REPORT TITLE

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Date

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Course title

Web enginnering

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1 Problem Statement

The website is for the taxi service and people, its purpose is to make the taxi service easier and more convenient for both customers and taxi drivers. It helps save people time and makes opportunities for those who need a job.

We will re-engineer the taxi system in addition to providing a monthly subscription for delivery to workplaces and provide smart cars [Future feature] with a robot driver.

1.1 Scenario:

It's an application for booking cars lets users create an account, the system allows the customer and driver to see each other's information, and the user can choose the driver he wants ,and the application saves the specified location. The system can specifies an approximate price almost 20 SR and it could be lower or higher depends on the path(number of Km * 2) , also, can send an alert to the customer when the driver arrives.The system uses GPS to determine the shortest path.

2 Project Proposal

2.1 Overview

The website is for the taxi service and people, its purpose is to make the taxi service easier and more convenient for both customers and taxi drivers. It helps save people time and makes opportunities for those who need a job.

Project Objectives:

- To study people's needs for this application.
- To identify an application that facilitates the movement of people from one place to another.
- To develop this application to make it more safely and more efficient such as developing the method payment.

2.2 Solutions, Scope of Work, and Deliverables

We will create a website that provides an online link between the taxi drivers and the clients who need them. This website can help study the needs of the users, specify the functions that will be used in the website to simplify the movement of the passengers, and develop safe and efficient payment methods that the users can rely on.

2.3 Preliminary Analysis and Design

2.3.1 Functional Requirements

- The system will not create a profile until the user enters a password.
- The system will save the entire customer's ride with details including the date and ride cost and time and driver information and location.
- The system allows the user to save locations as home or work.
- The system allows both customer and driver to give ratings to each other.
- The system allows the customer to cancel the ride.
-
- The system allows both the customer and the driver to see the basic information of each other including profile picture and full name and phone number.
- The system will show the customer the plate number and color of car.
- drivers have the choice to accept it .
- The system uses algorithms to show the shortest route to the driver.
- When the customer applies for a ride request the system will automatically notify the nearest drivers available.
- The user can only make one account with a specific number.
- The system required users to use the shortest path.
- The system must provide monthly subscriptions for users [300 SR for students and 500 SR for employees].
- driver must end the trip

2.3.2 Non Functional Requirements

- The system should load within 5 seconds if the number of simultaneous users is less than 1000.
- The system should finish up your new profile in 3 seconds.
- The system will notify the user if there was another sign up from another device.
- Each request for a ride should be processed within 10 seconds.
- The system should be downloadable on all types of devices including android and IOS devices.
- The user interface should be simple enough for all users including the elderly.
- The system should be online and available to all users at all times of the day and all days of the week.
- Customer information is not disclosed to others.
- When the specified site is not committed to, the last site and the customer and driver data are sent in full.
- If the customer is in danger he can send an immediate report.
- The system have to calculate the price by using this method (number of every Km*2)

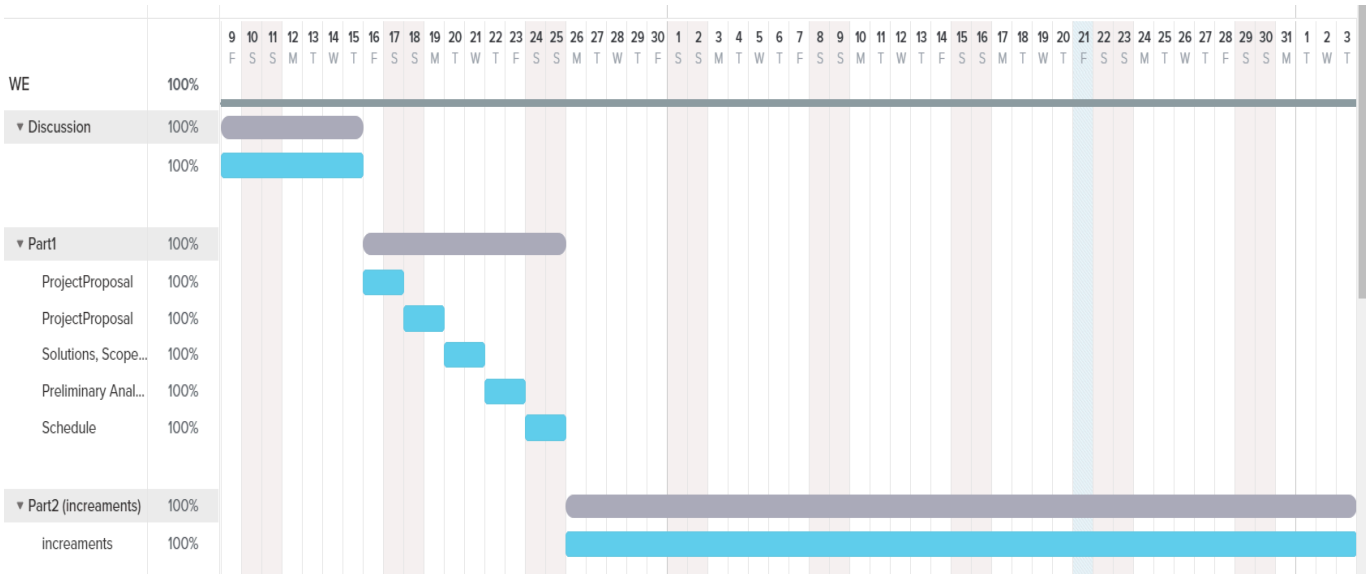
2.3.3 User Requirements or Domain requirements

The website use is just for the **city people**; it can't be used outside the city areas.

2.3.4 user categories

- Customer
- Driver
- System

2.4 Schedule



3 Increment1

3.1 Tasks

1- create account and add location
2- login taxi app handle error login

3.2 Formulation, Negotiation, and Elicitation

Requirements Formulation

The main motive of this project is to build a taxi service application to meet the needs of the customer in a good cost environment and appropriate security. In our application we target the category of people who are looking for taxis with these specifications and are older than 21 years

Requirements Negotiation

The negotiation between stakeholder and webapp, to ensure the achievement of functionality, good performance and other standards

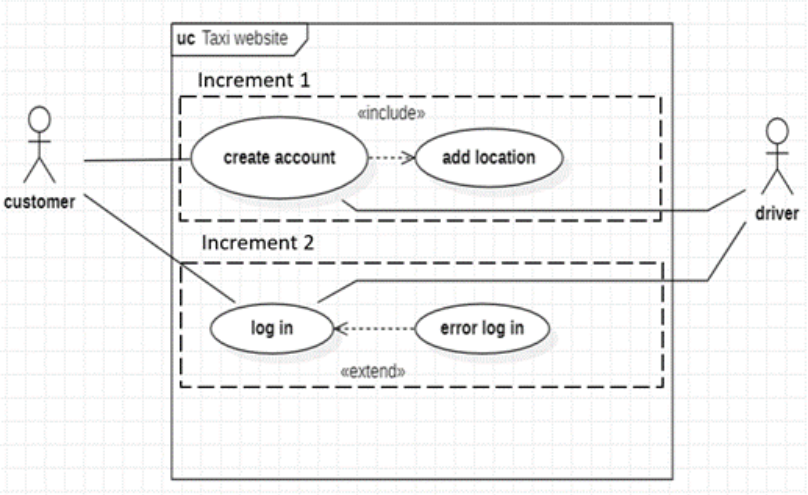
Requirements Elicitation

- User must be over 21
- The phone number must be 9 digits long
- The password must be at least 6 characters long and a combination of small and uppercase letters, numbers, and symbols
- The site must be within the scope of the service

