

**HOTEL MANAGEMENT
SYSTEM
A MINI PROJECT REPORT**

Submitted by

**Vasu Buchingari
[RA2011003010412]
Shaik Hussain Ahamed
[RA2011003010439]
Chandra Sekhar Reddy Karna
[RA2011003010435]**

Under the guidance of

Dr.R.Subash
(Assistant Professor, Computing Technologies)

In partial satisfaction of the requirements for the degree of

**BACHELOR OF TECHNOLOGY
in
COMPUTER SCIENCE & ENGINEERING
CORE**



**SCHOOL OF COMPUTING
COLLEGE OF ENGINEERING AND TECHNOLOGY
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
KATTANKULATHUR - 603203**

MAY 2023



COLLEGE OF ENGINEERING & TECHNOLOGY
SRM INSTITUTE OF SCIENCE & TECHNOLOGY
S.R.M. NAGAR, KATTANKULATHUR – 603 203

BONAFIDE CERTIFICATE

Certified that this project report “HOTEL MANAGEMENT SYSTEM” is the bonafide work of “Vasu Buchingari[RA2011003010412] , Shaik Hussain Ahamed[RA2011003010439] ,Chandra Sekhar Reddy Karna[RA2011003010435]” of III Year/VI Sem B.tech(CSE) who carried out the mini project work under my supervision for the course 18CSC303J- Database Management systems in SRM Institute of Science and Technology during the academic year 2022-2023(Even sem).


SIGNATURE

Dr.Subash R
Assistant Professor
Department of Computing
Technologies




SIGNATURE

Dr.M.Pushpalatha
Head of the Department
Professor and Head
Department of Computing Technologies

ABSTRACT

A Hotel Management System is a software application used to manage and operate various activities in a hotel such as reservations, room assignment, check-in and check-out, billing and payment processing, housekeeping, and maintenance. It enables hotel managers and staff to streamline their operations, enhance customer service, and improve overall efficiency. The Hotel Management System typically consists of several modules such as a reservation system, front desk operations, housekeeping management, food and beverage management, accounting and billing, and analytics and reporting. These modules are interconnected and integrated to provide a comprehensive solution for managing hotel operations. The reservation system module allows guests to make bookings online or through a travel agent, and it enables the hotel staff to manage reservations, room assignments, and availability. The front desk operations module manages check-in and check-out, guest requests, and room changes. The housekeeping management module is responsible for managing housekeeping staff, room cleaning schedules, and inventory management. The food and beverage management module manages restaurant and bar operations, menu planning, and inventory control. The accounting and billing module handles guest billing, invoicing, and payment processing.

TABLE OF CONTENTS

Chapter No.	Title	Page No.
	ABSTRACT	iii
	TABLE OF CONTENTS	iv
	LIST OF FIGURES	v
	LIST OF TABLES	vi
	ABBREVIATIONS	vii
1	INTRODUCTION	1
1.1	Introduction	
1.2	Problem Statement	
1.3	Objectives	
1.4	Scope and applications	
1.5	General and unique services in database applications	
1.6	Software Requirements Specification	
2	LITERATURE SURVEY	4
2.1	Existing system	
2.2	Comparison of Existing vs Proposed system	
3	SYSTEM ARCHITECTURE AND DESIGN	5
3.1	Architecture Diagram	
3.1.1	Front end (UI) design	
3.1.2	Back end (Database) design	
3.2	ER Diagram and Use case Diagram	
4	Modules and Functionalities	9
4.1	Subtitle 1	
4.1.1	Subsection 1	
4.1.2	Subsection 2	
4.2	Connectivity used for database access	
5	CODING AND TESTING	13
6	CONCLUSION AND FUTURE ENHANCEMENT	28
7	REFERENCES	29

LIST OF FIGURES

Figure No.	Figure Name	Page No.
3.1	Architecture Diagram	5
3.2	Front End Architecture	6
3.3	Backend Architecture	7
3.4	E-R and Use case Diagram	7-8

ABBREVIATIONS

AES	Advanced Encryption Standard
ANN	Artificial Neural Network
CSS	Cascading Style Sheet
CV	Computer Vision
DB	Data Base
DNA	Deoxyribo Neucleic Acid
SQL	Structured Query Language
SVM	Support Vector Machine
UI	User Interface

CHAPTER-1

INTRODUCTION

1.1 Introduction

A Hotel Management System is a software application designed to manage and automate various activities in a hotel. The system enables hotel managers and staff to streamline their operations, enhance customer service, and improve overall efficiency. It is a comprehensive solution that covers various aspects of hotel operations, such as room reservations, check-in and check-out, housekeeping management, food and beverage management, accounting and billing, and analytics and reporting.

