

ParkinGo: Parking Management System

InfiniteLoop

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1 Introduction

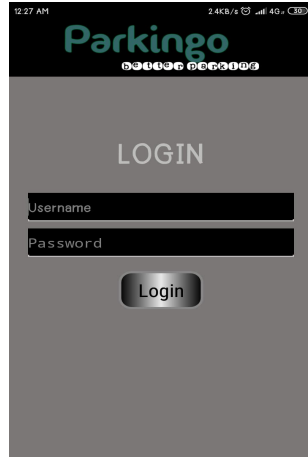
Finding an empty place to park is very time-consuming in places with huge parking lots like malls and multiplexes where parking space is spread across multiple floors. Also, there can be disputes regarding the time for which the vehicle was parked and hence on the amount which should be charged. Keeping in mind these problems, we have developed an android based parking management system. Using this app, user finds a free slot in the parking spot and then he can drive directly to the slot without wasting time in searching for a free slot. Once the user reaches the place he can 'check-in' using the app after which that slot becomes unavailable for the other users. And when the user leaves he will 'check-out' from the app. Then, the user will be charged depending upon the time for which the vehicle was parked. Also, we have a built in wallet to support payment

2 Motivation

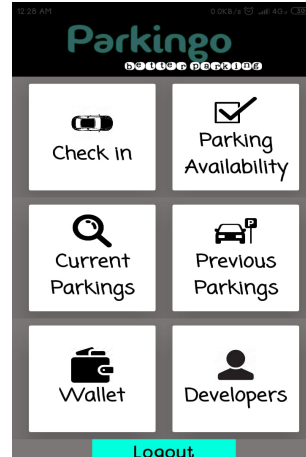
Huge parking lots are available in public places spread across multiple floors. People have hard time finding the free slots available. Also, manual printing of check-in ticket leads to long queue resulting in waiting time for the user and traffic at the parking entrance. People also tend to forget the place where they parked their vehicle. Also, the dispute regarding the money charged for the parking is very common. So keeping these problems in mind, we have developed our project.

3 User Documentation

User logs in into the app with username and password. On successful authentication, user progresses to the Home Screen which looks as in Figure 1.(b).



(a) Login Page



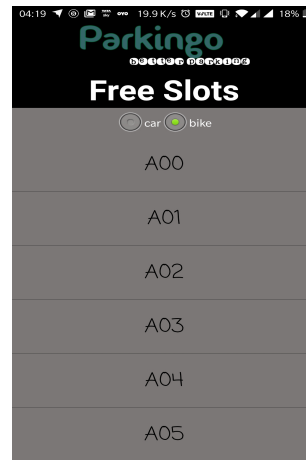
(b) Home Page

Figure 1: Login and Home Page

Now for the check-in, user selects Check-in option available at the home page. Then at the check-in page, user enters all the required details like Name, Mobile No., vehicle no. and on clicking the slots user gets an option to chose from the type of vehicle he want to park i.e. car or bike. And depending upon the type of vehicle user selected , he gets a list of all the available slots. He can chose any one of the slot. Then he will be redirected to the check-in page. Now he can click on check-in. .



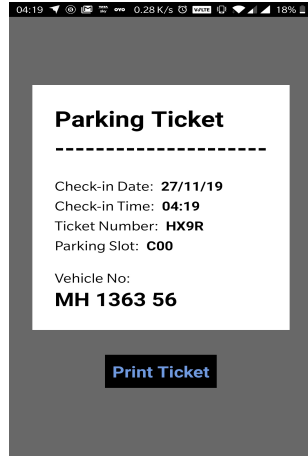
(a) Check-in Page



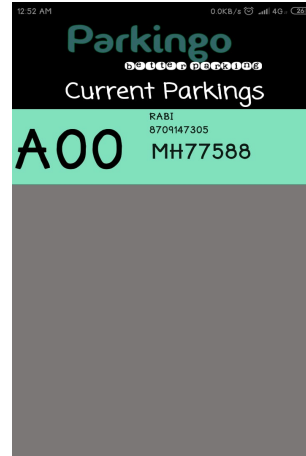
(b) Free Slots

Figure 2: Check-in Page and Available Free Slots

As the user clicks on the check-in , a ticket will be shown on the screen with the user details and timings as shown in Figure 3.(a). When the user wants to check-out , he can tap on "Current Parkings" on the home page. Then the user can see the current parking displaying the slot No. , user name, mobile no. and the vehicle no. of the parked vehicle as shown in Figure 3.(b).

