



# Principles of Software Design and Development

Homework

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Hakan Kahraman

# **WASHBOOKING**

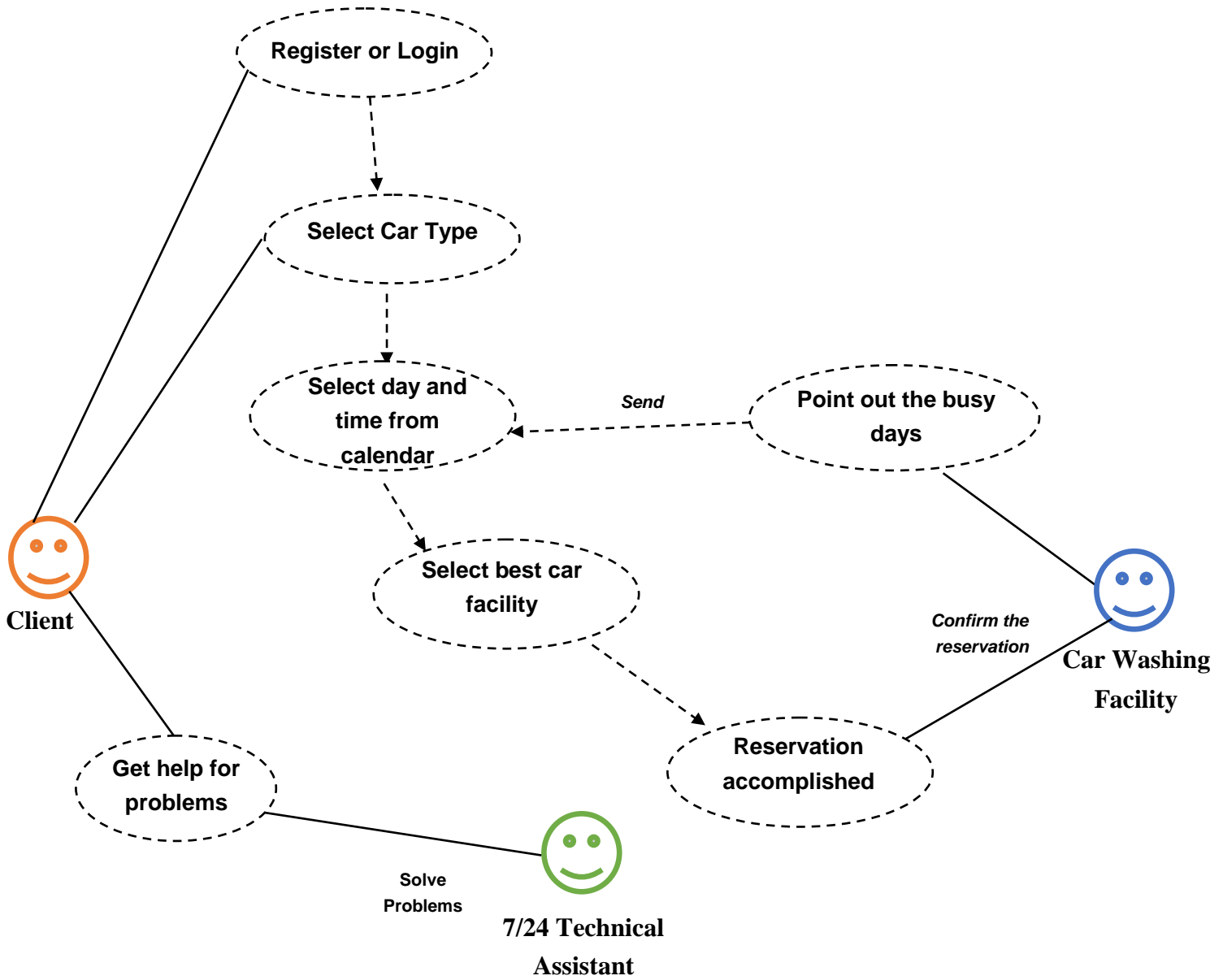
## **THE RESERVATION SYSTEM FOR CUSTOMERS OF A CAR WASHER**

