference in how: e.g. timing of refreshing data or method of getting data.

dead line: Nov.6th

1. **demo app design**
   1. **locations:**
      * **home - Colchester**
      * **workplace – london liverpool street**
      * **extra station - Stratford**
   2. **Given Condition**
      * Demo app is consisting of three screens: Home, List View, Detail View
      * Demo app has five local parameters as follows

|  |  |
| --- | --- |
| parameter name | value |
| Direction | 2 types: **to workplace**, or to home |
| Present location | 3 types: **Colchester**, London Liverpool Street, Stratford |
| Station near home | 1 type: **Colchester** |
| Station near office | 1 type: **London Liverpool Street** |
| departure station | 3 types: **Colchester**, London Liverpool Street, Stratford |
| arrival station | 3 types: Colchester, **London Liverpool Street**, Stratford |

Note: Default value for each parameter is **bold.**

* 1. **App View and Transition**
     + Home
       1. There are 4 buttons
          1. to: workplace  
             present location: Colchester

When tap this button, the view will transit to List View within parameter of Direction: “to: workplace” and present location: “Colchester”

* + - * 1. to: home  
           present location: London Liverpool Street

When tap this button, the view will transit to List View within parameter of Direction: “to: home” and present location: “London Liverpool Street”

* + - * 1. to: home  
           present location: Stratford

When tap this button, the view will transit to List View within parameter of Direction: “to: home” and present location: “Stratford”

* + - * 1. send local notification

send local notifications

* + - List View
      1. consist of following four areas
         1. Title

Display app name: Commute

* + - * 1. Control Panel

Display the valuable of the parameter: Direction

up and down arrows beside the Direction will toggle the valuable of the parameter: Direction (“to: home” and “to: workplace”)

the selective tab of “usual route” and “from here”

the tab will change valuable of the parameter of departure station as follows

The default focused tab which is transit from Home is “from here”

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameters’Conditions | | |  |  |
| Direction | Present location | focused tabs | depature station | arrival station |
| to: workplace | Colchester | from here | Colchester | London Liverpool Street |
| usual route | Colchester | London Liverpool Street |
| Stratford | from here | Stratford | London Liverpool Street |
| **usual route** | **Colchester** | **London Liverpool Street** |
| London Liverpool Street | from here | London Liverpool Street | London Liverpool Street |
| usual route | Colchster | Colchester |
| to: home | Colchester | from here | Colchester | Colchester |
| usual route | Colchester | Colchester |
| Stratford | from here | Stratford | Colchester |
| **usual route** | **London Liverpool Street** | **Colchester** |
| London Liverpool Street | from here | London Liverpool Street | Colchester |
| usual route | London Liverpool Street | Colchester |

Train information list (max 5 records). Each record consist of following information

Train operation company name: Greater Anglia

Train destination

Departure time at departure station

when the train is delayed, the time will be strikethrough and estimated departure time is displayed underneath.

Arrival time at arrival station

when the train is delayed, the time will be strikethrough and estimated arrival time is displayed underneath.

train operation status(on time or delayed?)

Platform number at the departure station.

* + - Detail View
      1. consist of following three areas. The information will be displayed based on a specific train which the user selected at List View.
         1. title

Title will have return button to List View.

Train operation company name: Greater Anglia

The train destination **(train’s target destination in general, not the user’s destination)**

* + - * 1. status

Displays a sentence“operaition status”

train operation status(on time or delayed?)

If the train operation status is “delayed”, the reason why it delay is displayed.

* + - * 1. time estimation

Will display maximum of three stations information as follows

departure station’s departure time and platform number (when the train is delayed, the scheduled departure time is strikethrough and estimated departure time will be displayed beside it.

(Optional) Stratford’s arrival time and platform number (when the train is delayed, the scheduled arraival time is strikethrough and estimated arraival time will be displayed beside it.

arrival station’s arrival time and platform number (when the train is delayed, the scheduled arrival time is strikethrough and estimated arrival time will be displayed beside it.

* 1. Local Notifications
     + Local notification will make a notification to
     + notify the train which delayed.
     + When the user press button at Home view, it will seek the train which the following condition is true.
       1. The train bound for London Liverpool Station when the parameter Direction is “to: workplace”. The train bound for Colchester Station when the parameter Direction is “to: home”.
       2. The train stops at “present location” and “arrival station”
       3. The train delayed in last two days
     + Will display local notification as same number of the train it meets the above condition
     + The notification message will be as follows
       1. “DD/MM hh:mm STATIONNAME1 to STATIONNAME2 has been delayed.”

“DD/MM hh:mm” will be hour and minute when the delayed report is made

“STATIONNAME1”: the name of the station where the delay starts.

“STATIONNAME2”: the name of the station where the delay ends

* + - When the user tap the notification, the list view will be opened.
    - **NOTIFICATION TEXT**
      1. **“DD:MM trains between STATIONNAMEDELAY1 and STATIONNAMEDELAY2 has been delayed. Your Station STATIONNAME1 to STATIONNAME2 might be affected.**
         1. **if the delayed routes are not within the STATIONNAME1 and STATIONNAME2 route, there will be no notifications**

1. **Implementation/Test**
   1. Implementation of demo app
   2. Make test case for the demo app’s functional check.
   3. Pass the test case above.
2. **Preparation for demo**
   1. Install the app on Smartphone.

**1. API Research**

At the moment, we found out APIs as follows. (not checked yet)

* National Rail Enquiries - <http://www.nationalrail.co.uk/46391.aspx> <- Darwin: Maybe this is primary option
* transportapi - <https://www.transportapi.com/plans/>
* travelfusion - <https://www.travelfusion.com/corporate/page/tf-rail-api>
* citimapper - <https://citymapper.com/api>
* Realtime Trains - <http://www.realtimetrains.co.uk/api/pull>

**2. Design**

Please refer pdf

**3. Implementation/Test**TBD

**4. Preparation for demo**

TBD