3.3 Planning

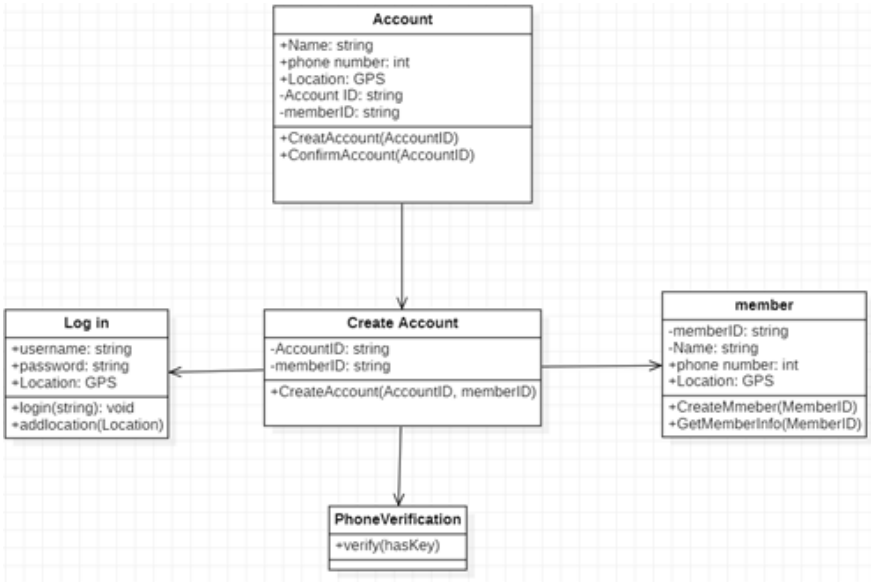
3.4 Analysis Modeling

3.4.1 Use case



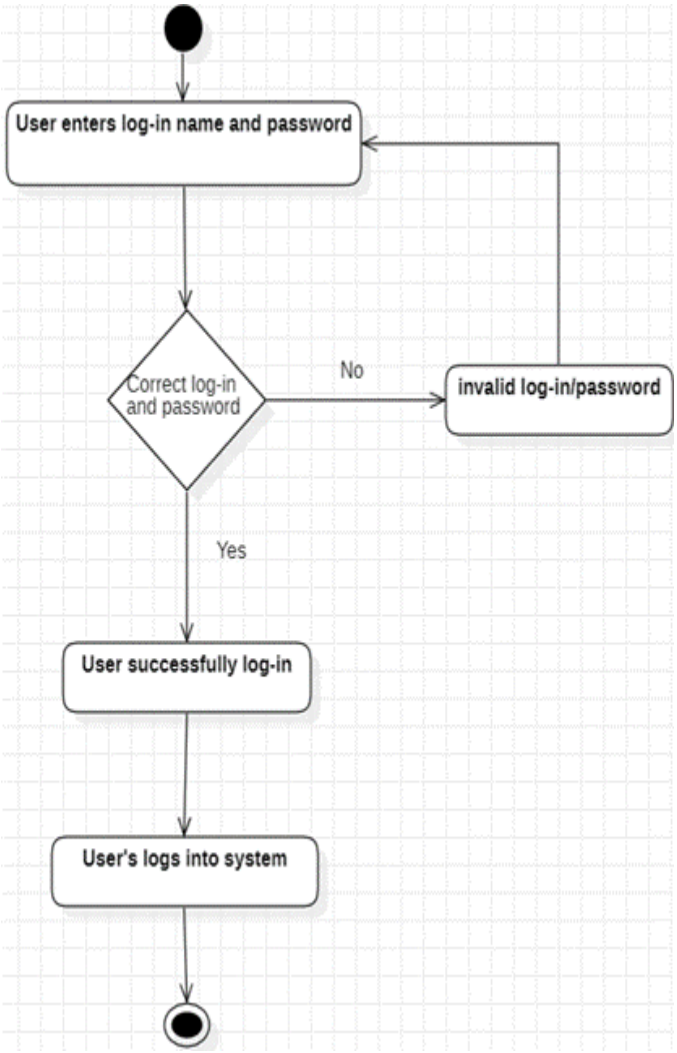
3.5 Design Modeling

3.5.1 class diagram

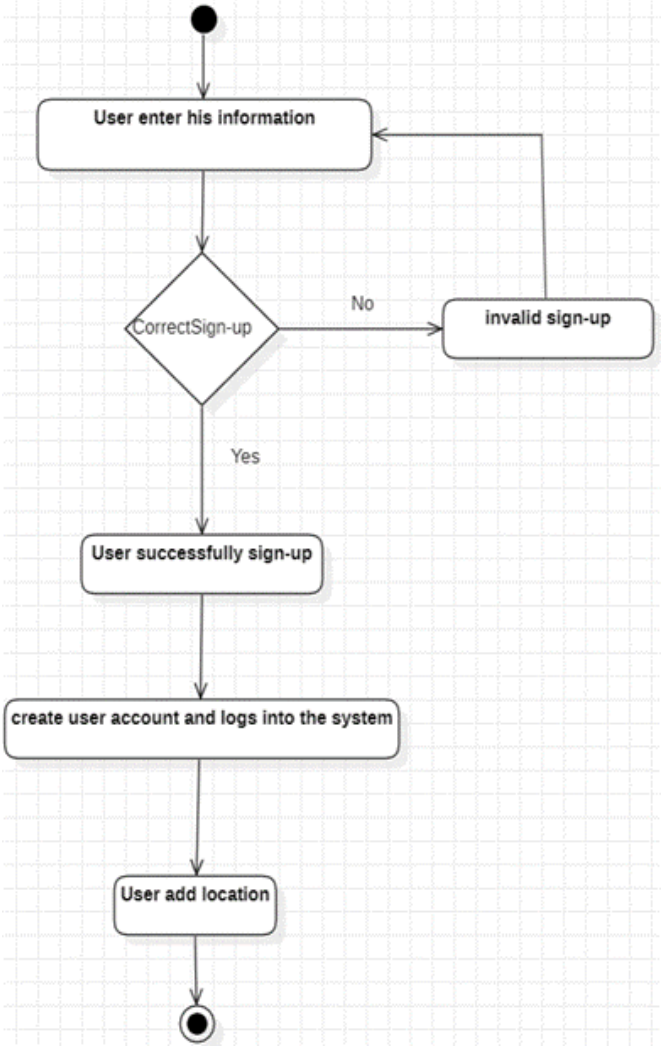


3.5.2 Activity diagrams

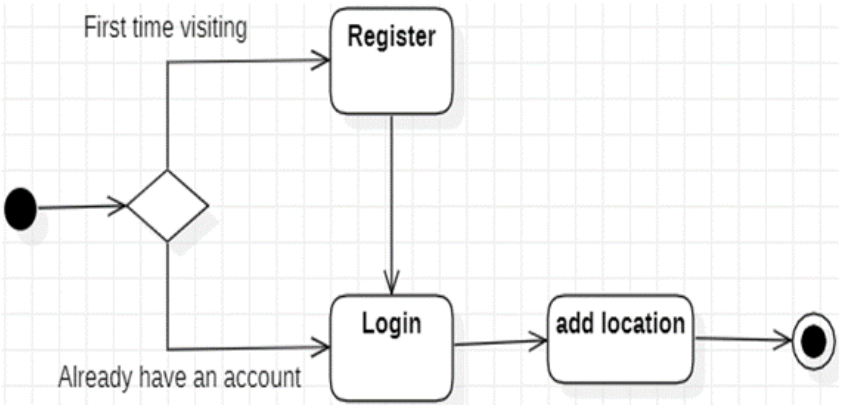
Login



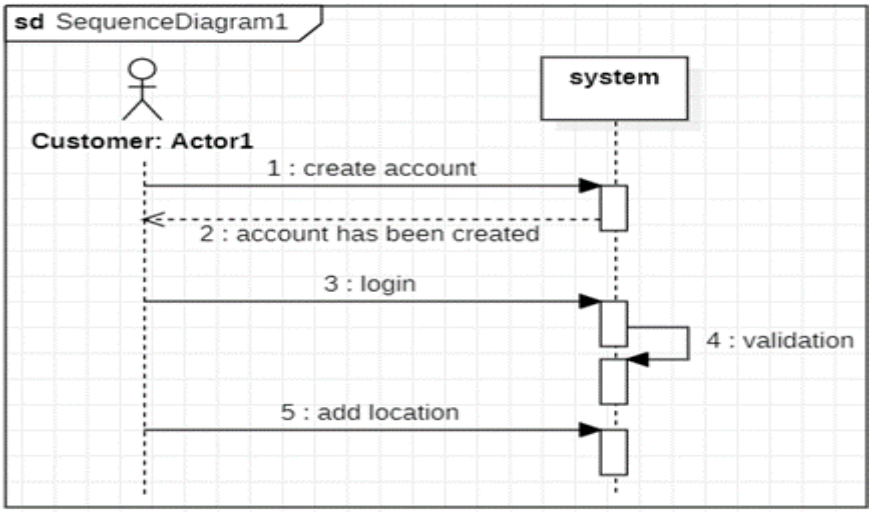
signup

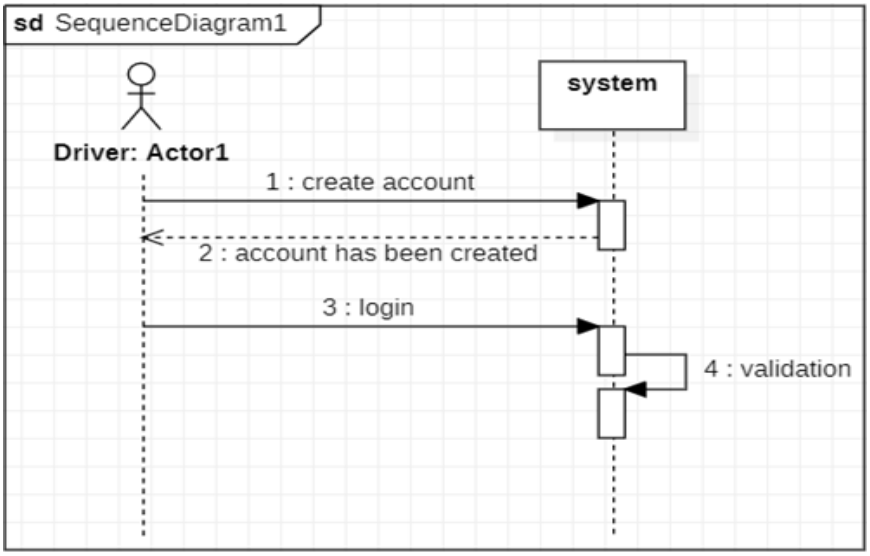


3.5.3 Statechart diagrams



3.5.4 Sequence diagrams





3.6 Construction and Testing

3.7 Deployment

4 Increment 2

4.1 Tasks

1- start order and accept order and cancel trip
2-select big or small car and show destination and start trip, cancel trip

4.2 Formulation, Negotiation, and Elicitation

Formulation

The goal of this increment is to facilitate the process of the ordering and canceling the trip for the users, and give them the choice to select a big or small car.

