Project Report

(SRM University)

Online Bus Booking System

(E-Ticketing)

Software Engineering

Group:

Akhila(AP19110010322)

Navya(AP19110010417)

Suparnika(AP19110010480)

Abstract

To reserve a bus ticket at any place at any time for any place and for any time, it is difficult, because Bus ticket reservation is done only at certain places and with long queues. So this Online Bus Booking system is the solution for this issue. Using this system, people can reserve tickets from anywhere to anywhere. The Online Bus Ticket Reservation System is a centralized Web-based service. This project examines the software programme "Online Bus Ticket Reservation System" as it should be used in a bus transportation system, including a facility for reserving seats, canceling reservations, and various types of route inquiries for securing quick reservations. OBTRS was created to manage and computerise traditional databases, ticket purchasing, and bus and travel tracking. It keeps track of all customer information, bus information, and reservation information. Imo Transport Company (ITC) was chosen as a case study to achieve the design because of its strategic importance to IMO State. The SSADM (Structured Systems Analysis and Design Methodology) was used.Furthermore, the front-end of the software was created using the PHP Hypertext Pre-processor (PHP) language, while the back-end was created using MySQL. The software developed can help improve customer service and relationships. ITC operations management Despite the fact that the current functionality of the developed software, as well as other features such as the ability to send tickets via email. Customer alerts and online credit/debit card payments should be available. included into the system ITC also has other operations, such as courier services. In order to improve the system, services should be interconnected.

SRS Document for Online Bus ticket Booking

1. Introduction:

1.1 Purpose:

This document provide the SRS of the project, Online Bus Ticket Booking System. Usually, people won't get the reservation easily, one need to stand in long queue and fill the application form and need to submit it in the reservation counter. Even after doing all these things, one can't ensure that the person will get a ticket reserved. The purpose of this project is to make the reservation process easier by providing online

1.2 Document Conventions

The main headings in this document are in bold,font size-14,font-style-Times New Roman and indicated with serial number. The subtopic of the main topic has the same characteristics except the font size which is 12 and these sub topics are indicated with serial number.

1.3 Intended Audience

The clients who gave this project and the people who belongs to testing, coding, managing departments and the people who are assigned to this project can access this document.

1.4 Product Scope

This Online bus ticket booking system is used to reserve certain number of tickets from anywhere to where at any time. using this E-ticketing system, one can see the list of buses that are available at various times and they have the chance to reserve tickets even few hours before the arrival. And this system doesn't require any prior knowledge as it is easy to understand,use and to operate. This project will ask for source, destination details and the passenger details and also support different mode of online payments. We can cancel our bus tickets at any moment, but the refund of the payment should depend on when the cancellation has been done. This

system replaces the Bus reservation system which makes many people job easier. This project can be extended further by adding train or flight tickets

1.5 Contact Information/SRS Team members

K.N.P.Suparnika- suparnika_k@srmap.edu.in

S.Navya- navya_sadineni@srmap.edu.in

N.Akhila- akhila_nathani@srmap.edu.in

2. Over all description

2.1 Product perspective

The website will start asking the user for the source, destination and the day for which user need to book tickets. According to this information, the website will show different types of buses that are available at various time, with various facilities and with various prices. Based on user requirements and according to his desire he would choose a bus. And after this, the website reaches a new page which provides the blue print of the bus and by clicking the seats, user can reserve that many seats. After this process, we need to fill in the details of the passengers (Name, age, Gender). Online payment will follow after filling this. Even here, we would have various options to perform online payment like debit card, credit card, UPI etc. After the payment was successful, a message is sent to the registered Phone number. The message contains the details of seat numbers, arrival time, place of departure also includes a link which is used to cancel our bus tickets. If we click that link it will provide the amount that would be refunded and also give an option for confirmation. The objectives of this project are:

i) Providing a web-based bus ticket reservation function where a customer can buy bus ticket through the online system without a need to queue up at the counter to purchase a bus ticket.

ii) Enabling customers to check the availability and types of buses online. Customer can check the time departure for every ITC bus through the system.

iii) Easing bus ticket payment by obtaining a bank pin after payments is made to the various designated banks.

iv) Ability of customers to cancel their reservation.

v) Admin user privileges in updating and canceling payment, route and vehicle records.