### Vision

It is proved that WashBooking's missions is positioned to align along with your values and your desires. We didn't say these words to glorify the brand. Time, how important is this in these days, is not it? In order for you to spend this precious time to the fullest, we sometimes have to make reservations for small things. This is what we are for. WashBooking is a developed purely for people's service, working to save people from tedious car wash queues and save time. The application is strive to produce high-quality - low cost service and to be directly customer focused. The vision of this application, which was established to provide customers with more than one car wash facilities, to find the optimum place for them, to save time and to bring a new dimension to car washing, is to prevent the smallest problems from becoming a big problem by using the developing technology in the best way and taking advantage of these opportunities, carry the technology to every stage of life. To give customers a wide assortment of car washing places, every day, with guaranteed satisfaction, friendly service, convenient hours (24 hours, 7 days a week) from a great online experience.

### Requirements List

1. The WashBooking must be online 7/24 for whole country.
2. Client should make a reservation easily.
3. It should be timesaver.
4. 24/7 technical support should be ready against any negativity.



### *Case 1: Client get reservation from system*

#### **External Initiator**

The client

#### **Success Scenario**

1. The client open the application whenever he/she want.
2. The client register or login account.
  - 2.a The client can login with guest account.
  - 2.b The client chooses the city where he/she lives.
  - 2.c The client chooses car type which will be washed.
3. The client sees busy days in calendar, chooses available days.
  - 3.a The system gives closest available date automatically.
4. The system send datas to the car washing facility
5. The client is ready for reservation.



#### **Exceptions**

- 4.a The car washing facility confirm that reservation, else, System will returns client to the first step and send error message.

### *Case 2: Car Washing Facility send datas of available and busy days*

#### **External Initiator**

The Car Washing Facility Owner

#### **Success Scenario**

1. Car washing facility owner open the application.
2. The owner login account.
3. The owner tick their busy and available days on calendar.
4. The owner click "Send" button.
5. Data's are sent to the system succesfully by owner.



### ***Case 3: Technical Assistant helps client***

#### **External Initiator**

Technical Assistant

#### **Success Scenario**

1. Technical Assistant login the system with password.
2. Technical Assistant check report box.
3. Technical Assistant click 'help request'
4. Technical Assistant communicate with client.
5. Technical Assistant deal with the problem



#### **Exceptions**

- 4.a Technical Assistant provide customer service number or Whatsapp
- 5.a If Technical Assistant solve the problem, delete report, else, communicate with authorized people to reach database system.

### **RESERVATION APP**

- |   |     |
|---|-----|
| 1. The client open the application whenever he/she want.  | 1   |
| 2. The client login account.  | N/A |
| 2.a The client can login with guest account or register.  | 2   |
| 2.b The client chooses the city where he/she lives.   | 1   |
| 2.c The client chooses car type which will be washed.   | N/A |
| 3. The client sees busy days in calendar, chooses available days.   | 3   |
| 3.a The system gives closest available date automatically.  | 2   |
| 4. The system send datas to the car washing facility.   | 4   |
| 4.a The car washing facility confirm that reservation, else, System will returns client to the first step and send error message. | N/A |
| 5. The client is ready for reservation.   | 2   |

### **Requirements List**

1. The WashBooking must be online 7/24 for whole country.
2. Client should make a reservation easily.
3. It should be timesaver.
4. 24/7 technical support should be ready against any negativity.

# -NOUNS-

## RESERVATION APP

### Case 1:

1. The client open the application whenever he/she want.
2. The client register or login account.
  - 2.a The client can login with guest account.
  - 2.b The client chooses the city where he/she lives.
  - 2.c The client chooses car type which will be washed.
3. The client sees busy days in calendar chooses available days.
  - 3.a The system gives closest available date automatically.
4. The system send datas to the car washing facility.
  - 4.a The car washing facility confirm that reservation, else System will returns client to the first step and send error message.
5. The client is ready for reservation.

### Case 2:

1. Car washing facility owner open the application.
2. The owner login account.
3. The owner tick their busy and available days on calendar.
4. The owner click "Send" button.
5. Data's are sent to the system succesfully by owner.

