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**Team-based Project: Release # 2 (Practicing Agile Methodology)**

**5 marks of the total course mark**

**Goal**: Creating software engineering artifacts for the team-based project implementation

**Deliverable**:

Your team will create the software engineering artifacts and upload them to the GitHub repository, your team created for the team-based project. More specifically, it is expected to observe the following documents on your GitHub repository:

1. Requirements documentation and specification (**Total: 2 marks**)
   1. A use case diagram for your application (0.5 mark)

A close up of a map

Description automatically generated

* 1. The use case specifications for each use case (1.5 marks) (you need to create use case specification for each use case of your application)

Three are three main use cases used in this program

1. Park
2. Use Case Name: Park
3. Scenario/Description: Park is the first use case that will be used by the customer. When the customer use the Park case, they will be directed to a ‘Park’ activity where they will be prompted to enter their information including the type of the vehicle, the number plate of the vehicle and number of hours the customer wants to use the parking. This information is then stored by the system to use later and calculate the total price of the parking. The customer will have access to all the use cases at the first screen, however, if the customer has not used the parking use case first to enter their information, the system will return an error message. It is so because the system will not identify the vehicle/ have store the information of the vehicle, until the park use has been completely executed.
4. Actors: Customer. Since this case does not stimulate the secondary actor (Parking System) to initiate any action, the customer is the only actor in this use case.
5. Preconditions: User needs to select the correct case and enter all the required information.
6. Post-conditions: The system stores the information for future calculation.
7. Related Use Case: Although the other two use cases i.e. Extend and Exit heavily rely on the information from the Park use case, this use case is totally independent of others.
8. Stakeholders: Customers using the parking, Administration
9. Extend
   1. Use Case Name: Extend
   2. Scenario/Description: Extend case is used by the customer to extend their initial parking time. There is a different rate for the customers who wants to extend their parking time. The customer will have access to all the use cases at the first screen, however, if the customer has not used the parking use case first to enter their information, the system will return back an error message. It is so because the system will not identify the vehicle/ have store the information of the vehicle, until the park use has been completely executed. Hence, to use the extend case the user must enter the matching vehicle info and add the required time to the system.
   3. Actors: i. Customer

ii. Parking System

* 1. Preconditions: i. User has already executed Park Use case

ii. User enters correct/matching vehicle info

* 1. Post-conditions: The system updates the stored information for future calculation.
  2. Related Use Case: It uses the information from Park use case and passes on the information to Exit use case.
  3. Stakeholders: Customers using the parking, Administration

1. Extend
2. Use Case Name: Extend
3. Scenario/Description: Exit use case is only used by the customer when they are rady to leave the facility. When the customer first come to use the parking, they enter their vehicle information and number of hours they want to park their vehicle. A customer can also add the hours by using extend case. In the Exit case customers enter their vehicle information. The system finds the match and uses the calculations from park and extend case to display the final amount and gives the customer two options to pay their bill.
4. Actors: i. Customer

ii. Parking System

1. Preconditions: i. User has already executed Park Use case

ii. User enters correct/matching vehicle info

1. Post-conditions: The system calculates the total cost and prompts customers to pay.
2. Related Use Case: It uses the information from Park use case as well as Extend case.
3. Stakeholders: Customers using the parking, Administration