2.2 Product Functions

a. Make Online Bus ticket Reservation

b. Provide list of various buses. The list also contain the arrival time,prices, facilities provided by various buses

c. Issue Bills

d. Various options in online payments.

e. Confirmation message

f. Message contain the complete details of bus.

g. Facility to cancel the tickets.

h. Confirmation of the cancellation.

i. Refund amount after cancellation.

2.3 User classes and characteristics

The website should work in Desktop or mobile. Any body can easily use this software with some prior knowledge about computer or mobiles, English language, internet and online payments. The website uses Graphical user Interface which is user-friendly.

2.4 Operating Environment

This System should be available on any browser and should be available as a app which can be downloaded.

2.5 Design/Implementation Constraints

- All of bus and passenger record must be protected for all steps

- In the future, it is possible that the software design will have to incorporate changes that could take place in other travel agency in the same domain. The bus and passenger record of all travel agency in domain should have same standards of data format and security of data when transferring between the agencies also needed.

- Changes or additions about payment methods can affect the system directly

- The system must be user-friendly

2.6 Assumptions and dependencies.

a. When two persons try to access the same seat at a time. It might raise a problem. The System should follow only a single person to update at a time.

b. If the payment is unsuccessful because of internet issues or because of any other reason, people should know how to handle it or the contact information of the concerned department should be provided.

c. The details of the phone number and the account details must be cross checked.

d. The vacancies in the specific bus should be updated continuously.

3. External Interface Requirements

3.1 User interfaces

The user Interface for software shall be compatible to user which can access to the system. The user Interface shall be implemented using any tool or software package like asp, jsp, servlet etc.

3.2 Hardware interfaces

We would need the Intel Core2Duo System and 1GB of memory at the minimum for the client. Thus the corporate server needs to be a server class machine with at least 2GB and Intel Xeon system per rack and 15TB of storage at the minimum and also have the dedicated links between the server and clients.

3.3 Software interfaces

The client machines require Microsoft windows xp or better. The corporate server requires red hat enterprise Linux AS 5(RHEL 5) and oracle data base 11G enterprise edition to hold on to all archives also both the client and server computer must have internet browser to work.

3.4 Communication protocols and interfaces

The system will perform the following functions:
a. Sophisticated and user friendly interface for all passengers
b. Individual account or profile for each user related to the system.
c. Implement bus, passenger, driver and staff data base systems.
d. Implement account system for managing invoices.
e. Each passenger needs only one bar code i.e, pin and username for waking through every step.
f. Keep secret for all of passenger profiles. Each division can see only necessary data of each passenger for analyzing.
g. Internet connection to work on with the system.
h. Emergency help system in case of any accident and any other technical or non-technical problem or risk.
i. Real time or dynamic service should be given in case of all changes appearing in the system.

4. System Features

4.1 Home Page

In this page the passenger can register with his phone number and name. Once the registration is successful, he can choose the desired source, destination and date of the departure. If there is no such feature it would be difficult for the software to reserve the tickets.

4.2 Availability of Buses

This page would show the available buses along with the prices, facilities and the arrival time. This feature can increase the number of users as we are not required to travel in the allotted one, instead we can choose one.

4.3 Payment

This payment page will display the amount that need to be paid and display various options which we could pay such as Credit, Debit or UPI.

4.4 One Time Password

After selecting the amount, OTP need to be send to that particular user’s mobile, so that we can ensure that the same person is booking tickets and it provides security for the user’s bank details.

4.5 Confirmation Page

This page will give a confirmation message to check whether our booking is successful or not. And after this confirmation page user will get a message which has the complete details about passengers, bus number, seat numbers, arrival time, date of the departure and a cancellation link.

4.6 Cancellation

By clicking on the cancellation link we reach to this page which asks for confirmation of cancellation and also provide the details of the refund of the payment(if any).