### Case 3:

1. Technical Assistant login the system with password
2. Technical Assistant check report box.
3. Technical Assistant click 'help request.
4. Technical Assistant communicate with client.
5. Technical Assistant deal with the problem

## **-NOUN LIST-**

### **Case 1:**

- The client
- The application
- Account
- City
- Car type
- Days
- Calendar
- The system
- Data
- Car washing facility
- Reservation
- Error message

### **Case 2:**

- Car washing facility owner
- The application
- Account
- Days
- Calendar
- The system
- Problem
- Request

### **Case 3:**

- Technical Assistant
- Password
- Report Box
- Client
- The system



# **-VERBS-**

## **RESERVATION APP**

### **Case 1:**

1. The client open the application whenever he/she want.
2. The client **register** or **login** account.
  - 2.a The client can **login** with guest account.
  - 2.b The client **chooses** the city where he/she lives.
  - 2.c The client **chooses** car type which will be washed.
3. The client **sees** busy days in calendar, **chooses** available days.
  - 3.a The system **gives** closest available date automatically.
4. The system **send** datas to the car washing facility.
  - 4.a The car washing facility **confirm** that reservation, else, System will **returns** client to the first step and **send** error message.
5. The client is ready for reservation.

### **Case 2:**

1. Car washing facility owner open the application.
2. The owner **login** account.
3. The owner **tick** their busy and available days on calendar.
4. The owner **click** "Send" button.
5. Data's are sent to the system succesfully by owner.

### **Case 3:**

1. Technical Assistant **login** the system with password.
2. Technical Assistant **check** report box.
3. Technical Assistant **click** 'help request'
4. Technical Assistant communicate with client.
5. Technical Assistant **deal** with the problem

