# BIM209

Principles of Software Design and Development

EASYPARK

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EASYPARK

Nowadays, finding a park place for Tom is a serious issue that he has confronted. He looks for empty places one by one every day. Tom wants to get rid of trouble of searching for parking. Moreover, he wants to be able to reserve his place before he arrives car park yet.

Tom wishes an application that is of tremendous facilities in terms of easy reserving, saving time and so on. It should mainly include these features below:

* + The app should be able to find the nearest and emptiest best car park for my car.
  + The app need to be able to reserve my park area on my license plate when I indicate a specific time range in the car park.
  + Pricing must start from the moment of booking in case not to sell anyone else.
  + The occupancy rate of the parking in the car parks should be able to be displayed on the application.
  + The hours which I enter and exit from the parking lot need to be analyzed and the app can do a change of the price. For instance, the pricing can be a bit increased when the occupancy rate of parking is high ; however ,it must be decreased when the rate is low.
  + When I indicate my parking time interval before arriving there, the app should make a discount on the price.
  + If I forget to indicate my time interval of parking place, I want to gain points about parking , when I notify leaving time to the app.

REQUİREMENTS

1. The app should find the nearest and empty parking lot.
2. The app must show occupancy rate and prices of parking lots.
3. The app must reserve the customers park area on the licence plate when user indicate a specific time range in the car park.
4. The price of parking area need to be able to be paid on the app.
5. When the users indicate their parking time before coming there, app will apply discount on the price. If users don’t indicate their parking time range, they can also gain points when they notify while they are leaving.

(The requirements are matches the use-cases in the next pages.)

USE CASE 1

1. The app wants location information from customers. (N/A)
2. The app searches for the nearest and possible parking spaces. (1. Requirement)

Starting Condition = First Step

Stopping Condition = Second Step

External Initiator = Customer

Clear Value = finding nearest and empty possible parking places

USE CASE 2

1. The app shows the nearest possible parking lots. (N/A)
2. Users select parking area which they want. (N/A)
3. Users see occupancy rate of parking lot which they choose. (2. Requirement)
4. Users select parking place on their licence plates with indicating their time interval. (3. Requirement)

Start Condition = First Step

Stop Condition = Fourth Step

External Initiator = Customer

Clear Value = Selecting Parking Lot

USE CASE 3

1. The app calculates price according to occupancy rate of choosen parking lot. (N/A)
2. If users indicate their parking time interval before coming there, app apply a discount on total price.(5.Ruqiurement)
3. If users notify their leaving time to the app, they gain points about pricing.(5.Requirement)
4. The app shows total price to users.(N/A)

Start Condition = Second Step

Stop Condition = Fourth Step

External Initiator = Customer

Clear Value = Showing Total Price

USE CASE 4

1. The app wants paying approval from user.(N/A)
2. User confirms the price and paying(N/A)

2.1) If user does not confirm paying , user quits from the app (N/A)

3)User pays the price with credit card.(4.Requirement)

3.1)User use her/his points about paying price (4.Req.)

4)The parking place has been reserved.(N/A)

Start Condition = First Step

Stop Condition = Fourth Step

External Initiator = Customer

Clear Value = Reserving and Paying

TEXTUAL ANALYSIS

First Use Case

Noun Analysis

App , location , information , customer , parking spaces

Verb Analysis

Want , search for

Second Use Case

Noun Analysis

App , possible parking lot , user , parking area , occupancy rate of parking , licence plate , time interval

Verb Analysis

Show , select , want , choose

Third Use Case

Noun Analysis

App , price , occupancy rate , choosen park lot , parking time interval , discount , total price , leaving time , pricing , total price

Verb Analysis

Calculate , apply , indicate , notify , gain , show

Fourth Use Case

Noun Analysis

App , paying approval , user , price , paying , credit card , point , parking place

Verb Analysis

Want , confirm , quit , pay , use ,reserve