5. Other Non-functional Requirements

5.1 Performance requirements

The system need to be updated contiguously. There are certain times where there would be a heavy load on server like people used to travel more when there are holidays(Sunday), occassions or festivals. At this time also, the website should not reduce its level of performance. And if there is any error, it should be resolved within less time.

5.2 Safety requirements

a. The transactions should be done in encrypted manner.
b. The details that are provided by the user should be confidential.
c. The payment should be refunded successfully if there is Cancellation of tickets.
d. Some times, We see the scenarios where the payment is reduced in the user's account but the reservation becomes unsuccessful, which should not happen in any case.

5.3 Security requirements

This system should respect the privacy of the user and the details should not be for any personal desires, it should be used only for the communication between the software and the user in the form of notifications or messages.

5.4 Software quality attributes

This Online Bus Ticket Booking System also include the features such as adaptability, availability, correctness, flexibility, interoperability, maintainability, portability, reliability, re usability, robustness, test ability, and usability for developers and users.

5.5 Project documentation

All the primary details of this SRS document is recorded in the project documentation and producing the documents required to implement it successfully.

5.6 User documentation

User document provided in the website for all the passengers,drivers, conductors, helper, mechanic, office staff to get well known about the safety measures and medical requirements people need to take care of.

Design of the Project:

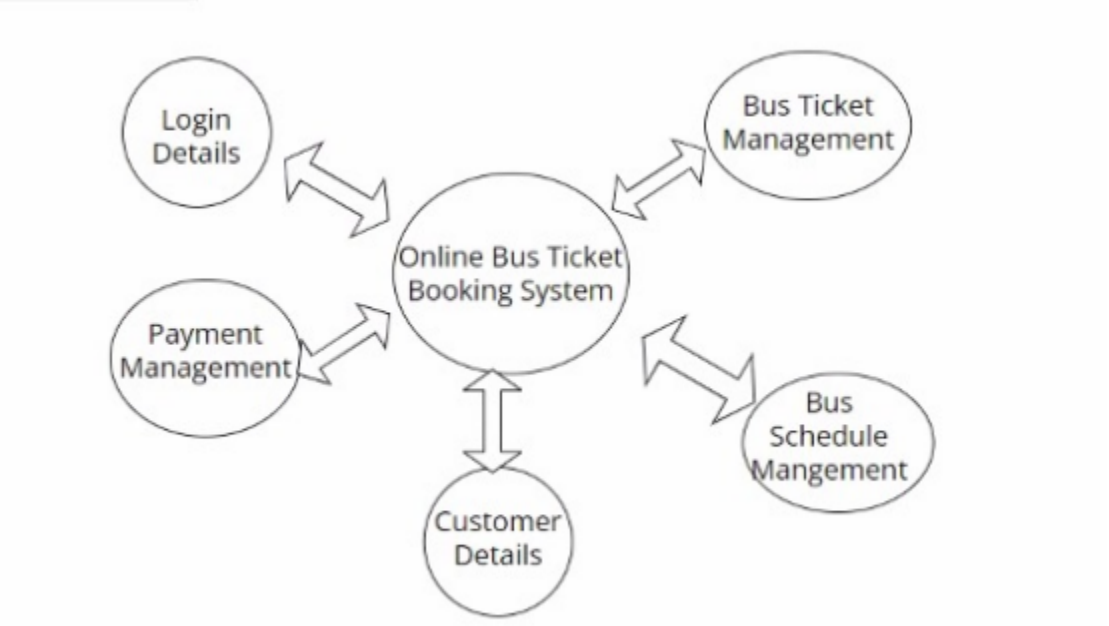
DFD:

Data Dictionary:

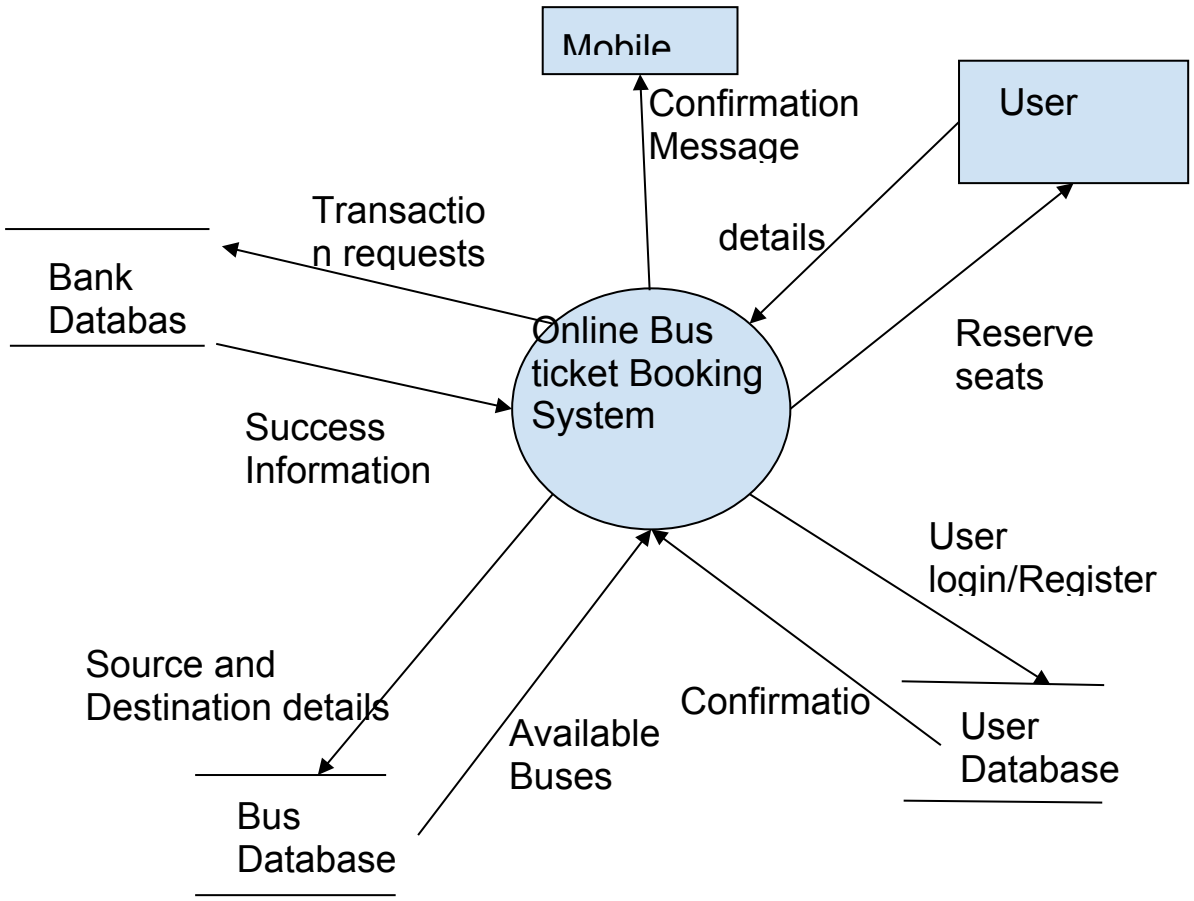
S.No	Name	Data type	Alias	Description	Example
1.	Source	Characters	Starting point, present location	The place from where you need to travel.	Guntur
2	Destination	Characters	Reaching point,arrival place	The place where you would like to reach.	Hyderabad
3	Phone number	Number{10}	Mobile number, contact		9898989898
4	Password	Alphanumeric	key	To provide security, a password is used.	User@123
5	User name	Alphanumeric	User id, user login	To recognise the customer, every user should provide a username.	Username.90
6	Passenger Name	Characters	Name,	Name of the	Maha

			traveler name	passenger.	lakshmi
7	Passenger Age	Numbers	age	Age of the passenger.	21
8	Passenger gender	enum{M,F, T}	sex	Gender of the passenger.	F
9	Account Number	Alphanumeric	Acc. Number	It contains 16 alphanumeric characters. Acc.No is used to make payments.	STB5 6071 4567 1234