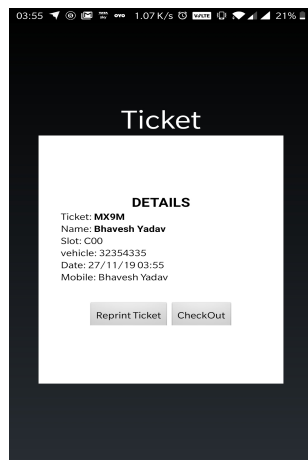


(a) Parking Ticket

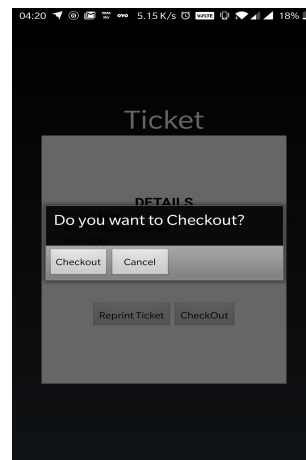


(b) Current Parkings

Figure 3: Parking Ticket and Current Parkings



(a) Checkout



(b) Checkout Acsert

Figure 4: Parking Ticket and Current Parkings

For checkout, user taps the one of the vehicles he wants to check out, then the "CHECKOUT" screen will come up with the user, slot, timing and vehicle details as shown in Figure 4.(a). Now, when user will tap on Checkout, a pop up will come ascertaining whether the user really want to check-out as shown in Figure 4.(b). Once, the user taps on yes, Checkout Receipt will be generated which contains the user and vehicle information along with the charged amount. Charged amount will automatically be deducted from the user wallet. Once the user clicks on print Ticket, user is redirected to the home screen as shown in Figure 5.(a)

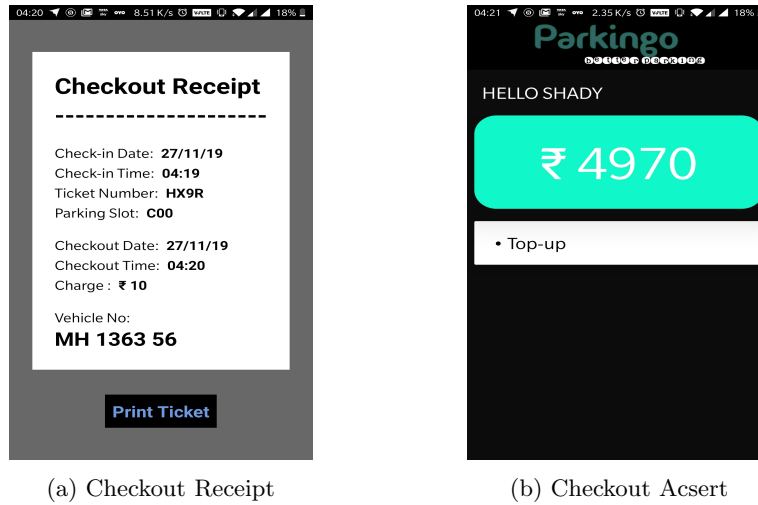
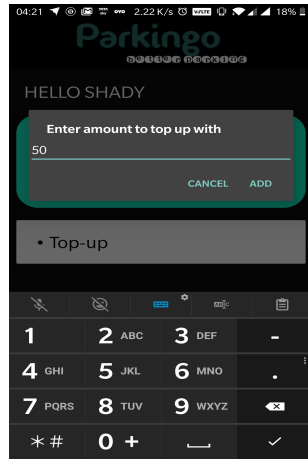


Figure 5: Parking Ticket and Current Parkings

Also, the user can add money to the wallet. For this, he can tap on the wallet on the home screen. Now, the user can see the current amount in the wallet. To put more money in the wallet, user can click on the "Top Up" and can add the money.



(a) Top Up



(b) Developers

Figure 6: Top Up and Developers

4 Usefulness of the project

This project can be deployed at any parking lot and can be used by any user who has this app but the conditions are:

- It will need admin support for initial data setup as different parking lot have different number of parking slots available.
- **Future Scope :** Adding multiple parking lots and making the app location aware.
- **Can be implemented within campus!**

What we have implemented that works really well?

- UI is awesome.
- Database Synchronization