Negotiation

To guarantee functionality, decent performance, and other standards are met, there will be negotiations between stakeholders and the web application. They will be discussing the new feature in the webapp.

Requirements Elicitation

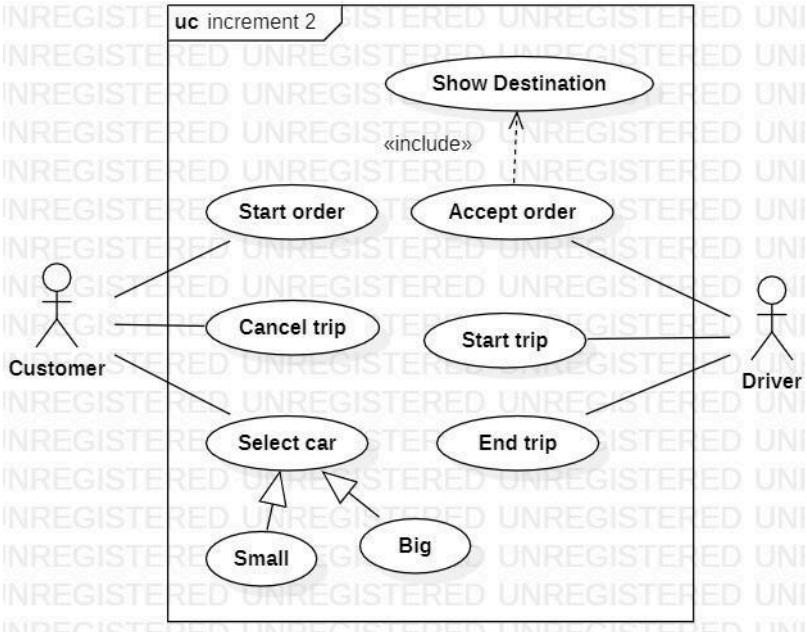
- the user must have an valid account
- the user must specify the trip information
- the user must select the size of the car
- the user must select the destination of the trip

4.3 Planning

In this increment we will add the features that help to order & cancel the trip, select the size of the car, and show the destination of the trip. At first, we will help the users to start ordering the car and let them choose the size of the car, then they will be able to select and see the destination of the trip, after that they can start or cancel it.

