Software Requirements Specification

For

Online Vehicle Seeker Management System

Version 1.0 approved

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1. Introduction

1.1 Purpose

In our daily life we waste a lot of time finding our desired vehicle when we need to go to certain places. We have realized that in our Khulna city there is no digital way to handle this problem. So, we came up with a software idea which we think will resolve this transportation problem.

1.2 Document Overview

The remainder of this document is three chapters, the first offering a general description of the software product about the initial situation, the purpose of the project, the context.
The second chapter lists the functional requirements that the software product should meet. So, it describes the actors, the system boundary and the use cases.
The final chapter exposes the non-functional requirements of the application, such as: performance, safety, security issues etc.

1.3 General Description of the product

1.4 Current situation

At present in Khulna city the general people use Auto Rickshaw or Rickshaw for transportation. But these Auto Rickshaw's only runs on the main roads. In Bangladesh most of the people live in small alleys where these Auto Rickshaw's are not available. So people waste a fair amount of time going to the busy main roads and finding vehicle and there is always a confusion between the passengers for misplaced fare.

1.5 Purpose of the product

The purpose of the product is to resolve all the problems mentioned in 1.4 to make a smart city

1.6 Product context

In our software the users will be able to find nearby vehicle and they will be able to see the per seat cost. On the other hand, any person having a vehicle and proper license can use our website and find desired passengers. So everyone can be benefited.

1.7 References

List of documents/Web addresses to which this SRS refers:

[1]. https://www.tutorialspoint.com/software_engineering/software_requirements.htm
[2]. https://ocw.cs.pub.ro/courses/

2. Overall Description

2.1 Product Functions

Our project contains the following functions/features:
Here, we will have two types of users.
[1]. Drivers
[2]. Passengers
[3]. Administrators

- **Features for Driver:**
  - Create account
  - Can add car picture and license photo along with mobile number
  - Add location
  - Add two types of trips. They are regular and one off
  - Add per seat cost (if regular)
  - Add per seat cost and available seat (if one off)
  - Add available time (if regular)
  - Add Current Location and Destination also trip time (if one off)
  - Can edit trips
  - Can delete trips
  - Can set status. They are available or not available.
  - A driver currently serving another passenger, can set his current status to not available
  - A driver currently not serving any another passenger, can set his current status to available
  - Get salary notification.
  - Log out.

- **Features for passenger:**
  - Login.
  - Passenger can search for drivers.
  - the software will show nearest drivers in 5 k.m. radius
  - User can also search for his location point to the destination point in case of one off trip
  - Logged in passenger can see other drivers profile

- Passenger can see other drivers phone number
- Passenger can see other driver's current status
- Passenger have to give review of the driver he has taken service from
- Logout

- **Features for Administrator:**
  - Administrator can check whether the driver has given the license photo
  - Administrator can check the given fair is justified or not
  - Administrator can ban any driver

2.2 User Classes and Characteristics

The client should have the basic idea to operate the system and he already has the experience to work in internet (browser). Default language is English

Some of the users identified for this system through use case analysis are listed below:

- Driver
- Passenger
- Administrator

2.3 Operating Environment

We are going to use Html, Css, Java script, Jquery, Php, Bootstrap, MySql, Google map's Api, Ajax and Jayson. Our website will be accessible from both mobile and computer. It will run on any operating system

2.4 Design and Implementation Constraints

- SQL commands for queries/applications
- Implement the database at least using some users details in database management system
- Will build the website in such a way that it would be compatible for any mobile screen resolution

2.5 User Documentation

Regardless the types of users, we will provide a user manual so that they won't face any problem.

2.6 Assumptions and Dependencies

- Database error may occur
- Passenger may give false review
- Driver may give fake car or license image

3. External Interface Requirements

3.1 User Interfaces

- **Front-end software:** HTML, CSS, Javascript , Jquery, Bootstrap
- **Back-end:** PHP, Mysql, Google map's API, Ajax, Jayson

3.2 Hardware Interfaces

A bowser which supports CGI, HTML & Javascript.