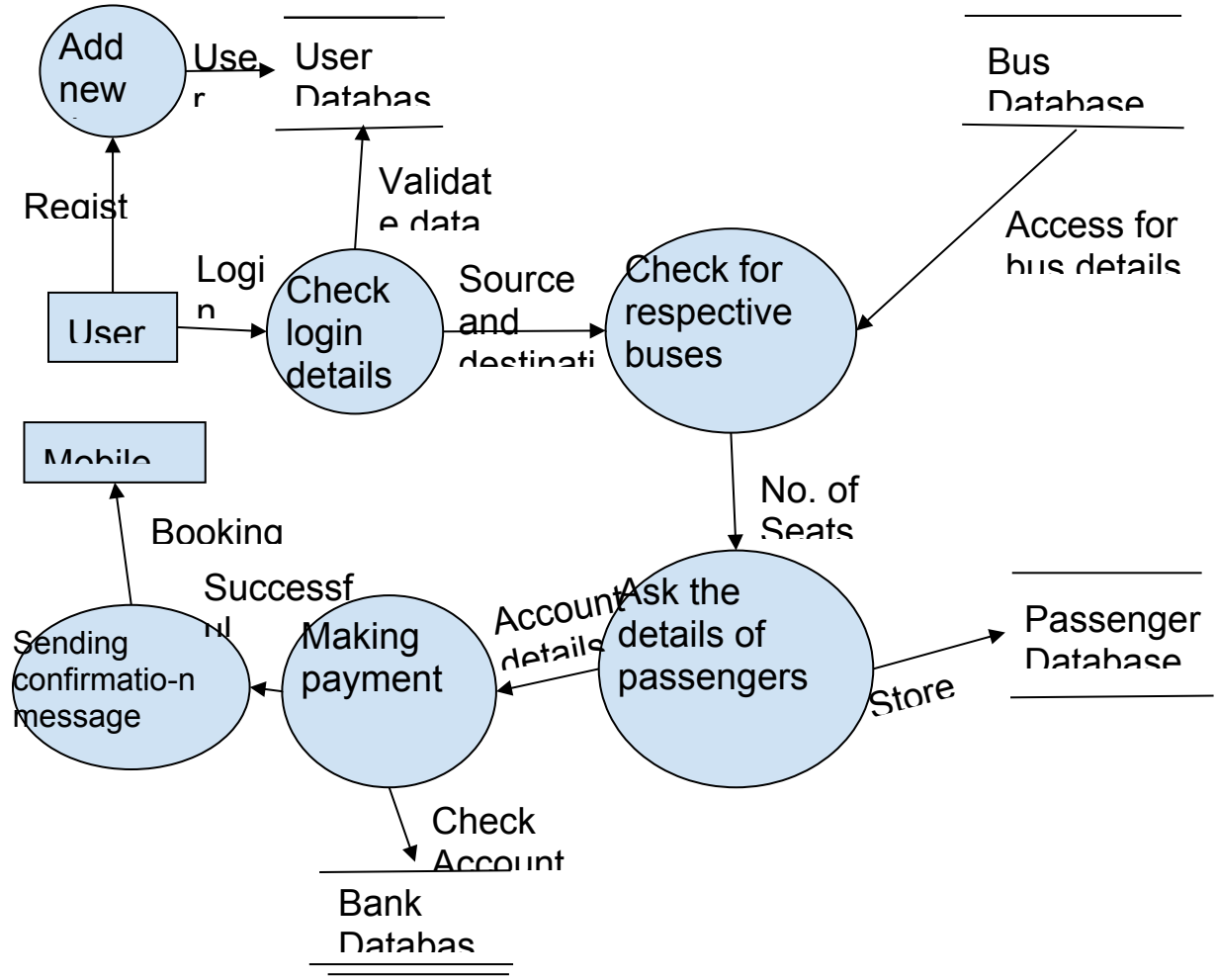
Level-0 DFD



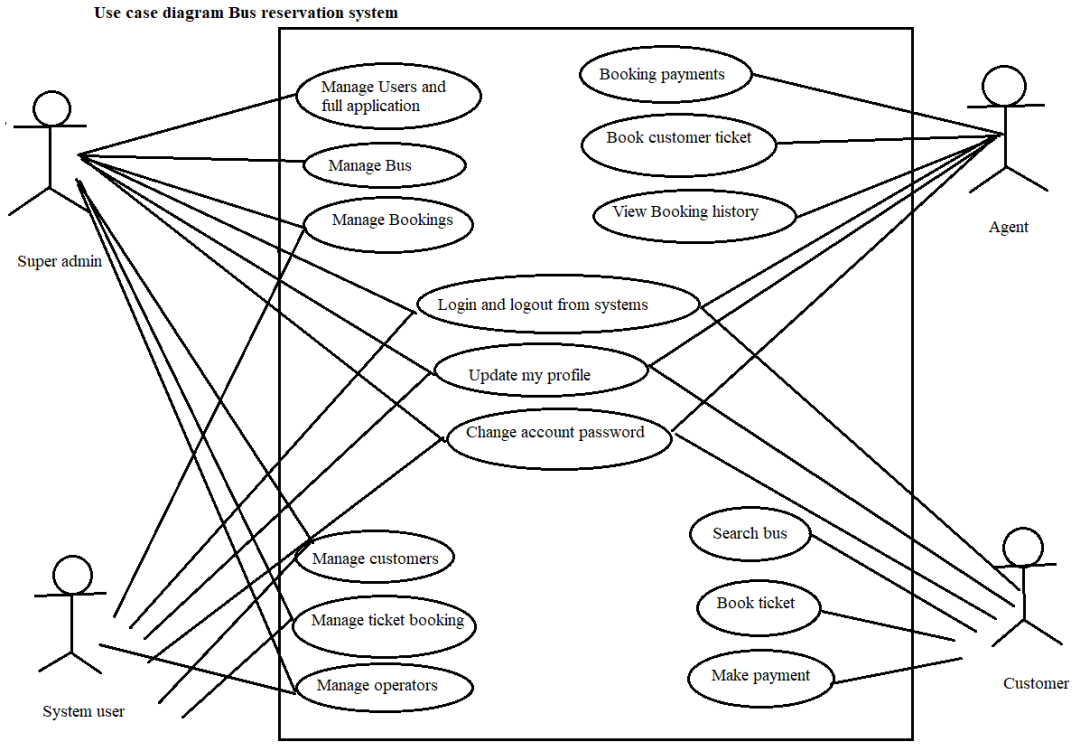
Level-1 DFD


Mobile
Confirmation Message
User
Transactio n requests
details
Bank Databas
Online Bus ticket Booking System
Reserve seats
Success Information
User login/Register
Source and Destination details
Confirmatio
Available Buses
User Database
Bus Database