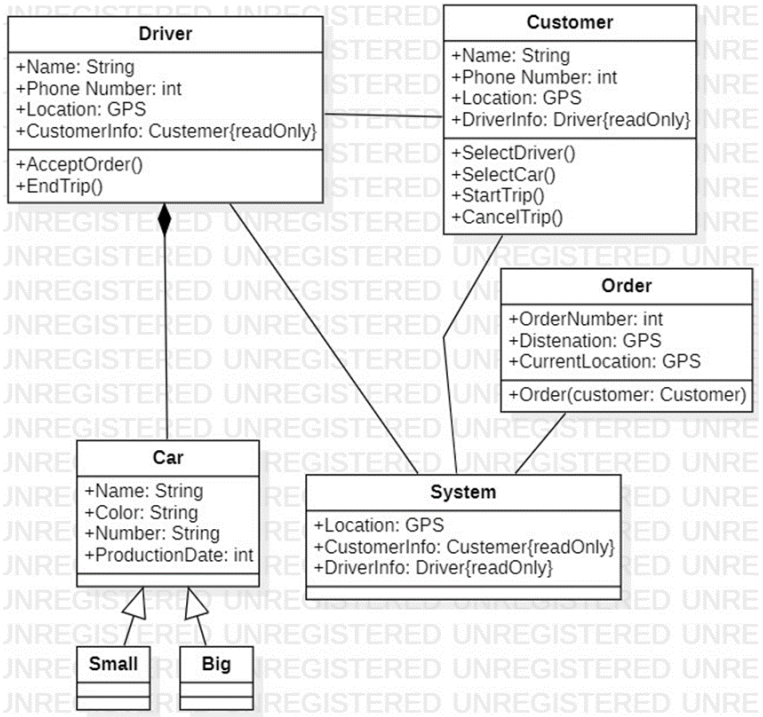
4.4 Analysis Modeling

3.4.1 Use case

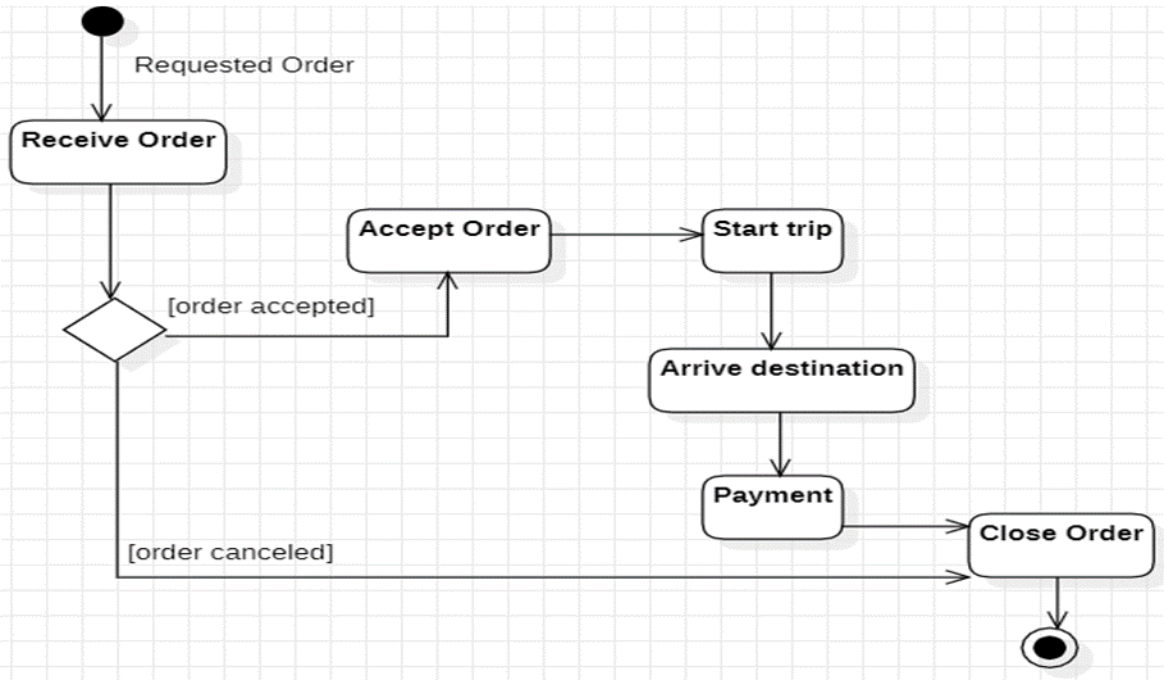


4.5 Design Modeling

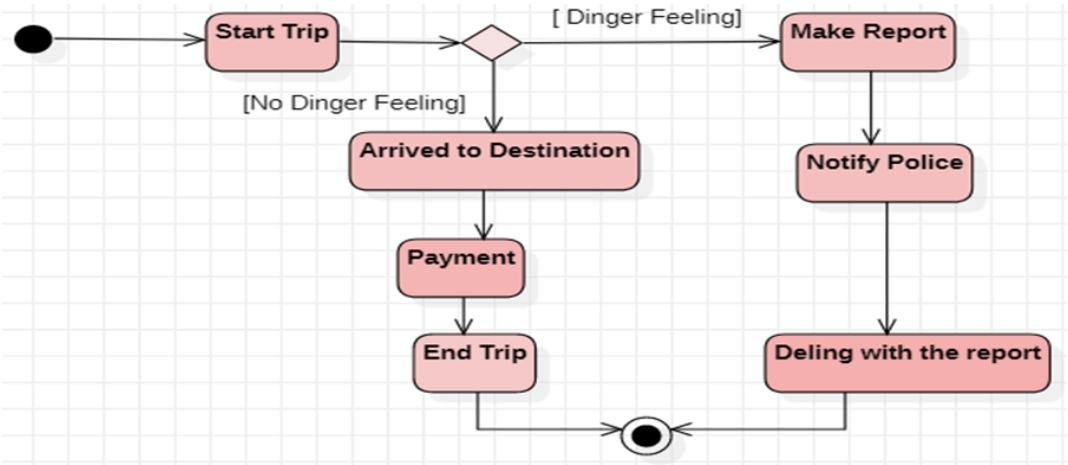
3.5.1 class diagram



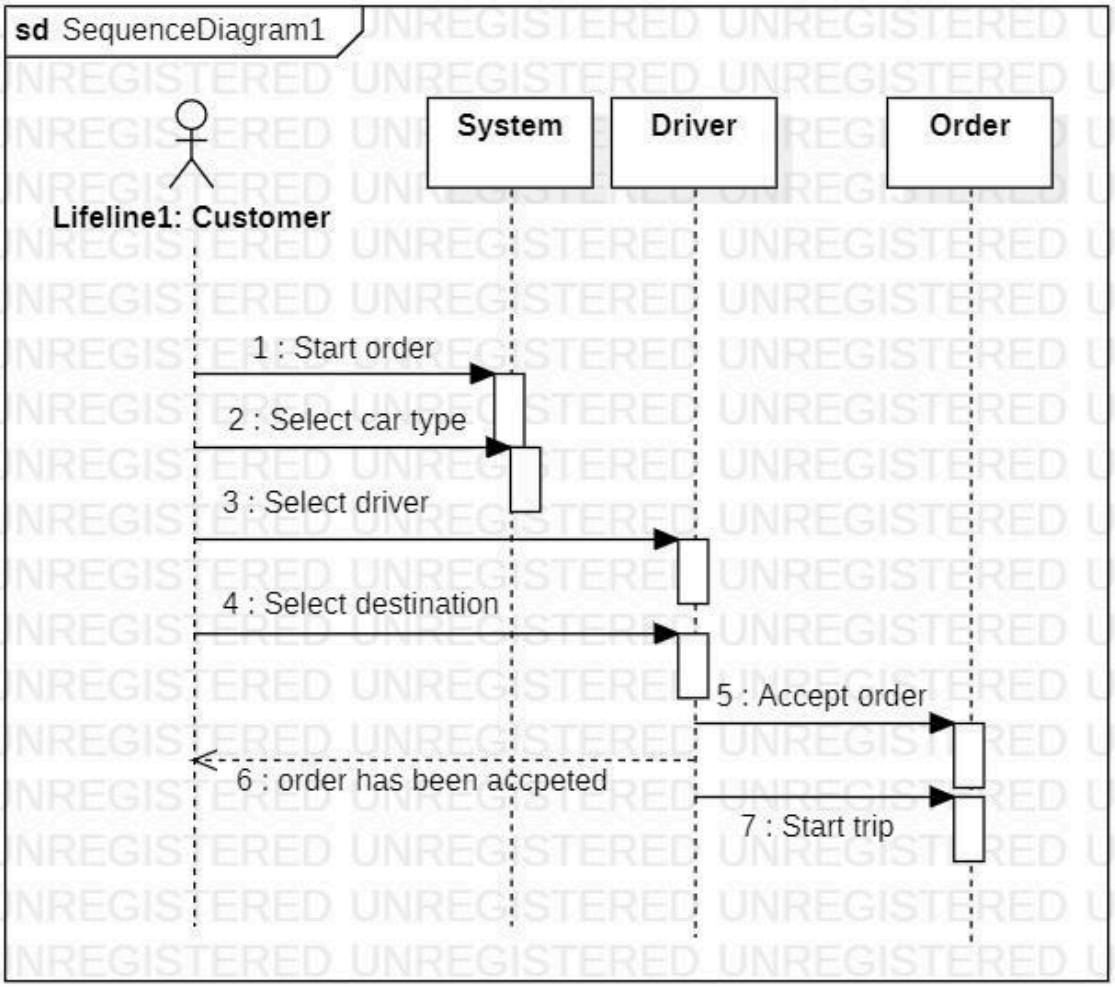
3.5.2 Activity diagrams



3.5.3 State chart diagrams



3.5.4 Sequence diagrams



4.6 Construction and Testing

4.7 Deployment

In the next increment, the users will be able to select the drivers they want and select the destination by GPS. and they will be able to choose the payment method they prefer.