3.3 Software Interfaces

- **Client on internet:** Can be browsed from any computer or mobile phone
- **Web Server:** Xampp, opearting system (any)
- **Database Server:** Mysql

3.4 Communications Interfaces

Client on internet will be using HTTP/HTTPS protocol

4. System Features

This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case,

mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.

4.1 System Feature 1

Some of the features are identified for the software. They are:

- **View available vehicles:** The client must be able to see all the details about the available vehicle without any constraints
- **Calculate fare:** client must be able to the fare they should pay for the vehicle
- **Feedback:** The user must be able to rate the driver and the administrator will analyze those feedbacks

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Our project will be always up-to-date with all new supported features and bug fixes. So the user is able to check for new versions of the program just by clicking a button. It's a light application that needs very few system resources in order to work**.**

5.2 Safety Requirements

We will conduct a background check on all drivers and vehicle cannot be more than 15 years old. If you come across any problem while traveling you can call the emergency number which will be added in our website.

6. Questionnaire

For the betterment of our project, we went to the general publics of Khulna city. We explained our software features and asked them what features they want to add to improve the software quality The answers are as follows:

Person1: I want the drivers to be professional. He should know how to drive a vehicle, I want a safe, risk free journey

Person2: I want to check if the driver of the car is good enough and he has proper license. I don't want any violation of traffic rules

Person3: I should able to see the per seat cost, so that no bargaining occurs

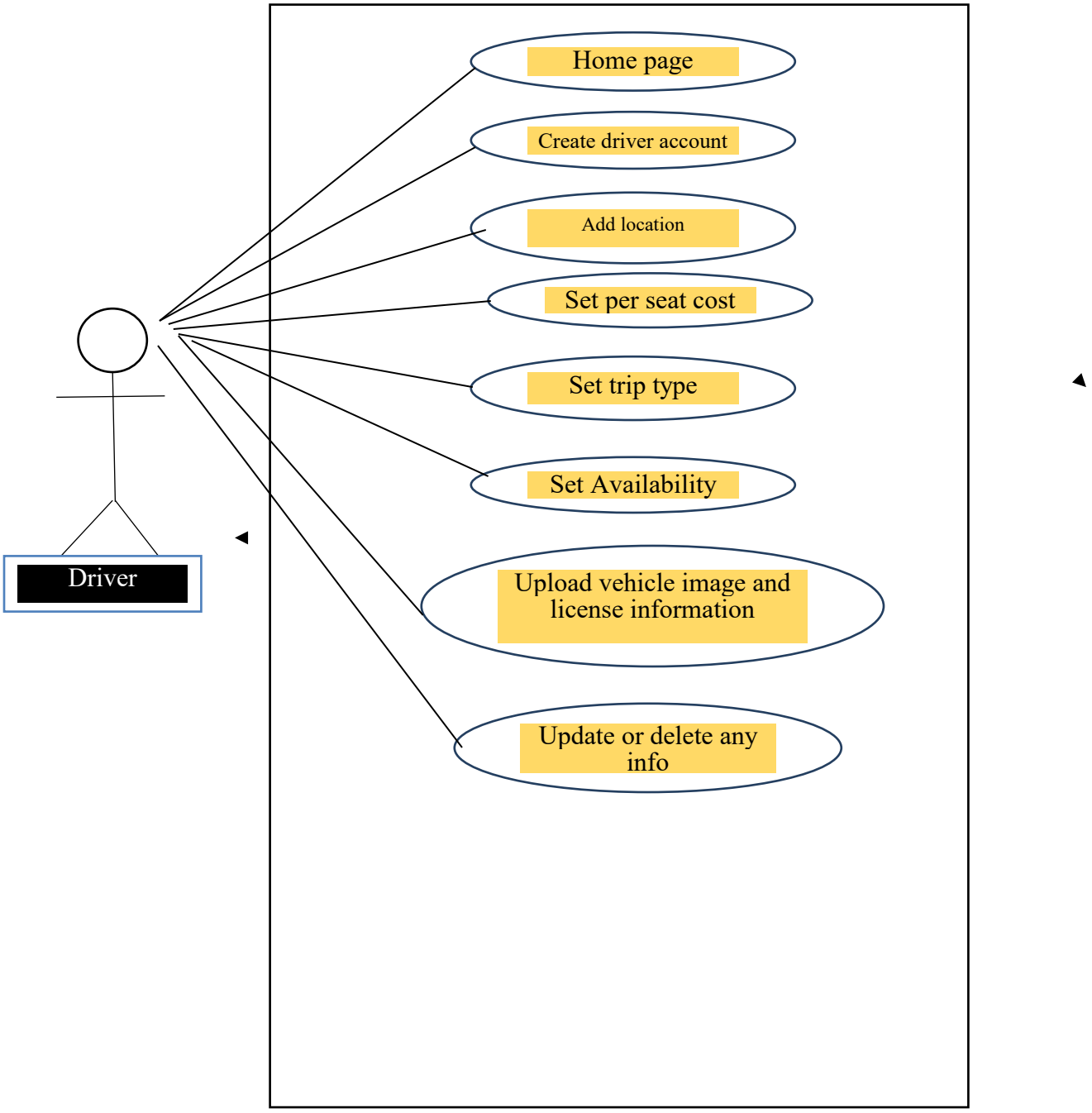
Person4: I should able to see what other passengers think of the behavior and the service of the driver and I also should be able to give ratings to him