## **-VERB LIST-**

### **Case 1:**

- Register
- Login
- Choose
- See
- Give
- Send
- Confirm
- Return

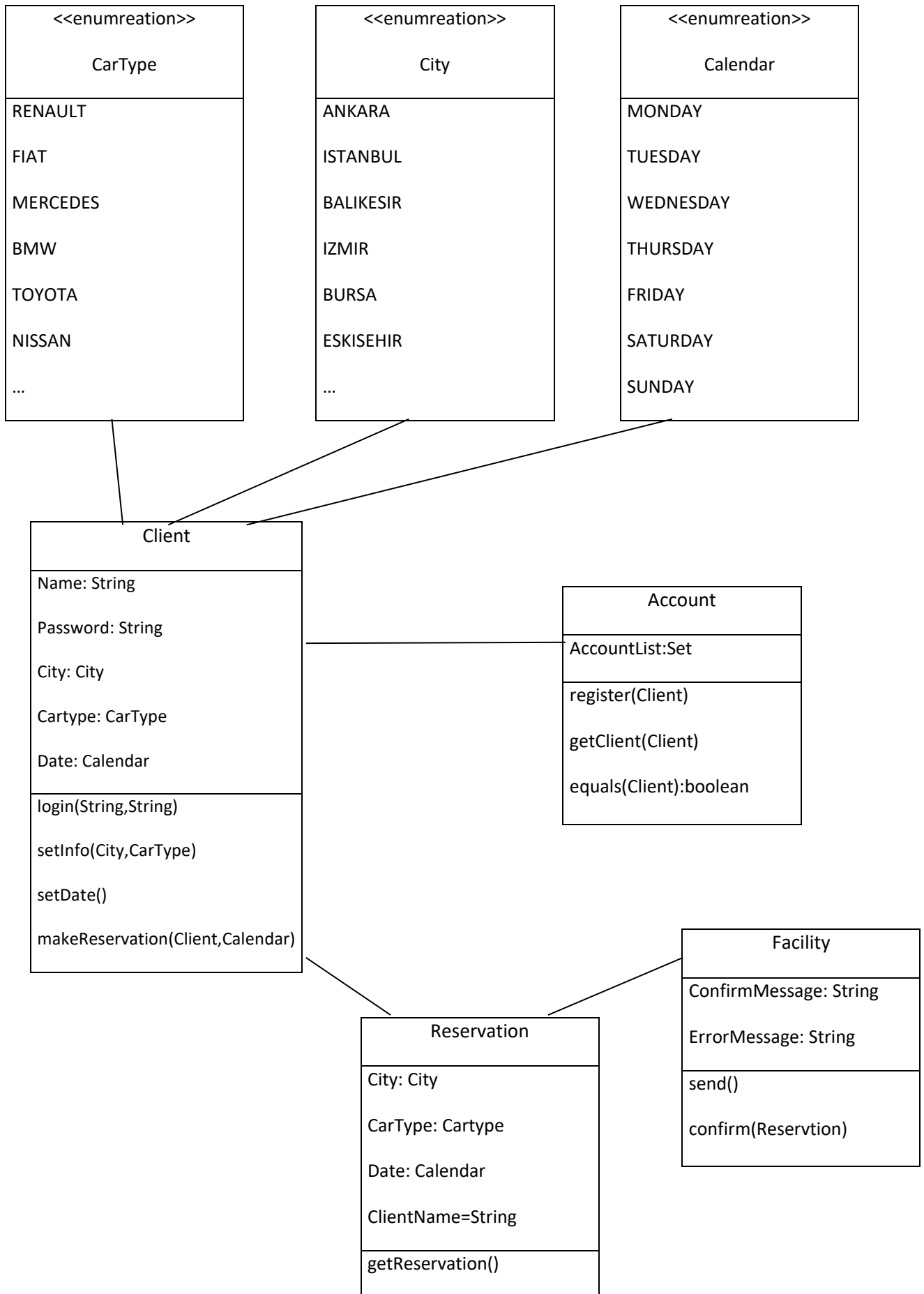
### **Case 2:**

- Login
- Tick
- Click

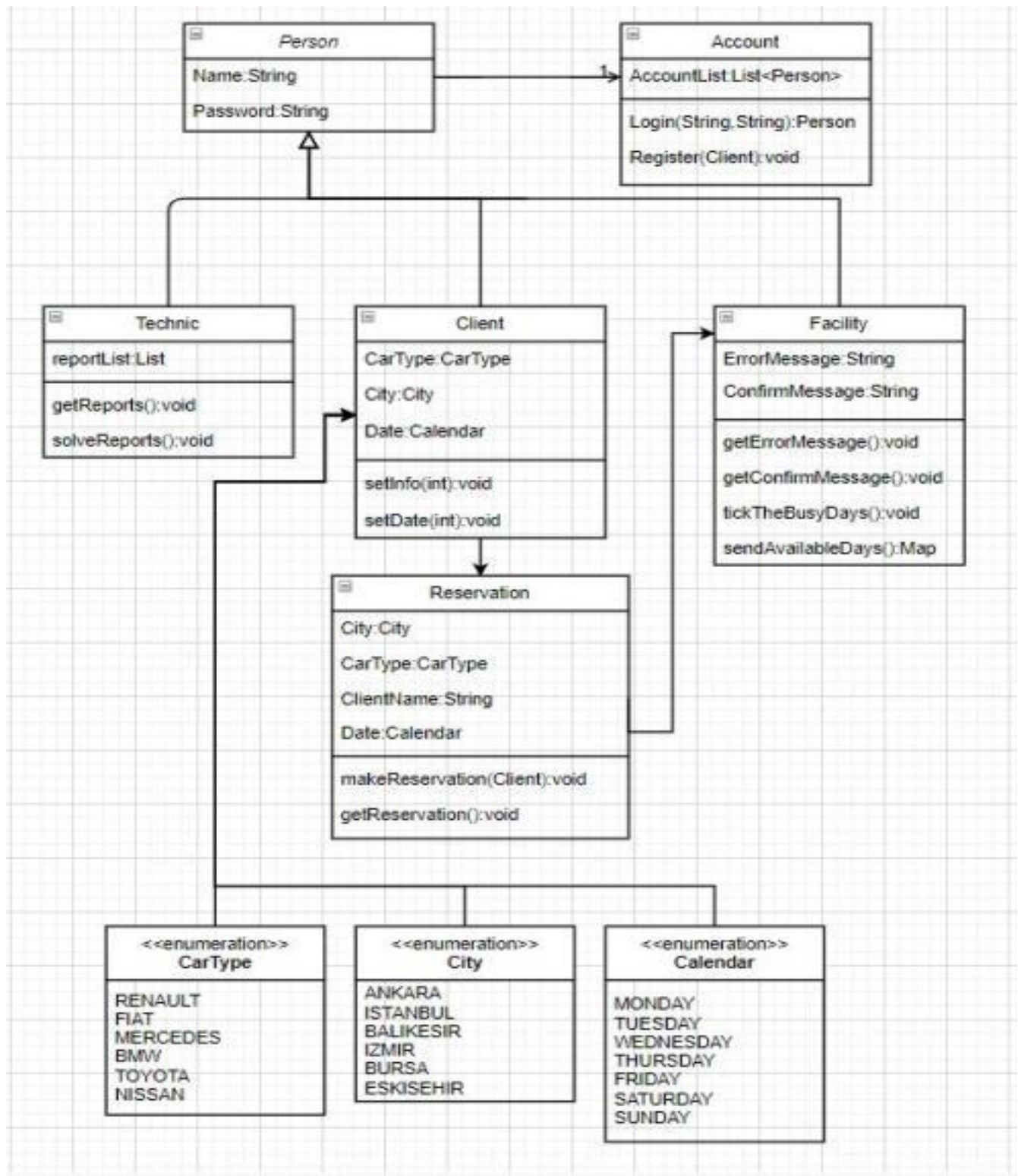
### **Case 3:**

- Login
- Check
- Click
- Deal

## -OLD UML DIAGRAM-



## -NEW UML DIAGRAM-



## **-EXPLANATION-**

Client is the object of the customer. It includes name, password, car type and city of the customer and date of the reservation. Also it has two method. These are `setInfo(int)`, `setDate(int)`.

If there is not any account of user, the Account class works the `register(Client)` method, register user and add users data to the arraylist. The client can login with this datas. When user logging it, the Login class will be working and check equality of datas and account list. User can also log in with Guest account. This account directly link user to the `setInfo(int)` and `setDate(int)` methods.

Reservation class includes information about the client and date of the reservation. There is two method in it. It is `getReservation()` to display the reservation info's and `makeReservation(Client)` to make reservation with datas of client.

Facility class includes two strings and two methods. These strings are `ErrorMessage` and `ConfirmMessage`. This strings is reached by `getErrorMessage()` and `getConfirmMessage()`. The facility owner also tick the busy days from `tickTheBusyDays()` method and upload the system with `sendAvailableDays()` method.

Technic class has a list of reports with named `reportList` and display the reports to the admin with `getReports()` method.