The use of Hotel Management Systems has become increasingly popular in recent years, as the hospitality industry continues to embrace digital transformation. With the help of technology, hotels can now offer their guests a seamless and personalized experience, while also optimizing their own internal processes.

A typical Hotel Management System comprises several modules that are interconnected and integrated to provide a complete solution. The system allows guests to make reservations online or through a travel agent, and it enables hotel staff to manage reservations, room assignments, and availability.

1.2 Problem Statement

Hotels are complex businesses that require a high level of organization and management to ensure smooth operations. However, many hotels still rely on manual processes, which can be time-consuming, error-prone, and inefficient.

This can lead to a range of problems, such as: **Overbooking:** When hotels do not have an accurate record of their available rooms, they may accept more bookings than they can accommodate.

This can result in guest dissatisfaction, lost revenue, and a tarnished reputation.

Inaccurate billing: Manual billing processes can be prone to errors, leading to incorrect charges and disputes with guests.

Poor inventory management: Without a proper inventory management system, hotels may face challenges in managing their supplies, leading to shortages, waste, and higher costs.

Limited guest data: Hotels that rely on manual processes may not have a complete record of their guests' preferences, history, and feedback. This can limit their ability to personalize guest experiences and improve customer service. **Lack of real-time insights:** Without a system to track and analyze hotel operations in real-time, managers may not have the data they need to make informed decisions and identify areas for improvement. These challenges highlight the need for a Hotel Management System.

1.3 Objectives

The main objectives of a Hotel Management System are as follows:

Streamline hotel operations: The system should automate and streamline various hotel operations, such as reservations, check-in and check-out, housekeeping, inventory, billing, and reporting.

Improve guest experiences: The system should provide guests with a seamless and personalized experience; from the moment they make a reservation to the time they check out. It should also enable hotels to track and analyze guest feedback to improve service quality.

Enhance efficiency: The system should optimize internal processes and reduce manual tasks, allowing hotel staff to focus on delivering exceptional guest experiences.

Increase revenue: The system should enable hotels to maximize revenue by managing room rates, inventory, and promotions. It should also provide insights into occupancy rates and demand patterns to inform revenue management decisions.

Ensure accuracy and compliance: The system should ensure that all hotel operations are accurate and comply with legal and regulatory requirements.

Provide real-time insights: The system should provide managers with real-time data and analytics, enabling them to make informed decisions and identify areas for improvement.

1.4 Scope and applications

A list of high-level units and tasks to be executed throughout the project. It's basically a predecessor of a work breakdown structure (WBS) for an online shopping website to be completed at the next step of planning.

- **Project milestones**—the important tasks and achievements that mark a certain stage of the project completion. They are predecessors of a project timeline and represent a clear sequence of events showing how the project advances.
- **Major known risks**—external conditions that may adversely affect a project's progress. The likelihood of each risk occurring and the severity of its risk should be estimated at this point.
- **Constraints**—restrictions defining a project's limits (e.g., budget, schedule, dependency on third party software releases, etc.). These may also include the external dependencies—activities and tasks outside the team's control—that may affect the project implementation

1.5 General and Unique Services in the database application

- 1. User Friendly Design
- 2. Mobile- Friendly Features
- 3. Multiple Payment Options
- 4. 24/7 Customer Service
- 5. User Reviews
- 6. User Feature and Discount
- 7. Extensive Product Information

1.6 Software Requirements Specification Front -End

Software

- HTML is probably the primary language all the developer's expertise at the very beginning.
- JavaScript Once there is a clear understanding of HTML and the webpage skeleton, there comes the need of enriching the page with more and more content.
- PHP is built for dynamic web apps.