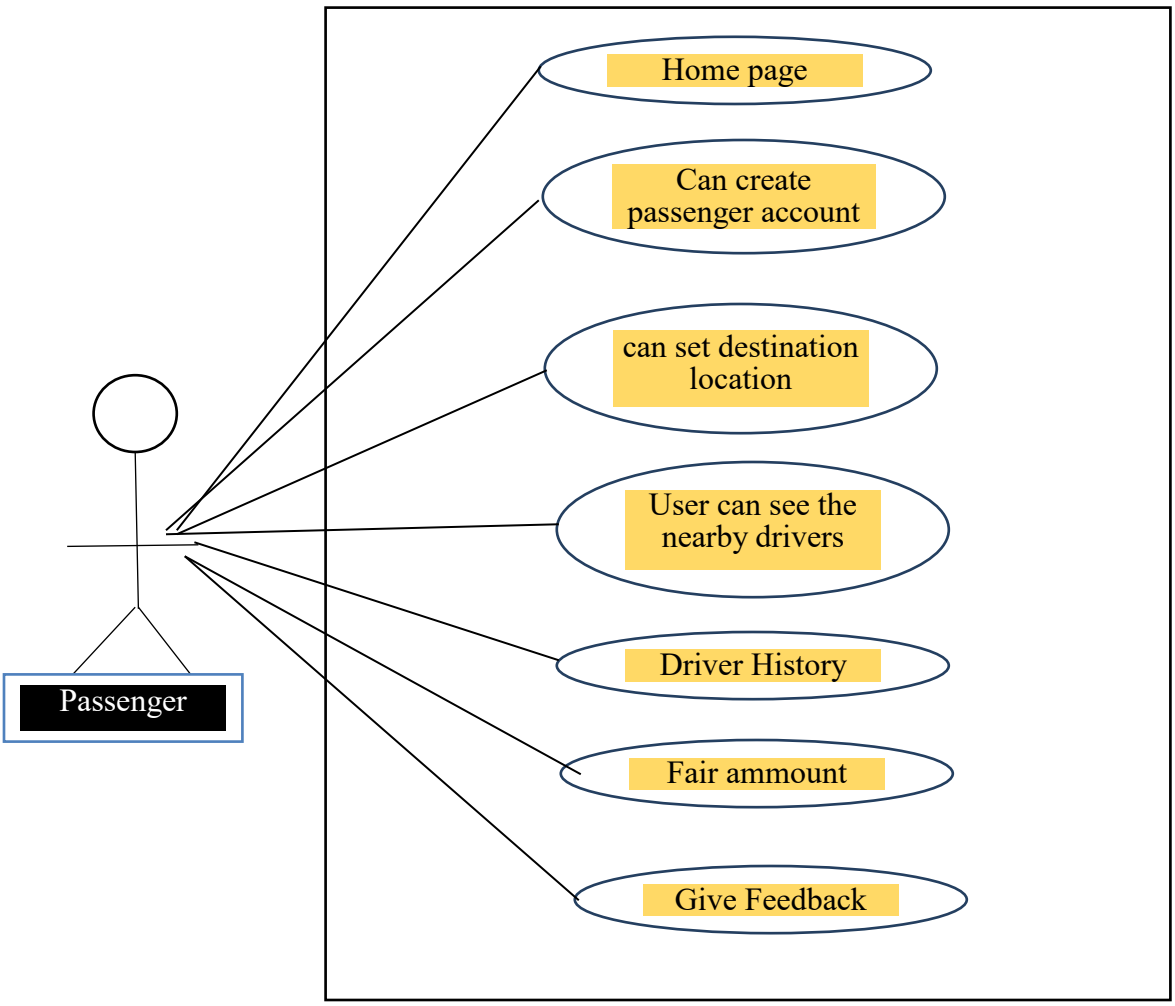
Person5: I have seen this kind of services in Dhaka. I would love to see this in our Khulna city.