5 Increment 3

5.1 Tasks

1- Select driver select destination by GPS
2- Payment by cash or credit Card

5.2 Formulation, Negotiation, and Elicitation

Formulation

This increment aims to provide the ability to the user to choose the driver he wants and the destination he needs to arrive at by using GPS. Also, give the user the choice to select the payment method he prver, cash or credit card.

Negotiation

To enhance the website features, performance and ensure that it's cover the requirements needs, there should be a negotiation between the stakeholders and the website developers

Requirements Elicitation

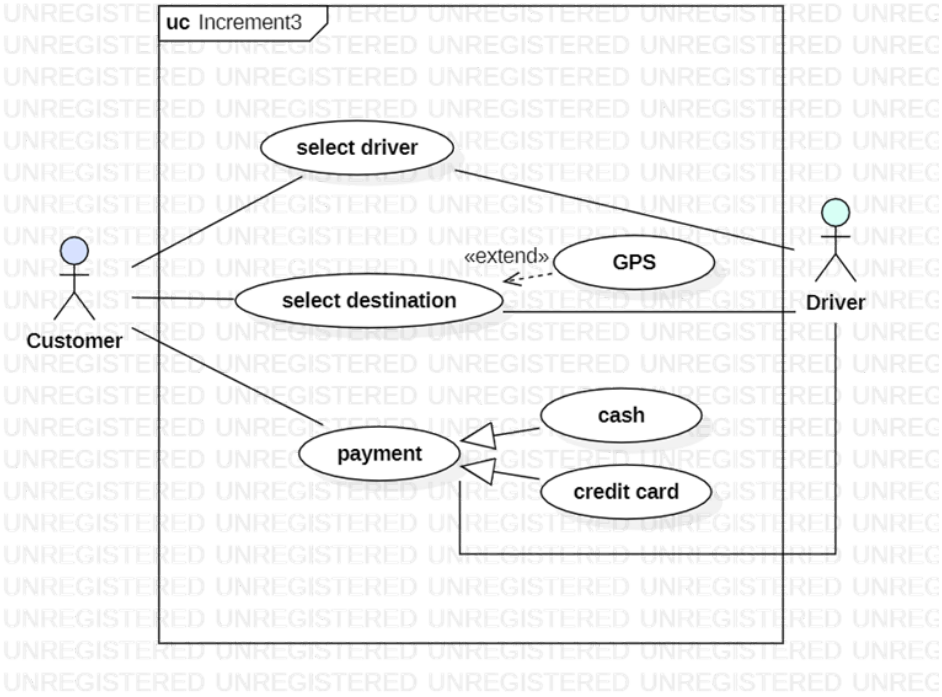
- The user must have a valid account
- The user must select the diver and the driver must be available
- The user must select the destination of the trip using GPS
- The user must select the payment method either Cash or Credit card

5.3 Planning

We analyzed the increment and understood its specifications by drawing a use case diagram. Then we design the static and dynamic models of the increment.
We tested the increment and mentioned its development.