Back -End Software

Mysql, PHP ADMIN

CHAPTER-2

Literature Survey

2.1 Existing system

A literature survey on Hotel Management Systems reveals that these systems have become increasingly popular in recent years due to the growing demand for digital transformation in the hospitality industry. Researchers and practitioners have recognized the potential benefits of Hotel Management Systems in streamlining hotel operations, enhancing guest experiences, and driving business growth.

2.2 Comparison of Existing and Proposed System

One study by Raza and Kamal (2020) examined the impact of Hotel Management Systems on the efficiency and profitability of hotels in Pakistan. The study found that the implementation of such systems led to significant improvements in hotel operations, resulting in increased revenue and profitability.

Another study by Kumar and Jha (2018) explored the benefits of using a Hotel Management System for inventory management in hotels. The study highlighted the importance of having an efficient inventory management system to prevent wastage, reduce costs, and improve profitability.

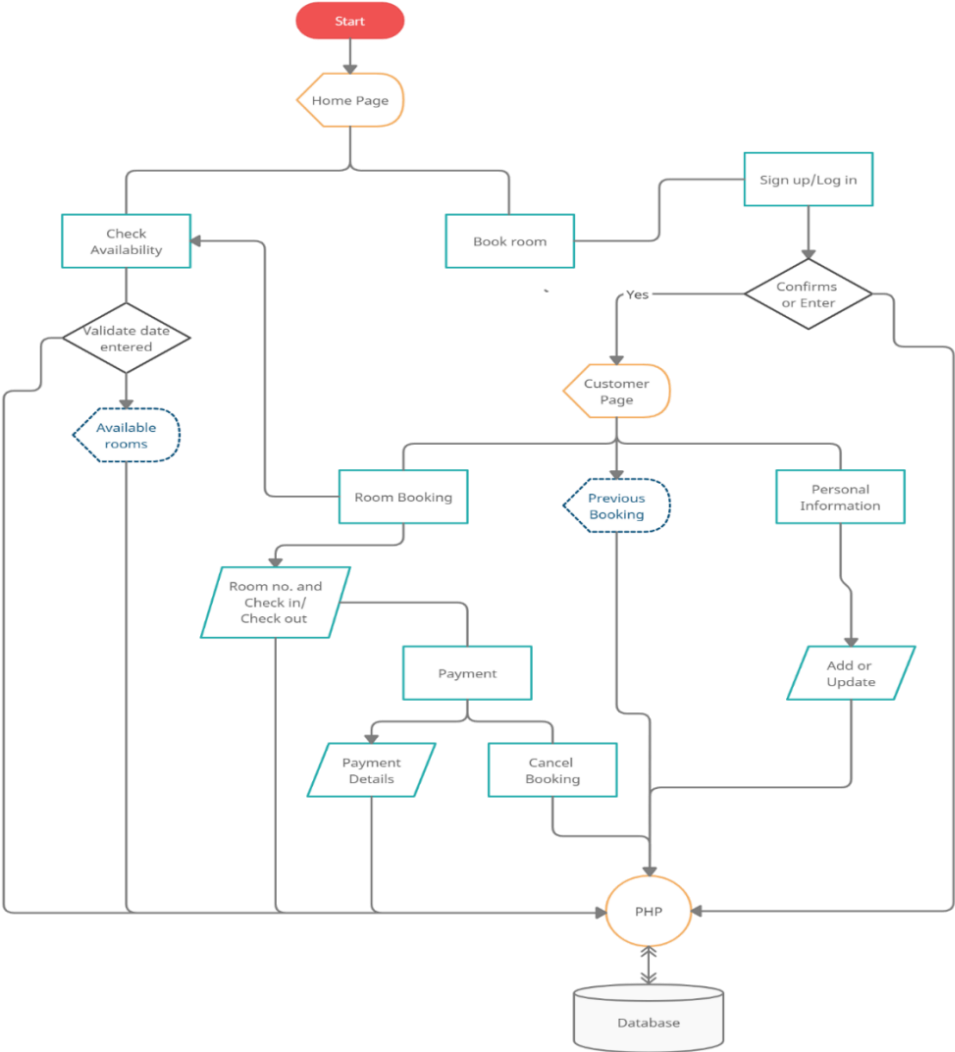
A study by Sattar et al. (2019) focused on the impact of Hotel Management Systems on guest satisfaction. The study found that hotels that implemented these systems were able to provide better service quality and personalized experiences, resulting in higher guest satisfaction ratings.