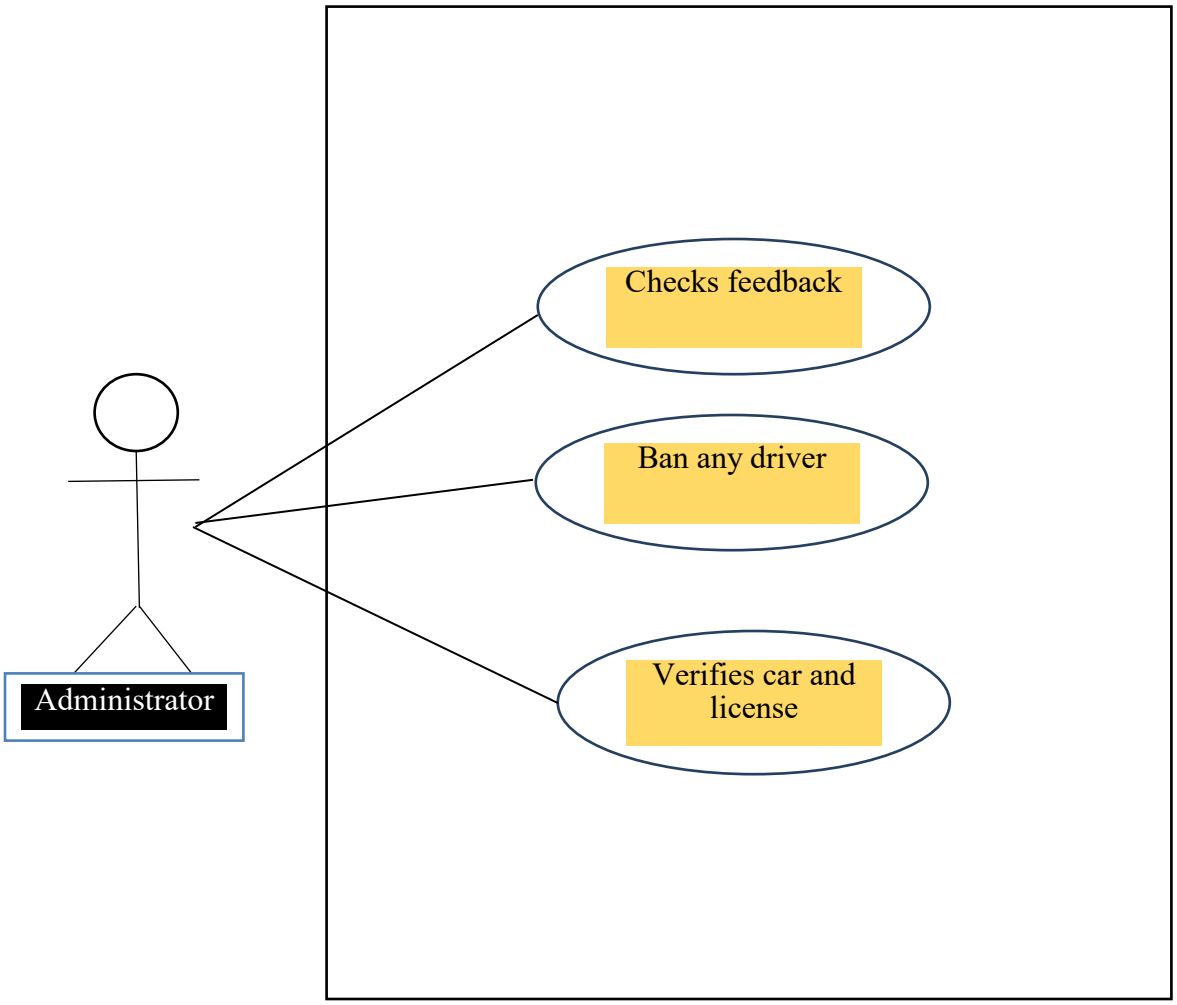
Person6: The driver should be able to see my location, so that he would have no problem finding me.