Level-2 DFD

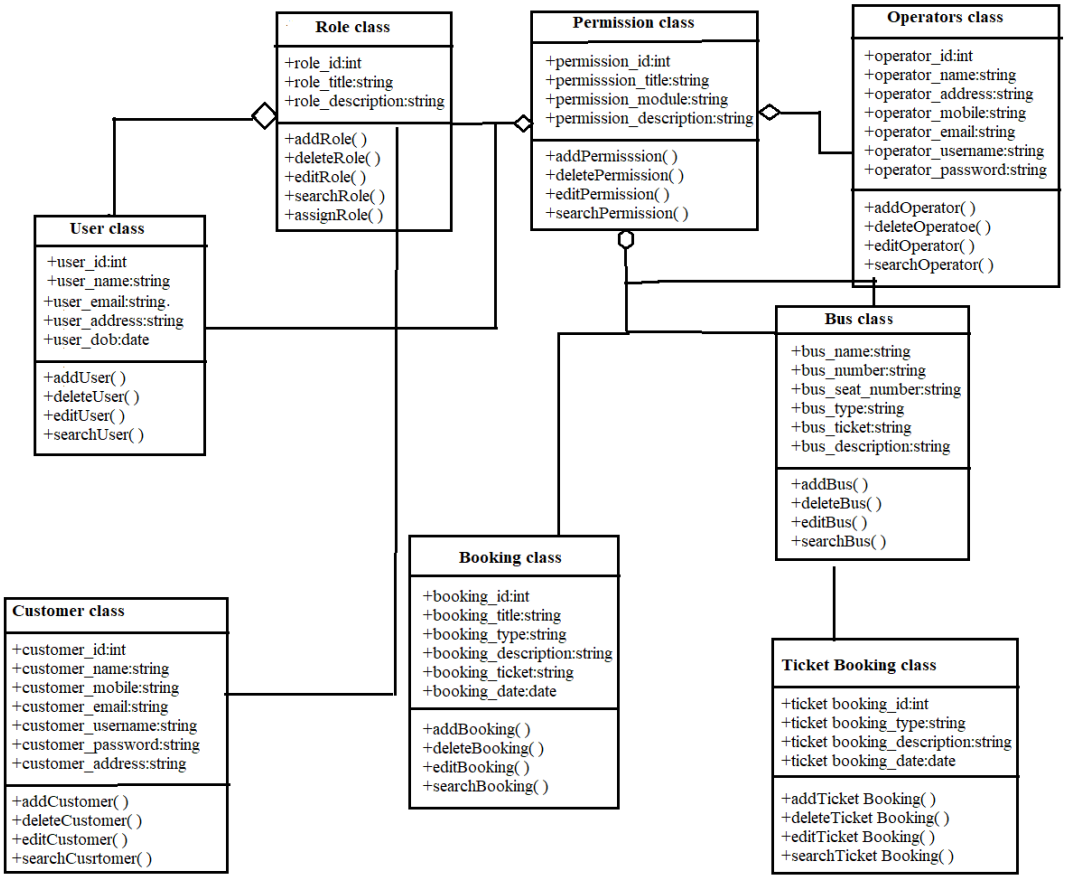


USE CASE Diagram:



Class diagram

Class diagram for Bus ticket reservation system



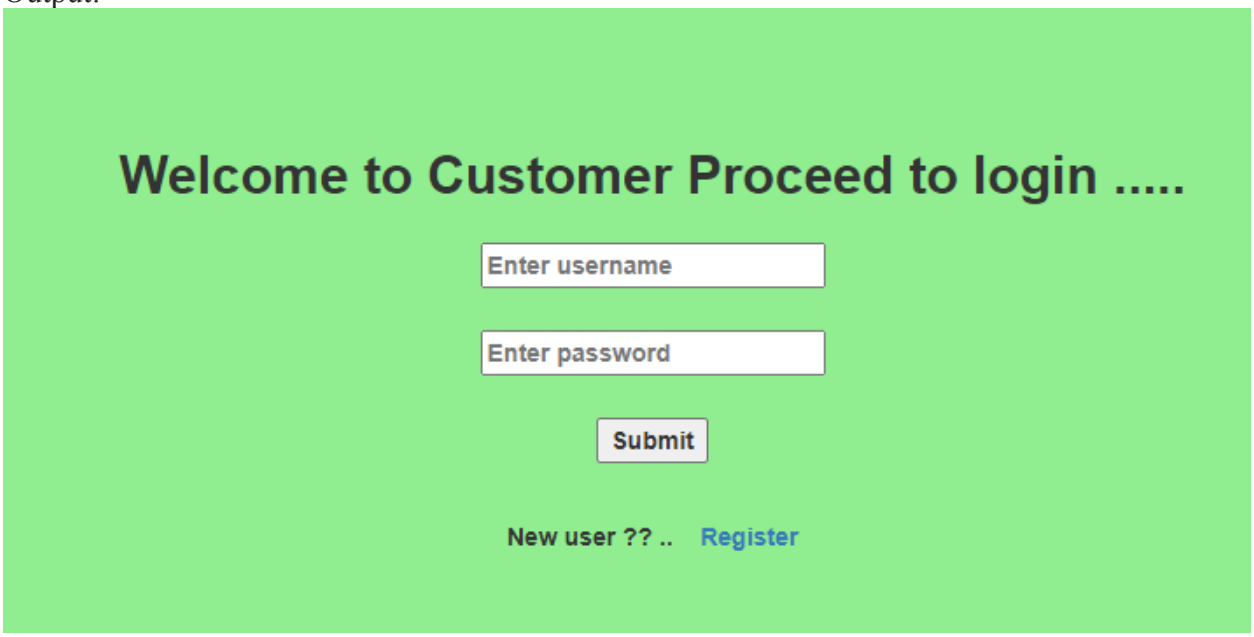
Code:

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>JFSD SKILL 4</title>
<meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

<style type="text/css">

body{
```

```
background-color:lightgreen;

}

</style>
</head>
<body>
<h1 align=center>Welcome to Home Page!!!</h1><hr color="blue"><hr color="blue">

<nav class="navbar navbar-inverse">
  <div class="container-fluid">
    <div class="navbar-header">
      <a class="navbar-brand" href="#">BookUrTicket</a>
    </div>
    <ul class="nav navbar-nav">

      <li><a href="index.html">Home</a></li>
      <li><a href="superadminlogin.html">Super Admin</a></li>
      <li><a href="tmanagerlogin.html">Theatre Manager</a></li>
      <li><a href="customerlogin.html">Customer</a></li>
      <li><a href="contactus.html">Contact Us</a></li>


    </ul>
  </div>
</nav>
<br><br>
<h2 align=center><b>Welcome to Customer Proceed to login .....<b></b></b></h2>
<center>
<form method="post" action="checkcustomer">
<fieldset style="width:200px;height:150px" >
<table align=center width=150 height=150>
<tr>
<td><input type="text" name="uname" placeholder="Enter username" required></td>
</tr>


<tr>
<td><input type="password" name="pwd" placeholder="Enter password" required></td>
</tr>

 <tr>
<td align=center><input type="submit" name="Login" ></td>
</tr>
</table>
</fieldset>
```

```
</form>
<br>
<b>New user ?? ..</b>   
<a href="customerreg.html">Register</a>
</center>


</body>
</html>
```

Output:



PHP Code to develop the connection between the database and web pages.

```
<?php
class Connection{

        protected $isConn;
        protected $datab;
        protected $transaction;

                                                                //un phpmyadmin    pass
phpmyadmin    ip                                  dbname
        public function __construct($username="root", $password ="", $host="localhost",
$dbname="medallion", $options = []){

                $this->isConn = TRUE;
                try{
                        $this->datab = new PDO("mysql:host={$host};  dbname={$dbname};
charset=utf8", $username, $password, $options);
                        $this->datab->setAttribute(PDO::ATTR_ERRMODE,
PDO::ERRMODE_EXCEPTION);
```

```
                        $this->transaction = $this->datab;
                        $this->datab->setAttribute(PDO::ATTR_DEFAULT_FETCH_MODE,
PDO::FETCH_ASSOC);
                        //echo 'Connected Successfully!!!';

                }catch(PDOException $e){
                        throw new Exception($e->getMessage());
                }

        }//endDefaultConstructor


        //disconnect from db
        public function Disconnect(){
                $this->datab = NULL;//close connection in PDO
                $this->isConn = FALSE;
        }//endDisconnectFunction




}//endClassDatabase

 //$con = new Connection(); //for debugging only
//echo 'debug connection';
 ?>
```

References:

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Cosmas,N.,Etus,C., Ajere,I.U.&Godswill,A.U.(2015). Online Bus Ticket Reservation System. Retreived from https://www.researchgate.net/profile/Chukwuemeka-Etus/publication/326468848_Online_Bus_Ticket_Reservation_System/links/5b4fc54b45851507a7ad6299/Online-Bus-Ticket-Reservation-System.pdf

Umar Khattab. (2019, November). Bus-reservation - system - SRS report. Scribd. Retrieved from https://www.scribd.com/document/441519339/bus-reservation-system-srs-report

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