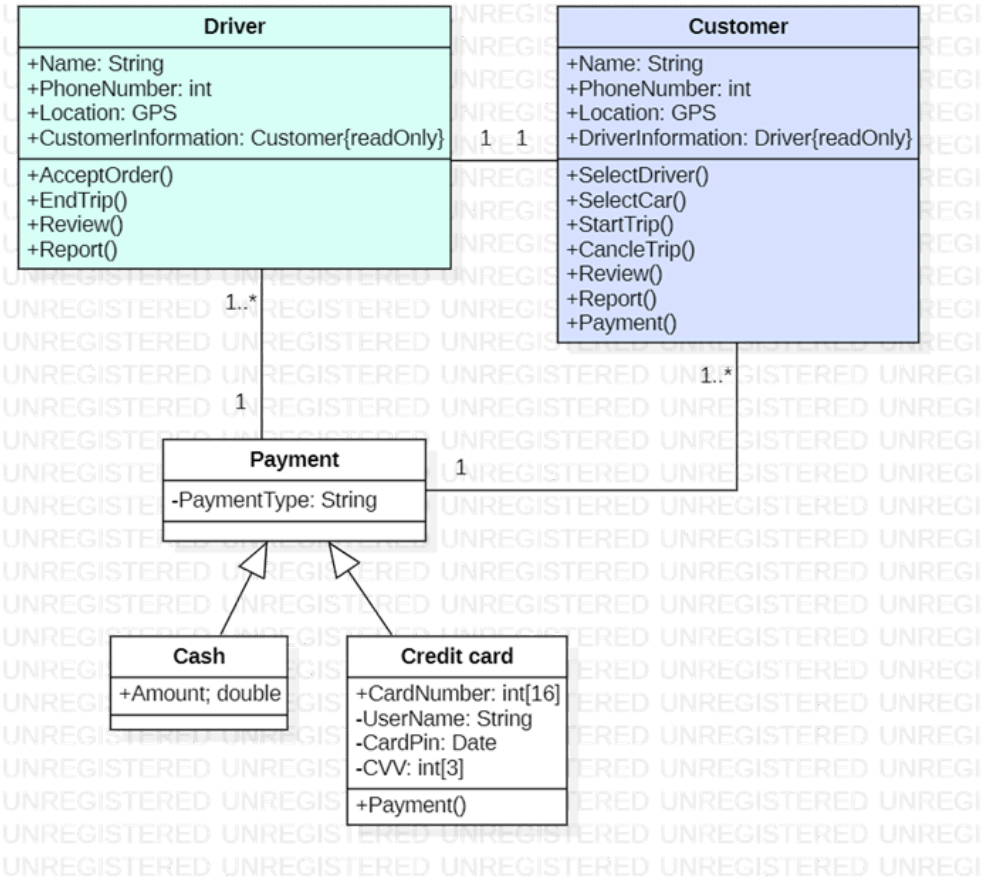
5.4 Analysis Modeling

3.4.1 Use case

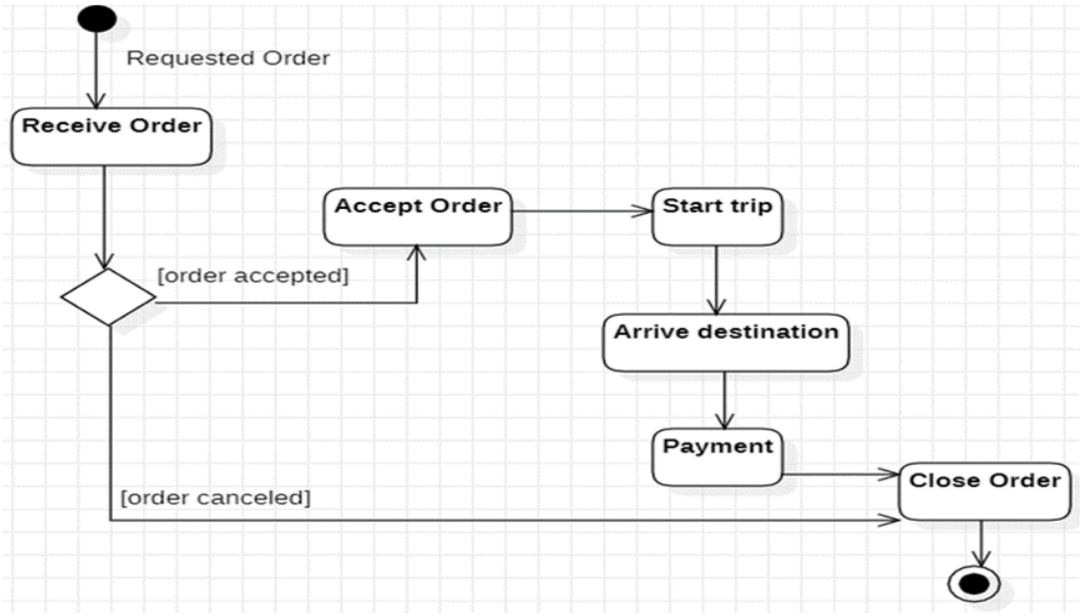


5.5 Design Modeling

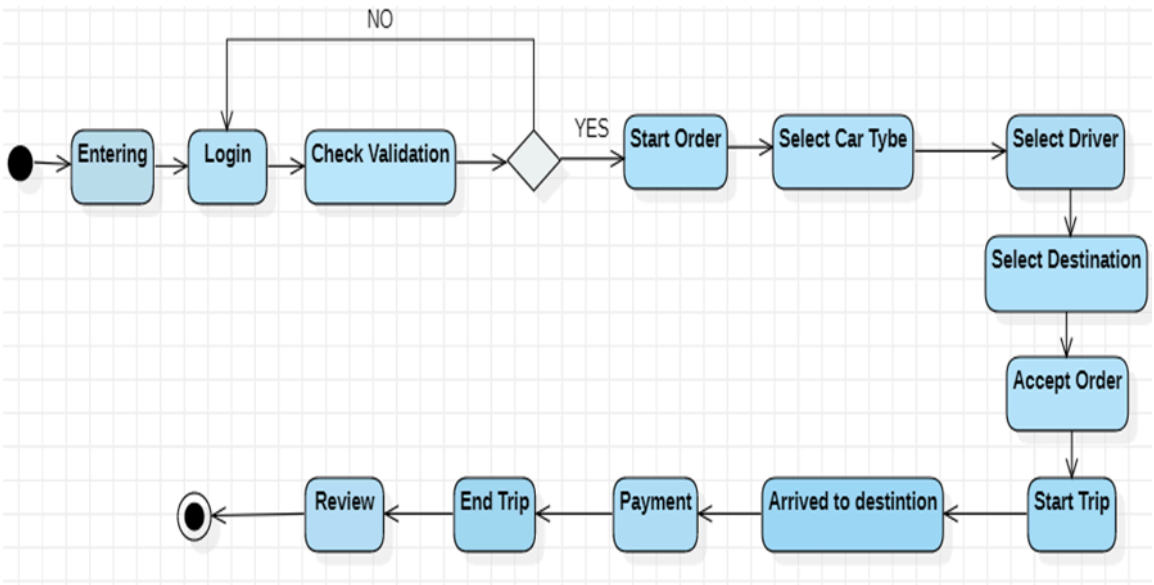
3.5.1 class diagram



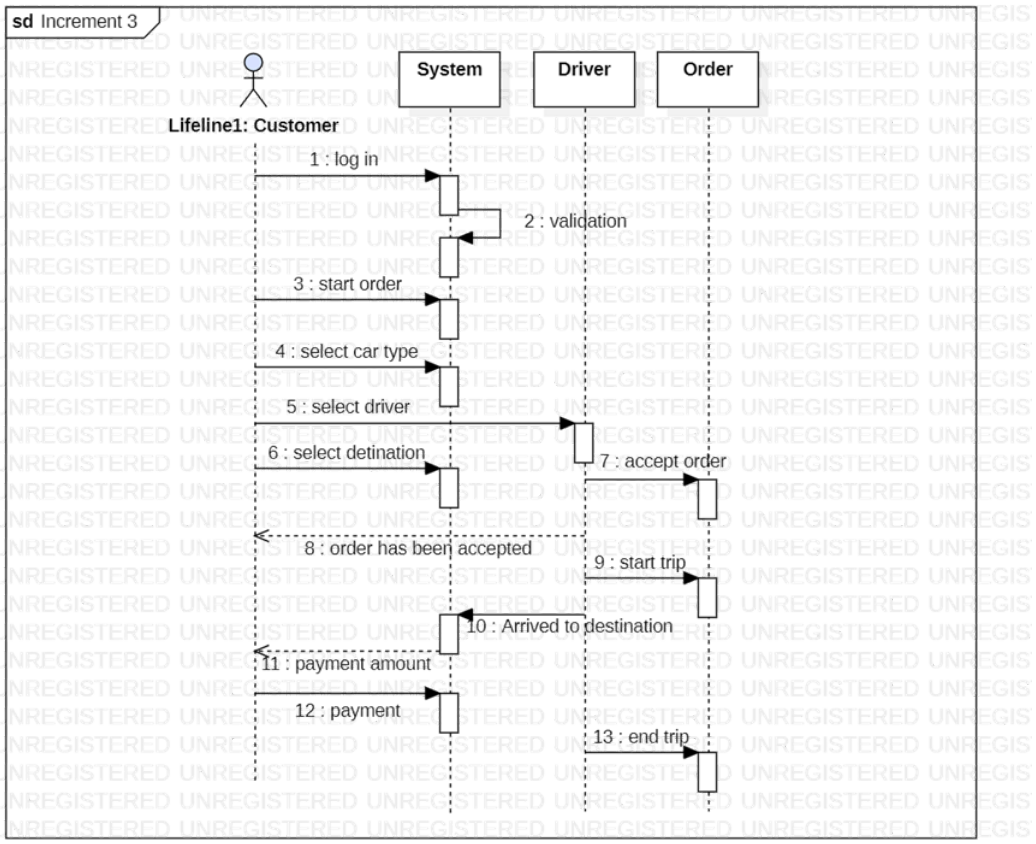
3.5.2 Activity diagram



3.5.3 Statechart diagrams



3.5.4 Sequence diagrams



5.6 Construction and Testing

5.7 Deployment

In the next increment, the users will be able to review, and report saved locations. Moreover, the system will provide a monthly subscription.

6 Increment 4

6.1 Tasks

1- review and report saved location
2- provide monthly subscription

6.2 Formulation, Negotiation, and Elicitation

fromulation

The primary goal of this increment is to make reviewing and reporting the saved location easier, as well as to give users the option to subscribe monthly.

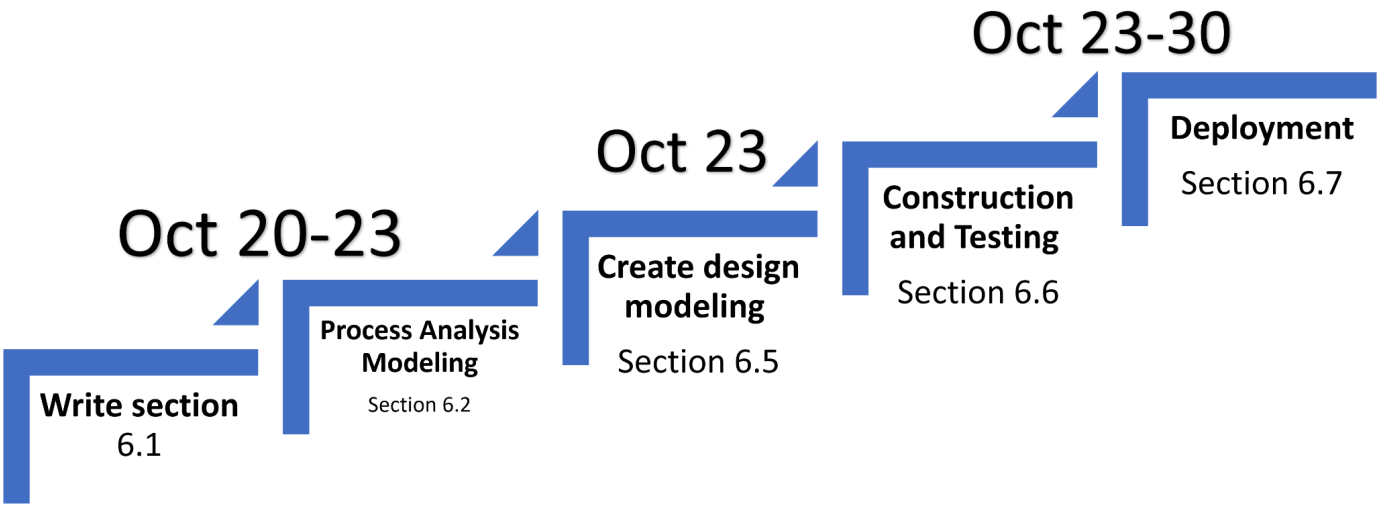
Elicitation

The customer's entire ride will be saved by the system, including the date, cost, time, driver information, and location.The user can save locations as home or work using the system.Algorithms are used by the system to show the driver the shortest route.Users must be able to subscribe to the system on a monthly basis—300 SR for students and 500 SR for employees.

Negotiation

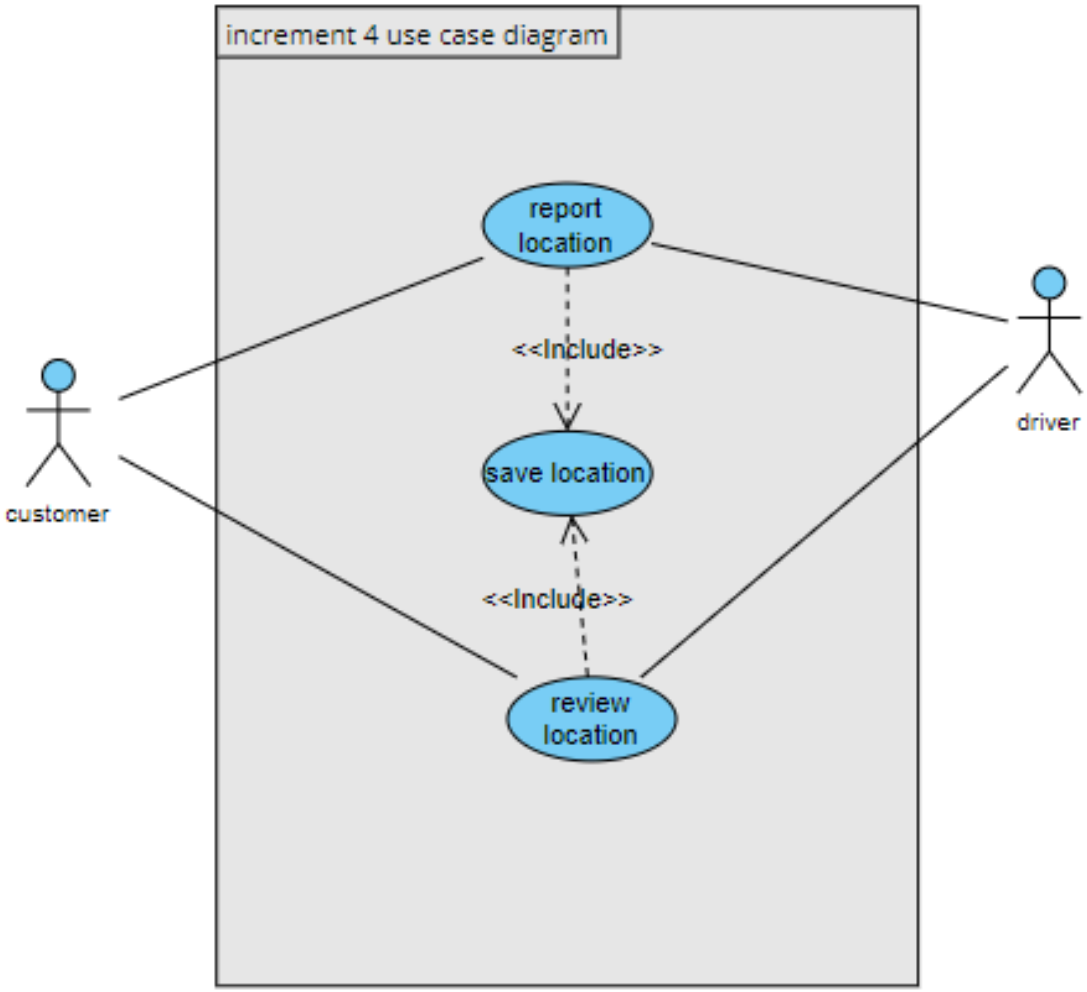
Users should be able to report and save locations on the same page as the system, and the subscription page will be on the payment page.