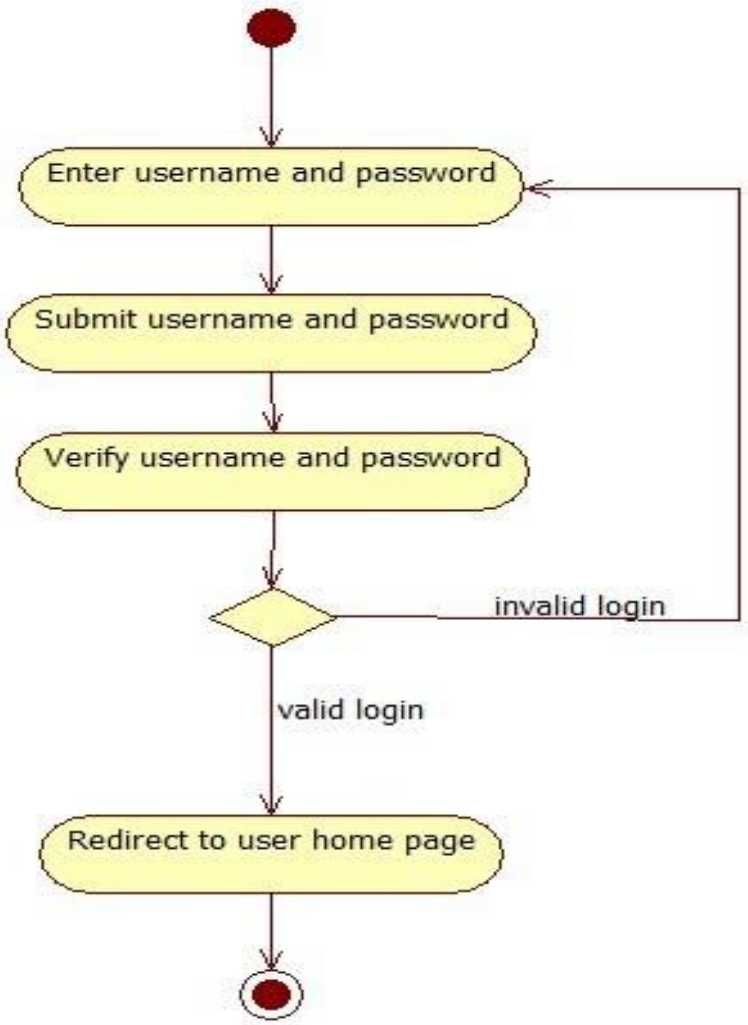
We have also provided a AUDIO FILE that we recorded from different locations.

