Cairo University  
Faculty of Computers and Artificial Intelligent

**CS251**

**Software Engineering I**

Project Name

Software Design

Team Names

Month & Year

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# Team

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# Document Purpose and Audience

The document is about class diagram and sequence diagram it

The Sequence diagram describe the interactions between the class in the system and how they work with each other as a system and it display the functions and the method in each diagram and how they will be called from the another class

And how the sequence of events will be dynamically happen.

The class diagram will describe the classes and the attribute for them and the methods or operations inside any class and the relations between them.

Those document is for the developer, software engineer and the software team to can implement the code and know how to make the design and how the system will interact with each other and the code .

# System Models

## I. Class diagrams

Diagram

Description automatically generated

| **Class ID** | **Class Name** | **Description & Responsibility** |
| --- | --- | --- |
| Class1 | vehicle | The class is to get the information about the vehicle and it  Use setter to set the information and getter to get information  And it include the function which take the inforamtion such as the model name,  Model year,id,width,depth from vehicle owner |

| **Class ID** | **Class Name** | **Description & Responsibility** |
| --- | --- | --- |
| Class2 | Calculation | The class calculation is to show to total number vehicle and to make calculation on it and it include and there is function to that perform that and there is two function once to calulate income and the other show result |

| **Class ID** | **Class Name** | **Description & Responsibility** |
| --- | --- | --- |
| Class3 | Time | the class is to set the arrival time it include setter and getter and the function set arrival time which take the arrival time autmayically from the system and also include the function to set exit time which take depetature autmatiaclay from the system and the function calculate to calculate the period and make calculate the cost |

| **Class ID** | **Class Name** | **Description & Responsibility** |
| --- | --- | --- |
| Class4 | slots | the slots function include the function to take the chosen way from the system and the garage owner that is the function parkin to take object and the chosen way and make process to show the available slots in the system by the function display slots |

### Important Algorithm

time class there where to complex because it was to set arrival time and then set exit time and calculate the period and then calculate the cost so it include many functions and alot of procces to do

## II. Sequence diagrams

Id : 1

A screenshot of a computer

Description automatically generated with low confidence

Id : 2

Chart

Description automatically generated with low confidence

Id : 3

Diagram

Description automatically generated

Id : 4

Diagram

Description automatically generated

### Class - Sequence Usage Table

| **Class Name** | **Sequence Diagrams** | **Overall used methods** |
| --- | --- | --- |
| vehicle | seq(1) | fill info() , submit() |
| Time  Calculation  slots | Seq(2 ,3)  Seq(4)  Seq(2) | exit time , arrival time , calculate period , calculate cost  calculate total vehicle , calculate total income , show total income , show total vehicle  park-in , diaplay-available- slots |

# Ownership Report

|  |  |
| --- | --- |
| **Item** | **Owners** |
| Document Purpose and Audience Class diagrams  Class diagram tables Important Algorithm Sequence diagrams Class - Sequence Usage Table Source code | *Asala ehab Mohamed*  *20201020*  *Esraa osama Mohamed*  *20201014* |
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