BOILER LABS

Sprint Retrospective

Team 5

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1. Tasks Implemented and Working:

A. TASK: Develop the front end menu screen using Android XML. This screen will be made to look very aesthetically pleasing but at the same time it will be minimalistic. The screen will be optimized for ease-of-access. The buttons on the screen will redirect the user to the appropriate screen when clicked. These buttons include ‘Nearest Lab’, ‘Lab List’, ‘Favorites’ and ‘Map’. (**Akshit Gupta**)

Why and How: The XML file was correctly implemented with each Button placed at the center of the screen and equidistant from each other. The Java activity file for the home screen was also implemented, with the OnClickListener method for each Button implemented so that it starts the correct Activity is launched for the right Button

B. TASK: Create the data structures to implement the basic functionality of the application that will include classes and different helper functions. The included classes will be Lab, Buildings, Coordinates, LabHelper, MapView and User. The classes will represent the tables and databases. (**Akshit Gupta**)

Why and How: The skeleton classes were created with methods created for other developers to implement so that the overall structure was in place. The data structures for the database were also created so that the Android application can access the data correctly. All the classes run as expected.

C. TASK: Develop a client side database that stores the list of all the ITaP computer labs and their specifications such as the number of computers, location of the lab, type of lab and timings. This database must be accessible to the client side user interface. (**Ayan Singh**)

Why and How: A database was created using SQLite. The primary key for all tables was named as _id as per the Android specifications for it to work. Data for all the labs was manually entered from the ITaP directory website and this database file was added to the assets folder of our Application structure so that the database is accessible without a data connection.

D. TASK: Develop the front end user interface for the offline mode. This interface will pass information back and forth between the client side and the database to obtain the relevant data. (**Chen Gong**)

Why and How: An Android XML layout file was created with a ListView for all the labs to be displayed in a List on the interface. A Connection was also established to the SQLite database to access all the Data through the DatabaseHelper class. The List also uses a StableArrayAdapter class to display the right information in the interface. The DatabaseHelper class also uses the Helper classes created such

LabDetails, Labs, Buildings etc. An OnClickListener was also created on each List item so that a New Activity is launched which shows details about that Lab.

E. TASK: Using Java to establish a connection between the client and the ITaP server to access the ITaP Labs directory website. Then develop methods to send and receive data from the client to the ITaP server. (**Shalin Shah**)
Why and How: Using the JSoup library a connection was established with the ITaP lab directory website. Using the library methods only information that is needed is extracted. All of this information is then stored in an ArrayList and sent to the parser. A method is also implemented which takes the buillding name and number and returns an ArrayList of the information about that Lab.

F. TASK: Once the connection is established, using a JSON parser to query the information needed from the server and store the relevant information in the online database. (**Rishabh Singh Ahluwalia**)
Why and How: Using regular expression and various other methods the information was extracted from an ArrayList that contains the required information and was then sent to add to the Online Database.

G. TASK: Develop a client side database that stores the list of all the ITaP computer labs and their specifications such as name of the ITaP computer lab, the total number of computers, number of computers available, the building it is located in, location of the lab, type of lab, status of the lab and timings. This database must be accessible to the client side user interface. (**Ayan Singh**)
Why and How: A database using SQLite was created in a similar method to the offline database but instead of data being added manually, methods were created to take the information from the parser and use “INSERT” statements to add the online data to the database.

H. TASK: Obtain the user location using Google Maps. Implement this on the client using the Google Maps API. The API will be used to display the map of campus as well the MapView class. (**Abhinav Kumar**)
Why and How: The Google Play services library was installed to be able to use the Google Maps API. A key was created using the Play services for the Android application to be able to access the API. A GoogleMap object was created to display the map of the campus and the current location of the user.

I. TASK: Obtain the location of each lab from the database and then display it as markers on the MapView class using the Google Maps API. The API will also be used to display the location of the user and all the labs on campus. (**Abhinav Kumar**)

Why and How: Using the methods created earlier the location of all the ITaP buildings with labs was extracted from the offline database. Using methods of the Google Maps API markers were created with the latitude and logitude of each lab and displayed on the lab.

2. How to improve:

a) We could branch more often in Git as sometimes we had to force reset our repository to merge changes that we created

b) We could meet more often instead of working at individual places to be more collaborative and discuss problems.

c) We could perform individual presentations to inform other group members of their individual parts that they implemented and how it works.

3. The tasks that were not implemented or did not work well

All the tasks for sprint 1 were implemented on time and work well.