A study by Zia et al. (2021) proposed a cloud-based Hotel Management System architecture that enables hotels to leverage the benefits of cloud computing, such as scalability, cost-efficiency, and accessibility.

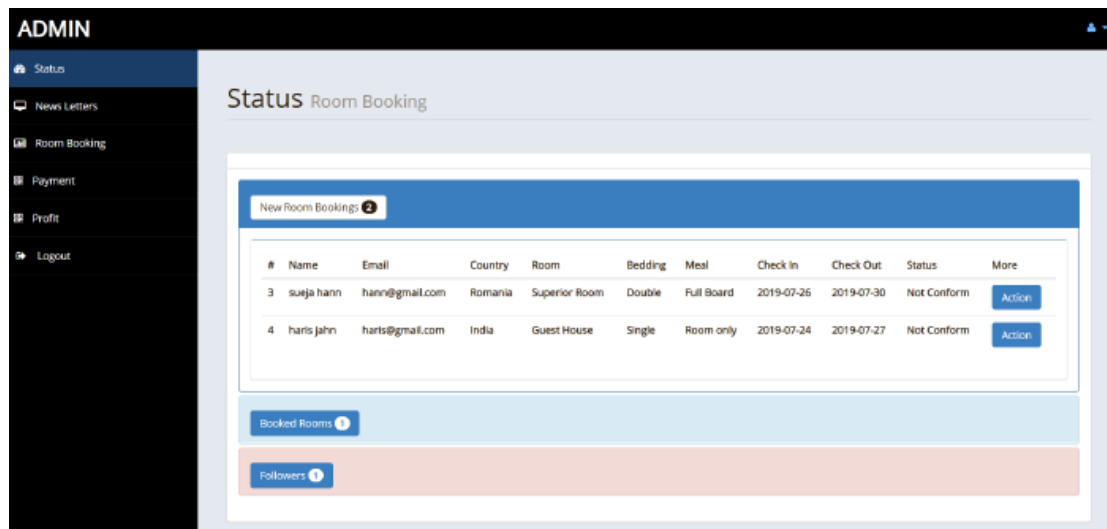