6.3 Planning



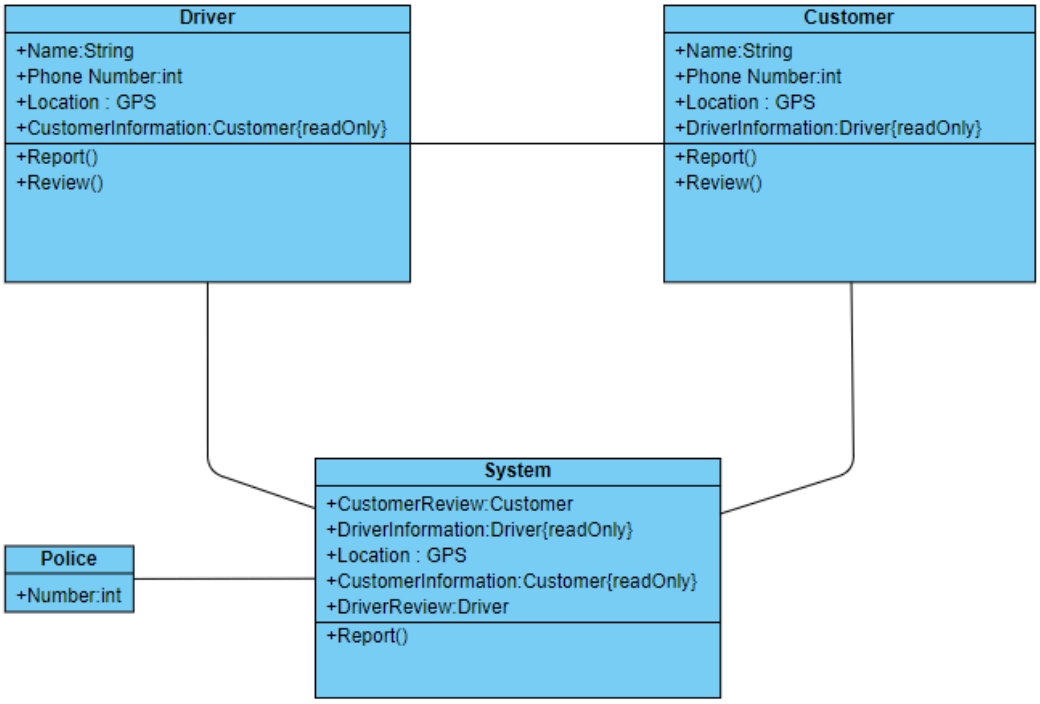
6.4 Analysis Modeling

3.4.1 Use case



6.5 Design Modeling

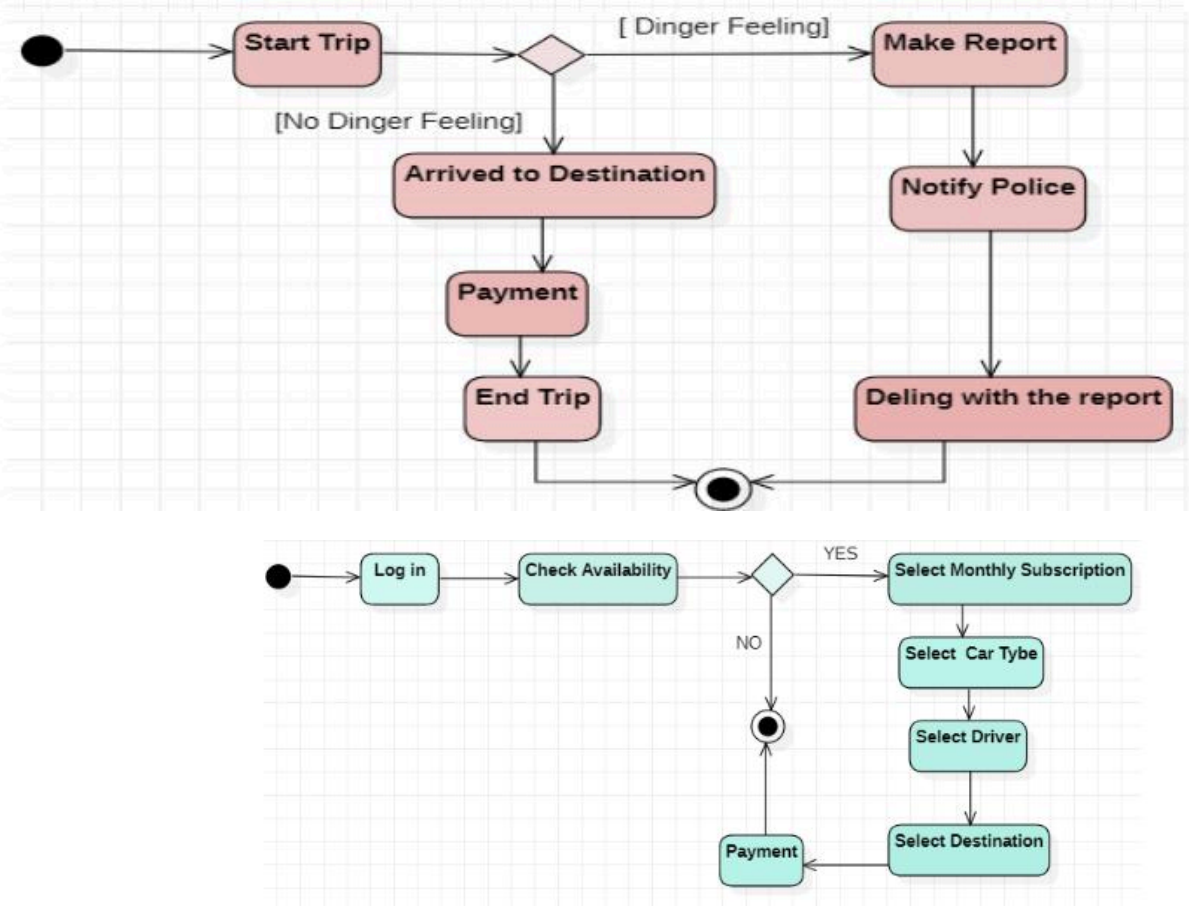
3.5.1 class diagram



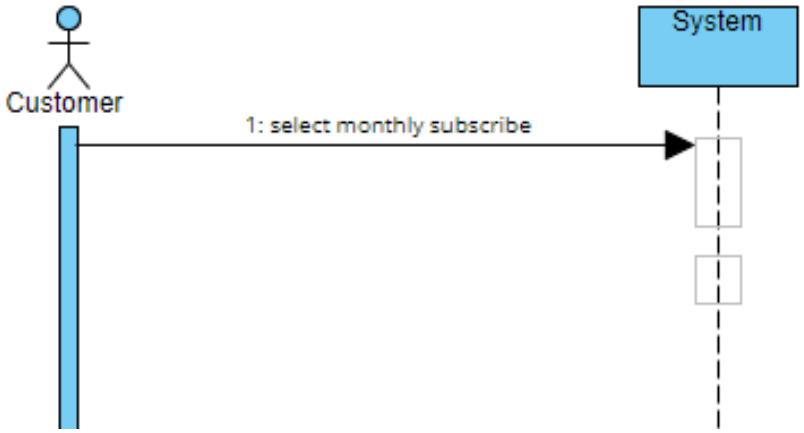
3.5.2 Activity diagrams

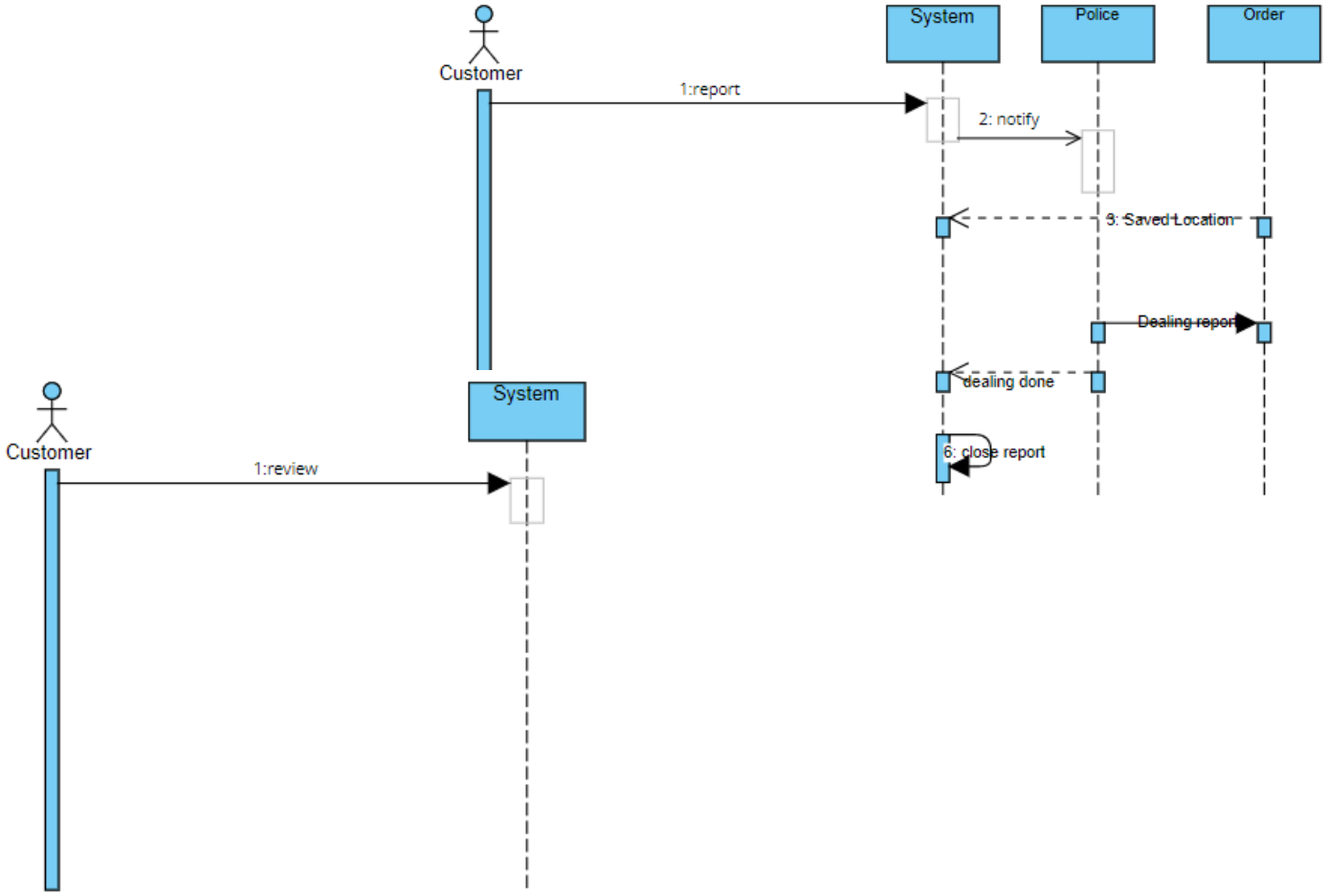


3.5.3 Statechart diagrams



3.5.4 Sequence diagrams





6.6 Construction and Testing

6.7 Deployment

Having developed a web application that complies with all increment requirements, this deployment of increment 4