ASSIGNMENT-3 REPORT

This assignment is based on recording location coordinates for every 10 seconds as a background service.

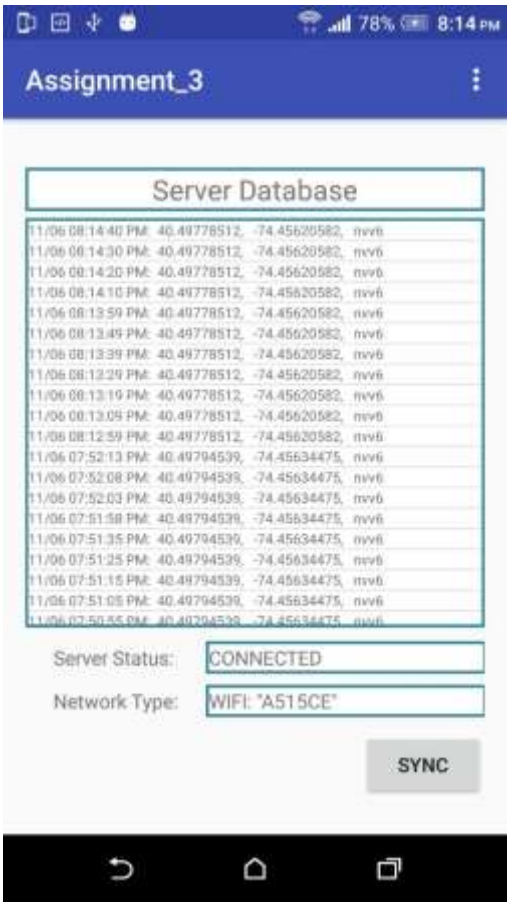
Online:

The landing page is a local database page which shows the location coordinates recorded for every 10 seconds. The locations are saved in an ArrayList of string array. As soon as the activity is created, the GPS-coordinates_service is called to start a service as a background process that records the location coordinates for every 10 seconds. The service class uploads the location data to the firebase database prescribed in the class when it is connected to Wi-Fi or else it saves the information in a local database. This updating of coordinates is done using a class known as SQLiteHelper using update and insertentry functions. The local database would look like this:

Offline:

The server database page communicates with the online database and displays the recorded information in a listadapter. It also has two text boxes. One is to show whether the app is connected to online database and other is to show if the device is connected to Wi-Fi or mobile data. If the app is connected to Wi-Fi, it also displays the wifi name.

It has a sync button so that if the device is connected to mobile network and has local database, it uploads the local database online. The server database looks like:



Query:

The query page helps us to retrieve the location data for a particular netid in either ascending or descending order. If the netid textbox is left blank, it gives an alert to the user to enter a value.

The option of selecting Ascending or Descending is done using a spinner.

The query page would look like the following:

The Landscape view is implemented using two different fragments and looks like the following: