

# Smart Parking System

**GROUP NUMBER: 14**

## **GROUP MEMBERS:**

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## **Motivation:**

With the increase in the population of vehicles in metropolitan cities, road congestion is the major problem that is being faced. The user usually wastes his time and effort in search of availability of free space in a specified parking area. So, with the help of this project we can minimise the waiting time for the user in search of parking space.

## **Project Idea:**

In this project, we are designing a app which consists of

### **user model:**

user can login to the app and book the slots which are available based on the area they live to a certain period of time

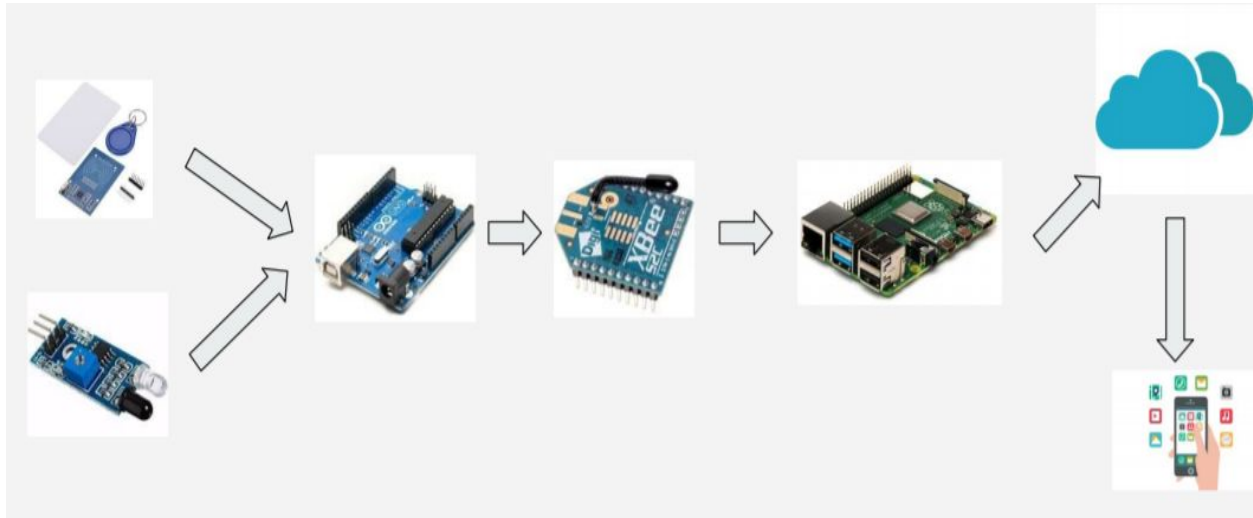
### **Owner model:**

Owner can login to the app and enter the details of their apartments which they want to use it for the parking and can also cost them if they are willing

### **Notifications:**

users are notified after the slot is booked and also to vacate the booked slot if the duration of that slot is completed.

## System Architecture:



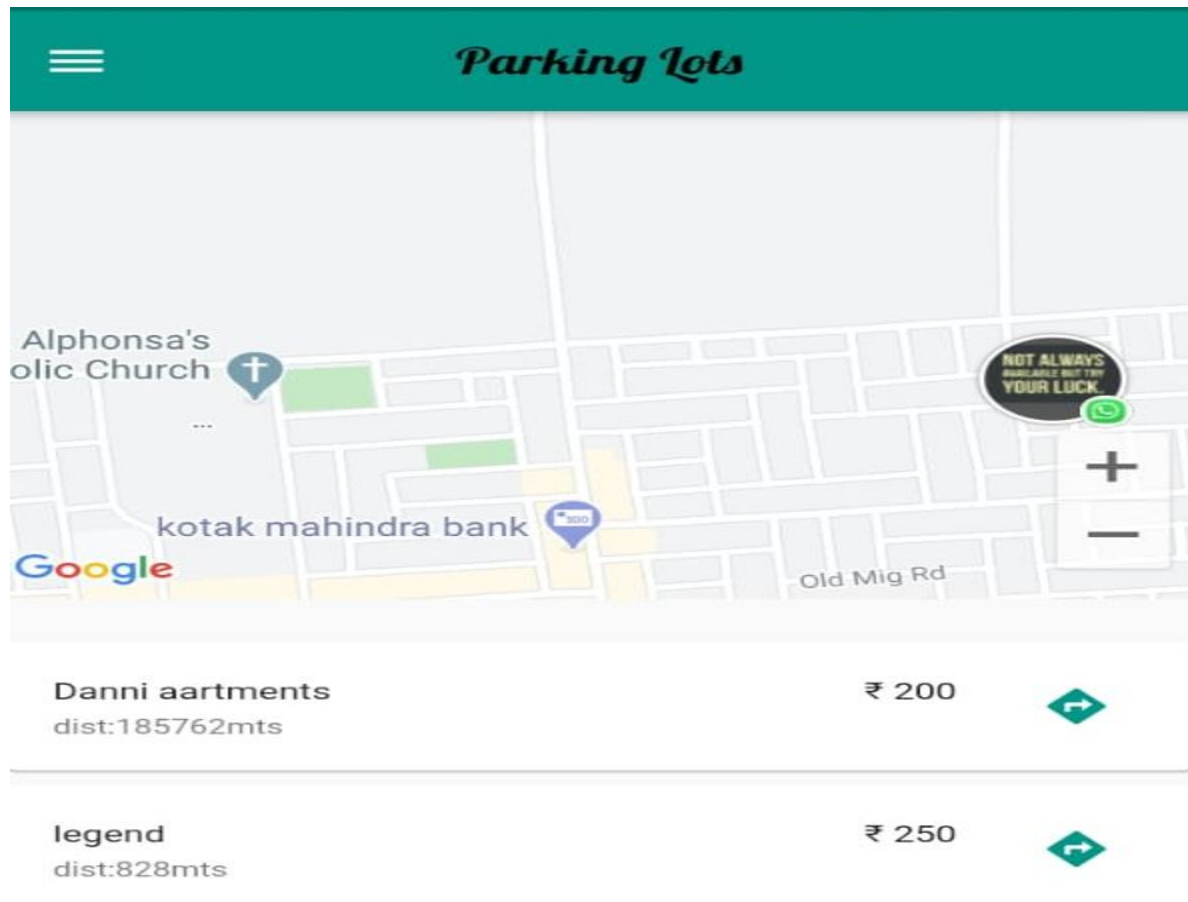
## Results:

The mobile App displays the slots which are booked with the information including username, book date, start time and also duration.

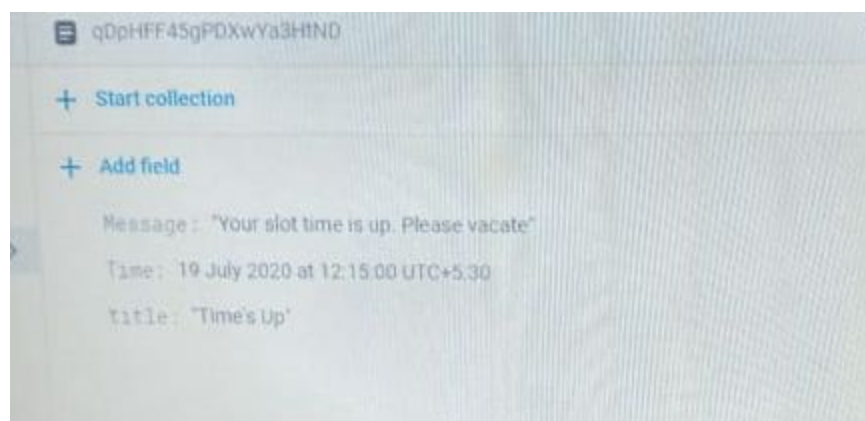
The screenshot shows a mobile application interface. At the top, a status bar displays the time 12:06, signal strength, 4G LTE1, and 47% battery. Below the status bar is a green header with a back arrow and the text "Slot 1". The main content area displays a table with booked slots.

User	Book Date	Start time	Duration
veman	18/7/2020	11 am	1 hours
Priyanka	18/7/2020	1 am	6 hours

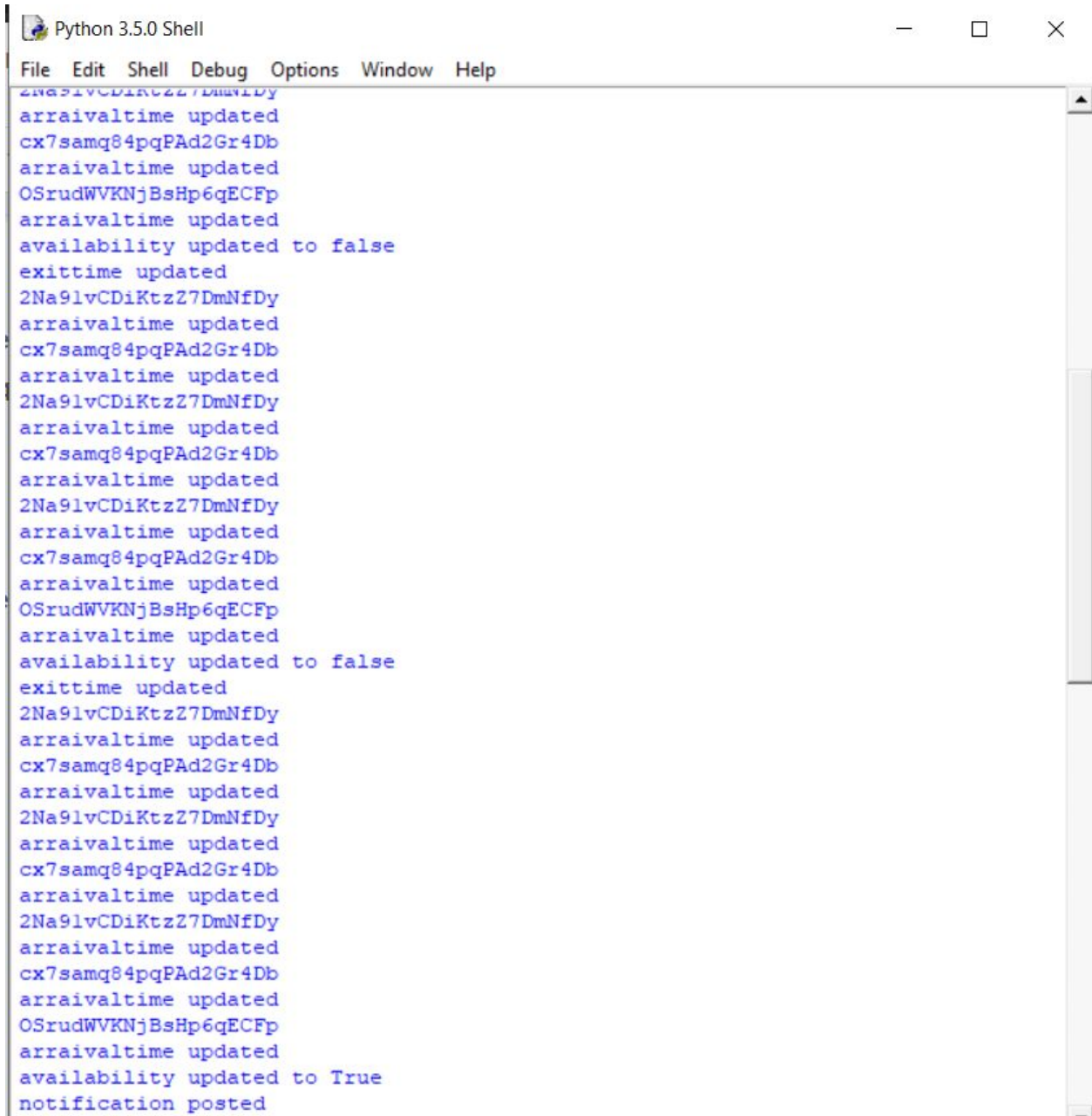
The owner can enter the details of the apartments which can be used for parking along with the distance and cost



Users are notified to vacate the booked slot if the duration of the that slot is completed.



Python code results to notify the user after the completion of the duration of that booked slot.

A screenshot of a Python 3.5.0 Shell window. The window has a title bar with the text 'Python 3.5.0 Shell' and standard window controls (minimize, maximize, close). Below the title bar is a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The main area of the window displays a series of log messages in a monospaced font. The messages are: '2Na9lvCDiKtZ7DmNfDy', 'arraivaltime updated', 'cx7samq84pqPAd2Gr4Db', 'arraivaltime updated', 'OSrudWVKNjBsHp6qECFp', 'arraivaltime updated', 'availability updated to false', 'exittime updated', '2Na9lvCDiKtZ7DmNfDy', 'arraivaltime updated', 'cx7samq84pqPAd2Gr4Db', 'arraivaltime updated', '2Na9lvCDiKtZ7DmNfDy', 'arraivaltime updated', 'cx7samq84pqPAd2Gr4Db', 'arraivaltime updated', '2Na9lvCDiKtZ7DmNfDy', 'arraivaltime updated', 'cx7samq84pqPAd2Gr4Db', 'arraivaltime updated', 'OSrudWVKNjBsHp6qECFp', 'arraivaltime updated', 'availability updated to false', 'exittime updated', '2Na9lvCDiKtZ7DmNfDy', 'arraivaltime updated', 'cx7samq84pqPAd2Gr4Db', 'arraivaltime updated', '2Na9lvCDiKtZ7DmNfDy', 'arraivaltime updated', 'cx7samq84pqPAd2Gr4Db', 'arraivaltime updated', '2Na9lvCDiKtZ7DmNfDy', 'arraivaltime updated', 'cx7samq84pqPAd2Gr4Db', 'arraivaltime updated', 'OSrudWVKNjBsHp6qECFp', 'arraivaltime updated', 'availability updated to True', and 'notification posted'.

```
Python 3.5.0 Shell
File Edit Shell Debug Options Window Help
2Na9lvCDiKtZ7DmNfDy
arraivaltime updated
cx7samq84pqPAd2Gr4Db
arraivaltime updated
OSrudWVKNjBsHp6qECFp
arraivaltime updated
availability updated to false
exittime updated
2Na9lvCDiKtZ7DmNfDy
arraivaltime updated
cx7samq84pqPAd2Gr4Db
arraivaltime updated
2Na9lvCDiKtZ7DmNfDy
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2Na9lvCDiKtZ7DmNfDy
arraivaltime updated
cx7samq84pqPAd2Gr4Db
arraivaltime updated
OSrudWVKNjBsHp6qECFp
arraivaltime updated
availability updated to True
notification posted
```

## Challenges faced:

- Accessing firebase from python is difficult
- Struggled a lot to add a map to the mobile app.