CHAPTER-3

System Architecture and Design

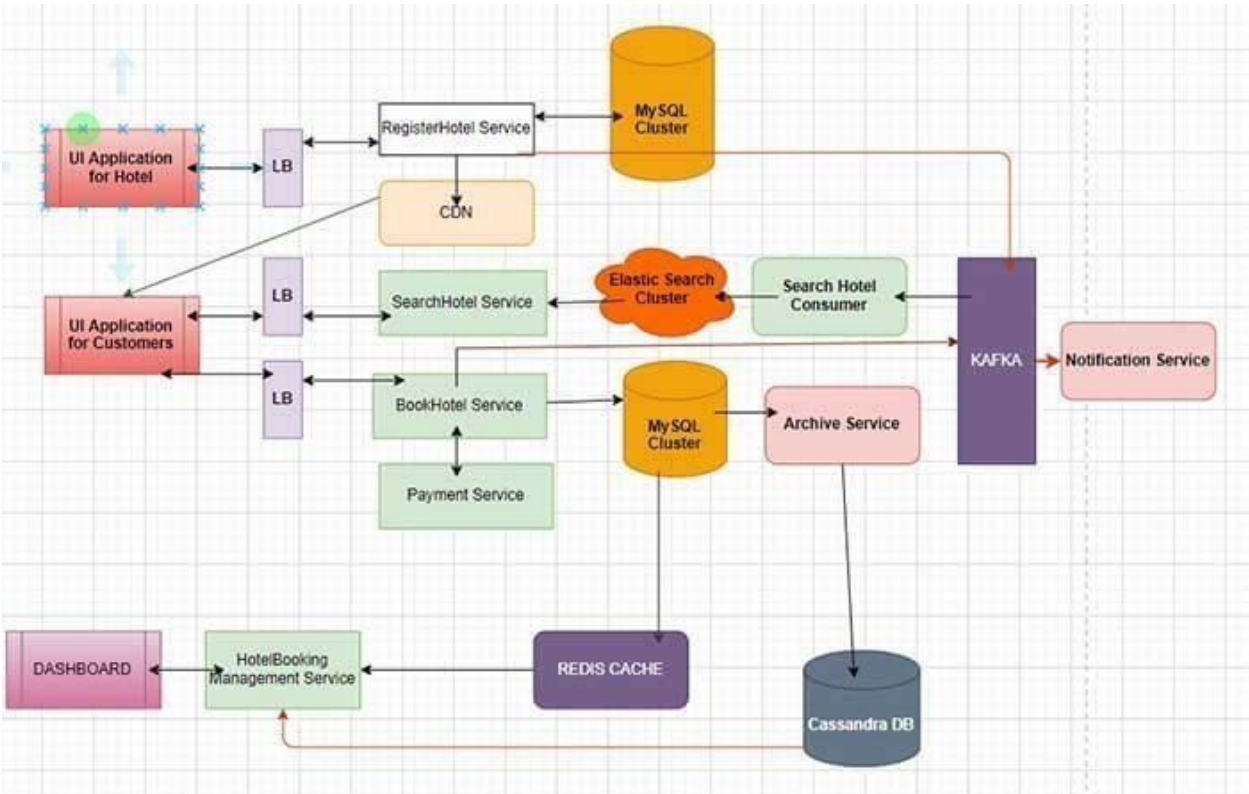
3.1 Architecture Diagram



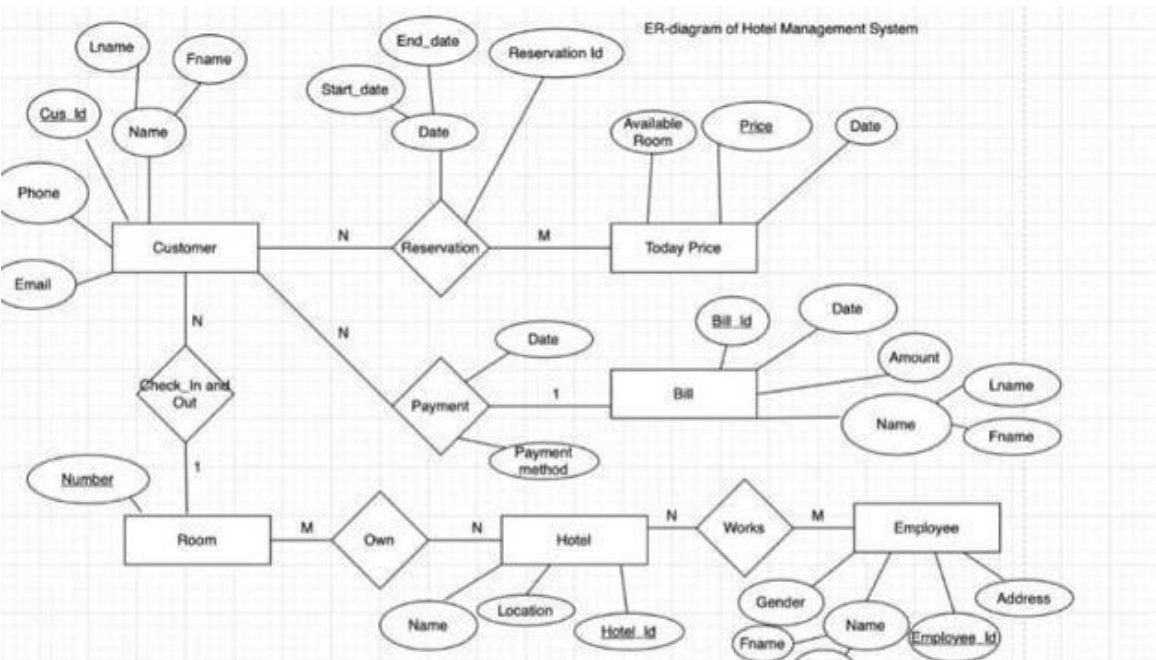
3.1.1 FrontEnd(UI)Architecture

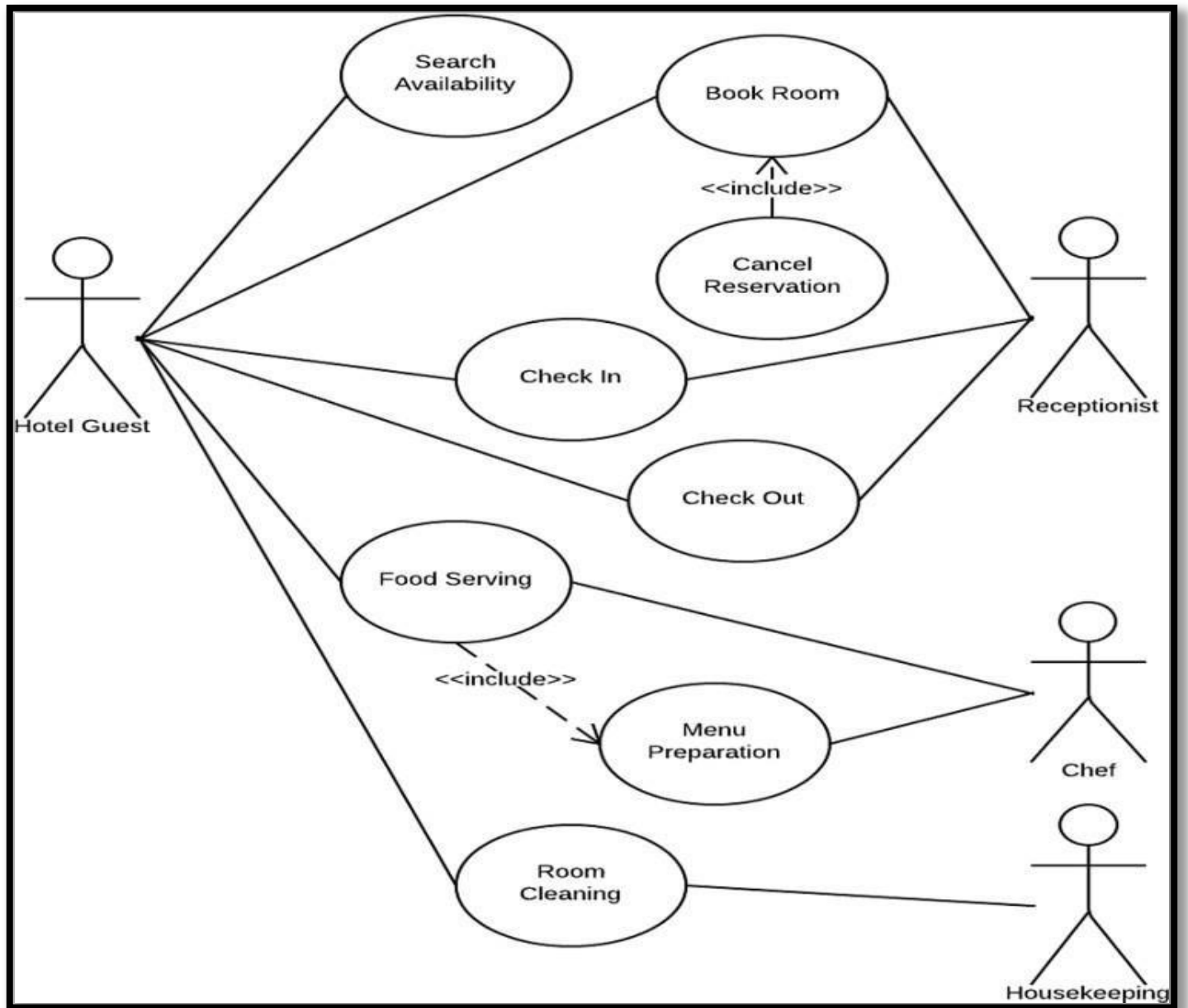