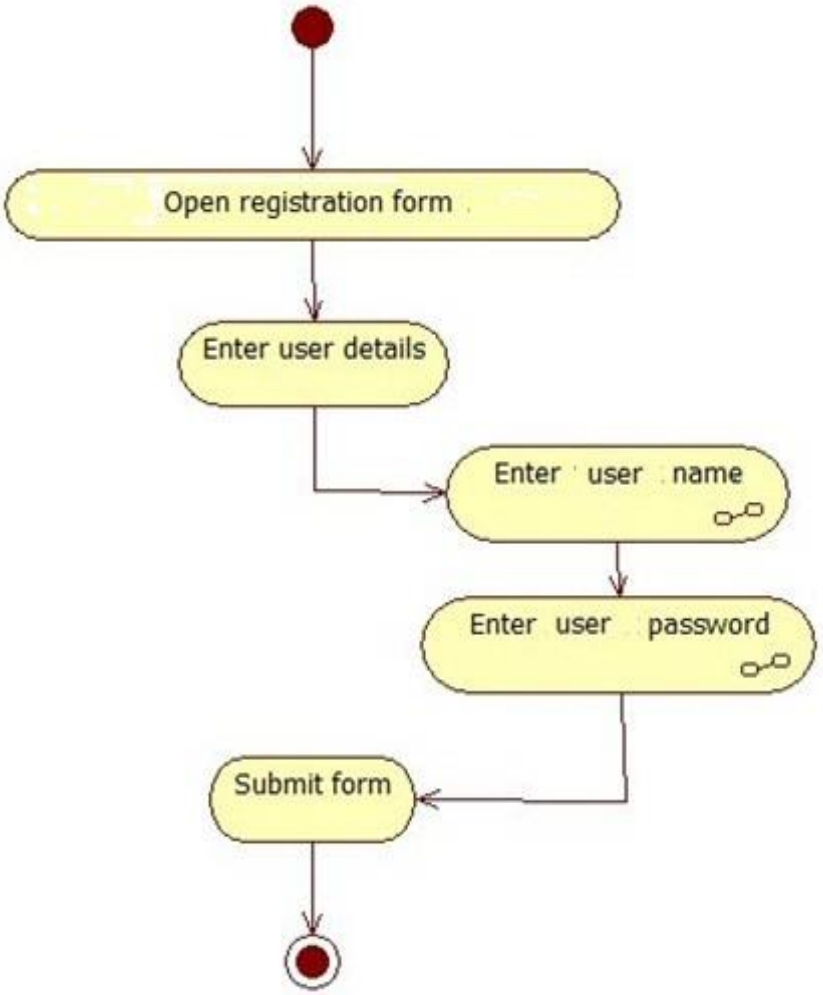
7. Case Diagrams




Home page
Can create passenger account
can set destination location
User can see the nearby drivers
Driver History
Fair ammount
Give Feedback
Passenger


Checks feedback
Ban any driver
Verifies car and license
Administrator


Enter username and password
Submit username and password
Verify username and password
invalid login
valid login
Redirect to user home page


Open registration form
Enter user details
Enter user name
Enter user password
Submit form

7.1 Use Case Descriptions

HOME PAGE

Use Case Name	**Home page**
Brief Description	The home page provides all necessary page links based on the user accessibility.
Priority	Essential
Trigger	The user can access after log in.
Precondition	The user must be connected to the internet.
Basic Path	1. The Server presents the users with the user Home Page.
Alternate Path	N/A
Post condition	User is on the User Home Page
Exception Path	If there is a connection failure, the Departmental Server returns to the wait state

Create Driver Account

Use Case Name	**Create Driver entry**
Brief Description	This operation creates Driver entity.
Priority	Critical
Trigger	The Driver can access after log in.
Precondition	The user must be connected to the internet.
Basic Path	1. The web server presents a form for the driver 2. Driver fills in the form and clicks submit. 3. The server checks to see if all the required fields are not empty. 4. If all the required fields are not empty, the server creates a new teacher entity to the database. 5. If any required field is empty, the server returns an error message.
Alternate Path	N/A
Post condition	The server creates a new drivers entity to the database.
Exception Path	If there is a connection failure, the Departmental Server returns to the wait state