There are enums in the project these are the city, the cartype and the calendar. Because of these enums the client can choose the informations easily and without mistake.

NOTE : This program is a demo version. So that, there is not any input implementation, all inputs will be enter automatically. All cases will be trying and all methods will be working when you run the program.

## **-CHANGES/UPDATES-**

- **The UML diagram which described from first report is changed.**
  - The program need new class the Technic which includes technical assistant properties.
  - Also we need change properties of Account class. The equals method deleted because it be unnecessary. The login method will be do same operation with equals method.
  - The makeReservation(Client) method has been moved from Client class to the Reservation class so this method make reservation easily.
  - Facility class now includes 4 new method. Facility owner can tick the busy days from this method.
  - The person class is added. The client class extend this class and inherits name and password string types.
  - The login() method in client has been moved to the account class. This operation ensured the regularity.
- **New verbs has been added for case 2 and case 3**
  - Login (Case 2 and Case 3)
  - Tick (Case 2)
  - Check(Case 3)
  - Click(Case2 and Case 3)
  - Deal(Case 3)
- **New nouns has been added for case 2 and case 3**
  - Car washing facility owner, The application, Account, Days, Calendar, The System, Problem, Request nouns for case 2.
  - Technical Assistant, Password, Report box, Client, The system nouns for case 3.
- **“Cancel reservation” and “Read comments and rate” verbs deleted from scheme.**