CREATE PASSENGER ENTRY

Use Case Name	**Create Passenger entry**
Brief Description	This operation creates passenger entity.
Priority	Critical
Trigger	The passenger can access after log in.
Precondition	The user must be connected to the internet.
Basic Path	1. The web server presents a form for the passenger. 2. Passenger fills in the form and click submit. 3. The server checks to see if all the required fields are not empty. 4. If all the required fields are not empty, the server creates a new teacher entity to the database. 5. If any required field is empty the server returns an error message.
Alternate Path	N/A
Post condition	The server creates a new parent entity to the database.
Exception Path	If there is a connection failure, the Server returns to the wait state

LOGIN

Use Case Name	**Login**
Brief Description	This operation takes the user to his account
Priority	Critical
Trigger	Users Chooses to login
Precondition	The user must be connected to the internet.
Basic Path	1. The web server presents a form for the Users. 2. User fills in the form and click submit. 3. The server checks to see if all the required fields are not empty. 4. If all the required fields are not empty, the server takes the user to his account. 5. If any required field is empty the server returns an error message. 6. The server returns the user to the home page.
Alternate Path	N/A
Post condition	The server takes the user to his account.
Exception Path	If there is a connection failure, the Departmental Server returns to the wait state

Search for Driver

Use Case Name	**Find Drivers**
Brief Description	Passengers can search for nearby drivers
Priority	Critical
Trigger	Accessible passenger is logged in
Precondition	The passenger must be connected to the internet.
Basic Path	1. The Passenger can see his current location in a map 2. Passenger can search for nearby drivers. 3. If passenger wants to have a one off trip . He can search for current location to destination and our website will show the nearby drivers matching user requirements. 4. Our website search for the drivers within 5 kilo meters radius
Alternate Path	N/A
Post condition	Passenger is on basic passenger page
Exception Path	If there is a connection failure, the Departmental Server returns to the wait state

View Driver profile

Use Case Name	**View Driver profile**
This operation views the driver deatils	Logged in passenger can view drivers profile
Priority	Critical
Trigger	Only accessible from logged in profiles
Precondition	The user must be connected to the internet.
Basic Path	1. The passenger can select driver profile from driver list. 2. The passenger can see the pictures of driver's car, license etc. 3. This page also shows the phone number of the driver and per seat cost and available seat 4. The user can also see what kind of a trip the driver is offering. 5. Passenger can give reviews to the driver and the review will be visible in drivers profile
Alternate Path	N/A
Post condition	The server creates a new meeting entity to the database.
Exception Path	If there is a connection failure, the Departmental Server returns to the wait state.

DRIVERS PAGE

Use Case Name	**Drivers page**
Brief Description	This page is made for Driver only
Priority	Critical

Trigger	The driver can access after log in.
Precondition	The user must be connected to the internet.
Basic Path	1. The driver can select his location from this page. 2. He can select weather it's a regular or one off trip 3. He can upload car pictures and license pictures 4. He can add per set cost and available seat 5. Also driver can turn on and off the availability switch. Which will help user to notice weather the driver is available or not.
Alternate Path	N/A
Post condition	The driver is on the driver's page
Exception Path	If there is a connection failure, the Departmental Server returns to the wait state

Driver Information Update/Delete page

Use Case Name	**Driver Information Update/Delete page**
Brief Description	This page gives the driver the freedom to update or delete his information's.
Priority	Essential
Trigger	The driver can access after log in.
Precondition	The user must be connected to the internet.
Basic Path	1. Driver can update or delete his information's from here.
Alternate Path	N/A
Post condition	User is on the update/delete Page.
Exception Path	If there is a connection failure, the Departmental Server returns to the wait state