3.1.2 Backend Architecture



3.2 E-R Diagram and Use Case Diagram



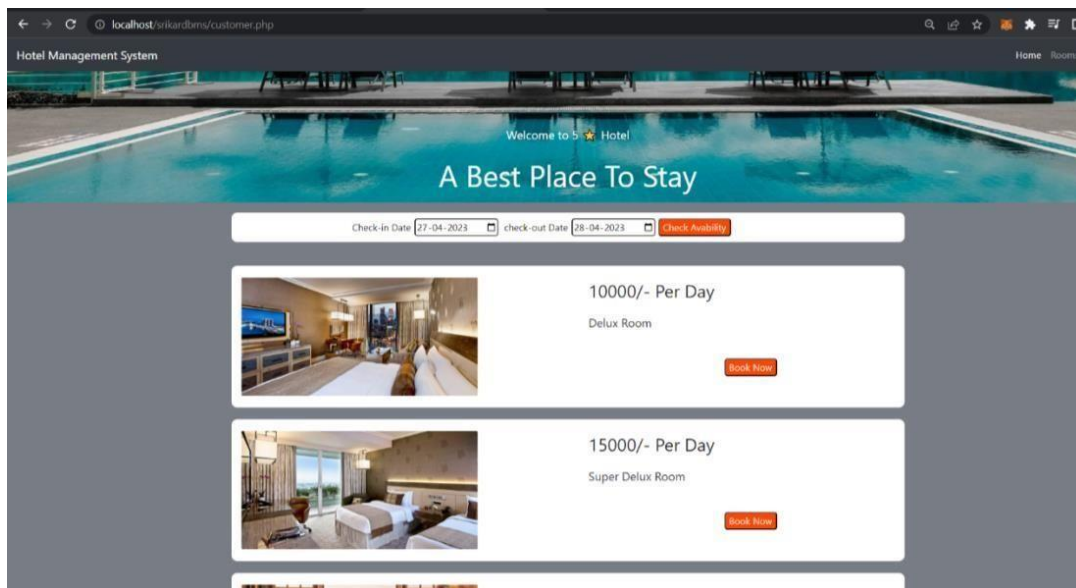


CHAPTER-4

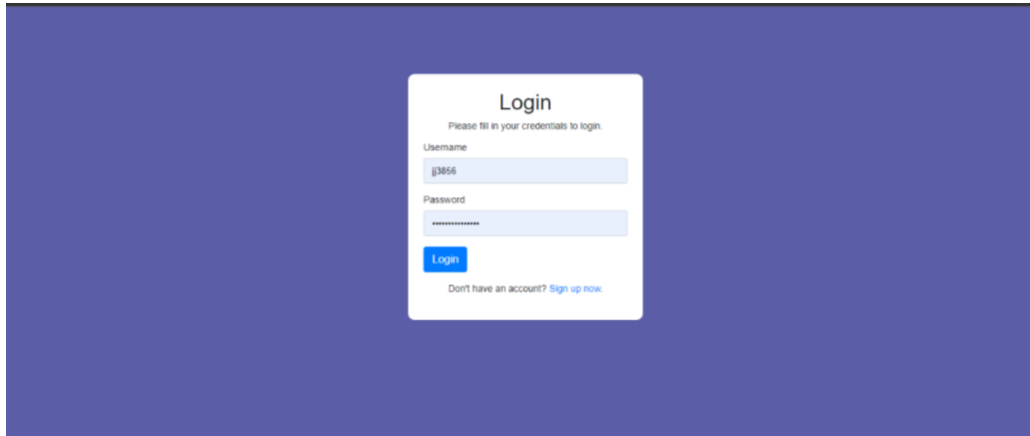
Modules and Functionalities

4.1 Home Page: The home page of the application is common to all the system administrate.

This interface is available through the web application. At the time of logging into the homepage, the page shows the categories available for shopping. By default, there is only onecategory.

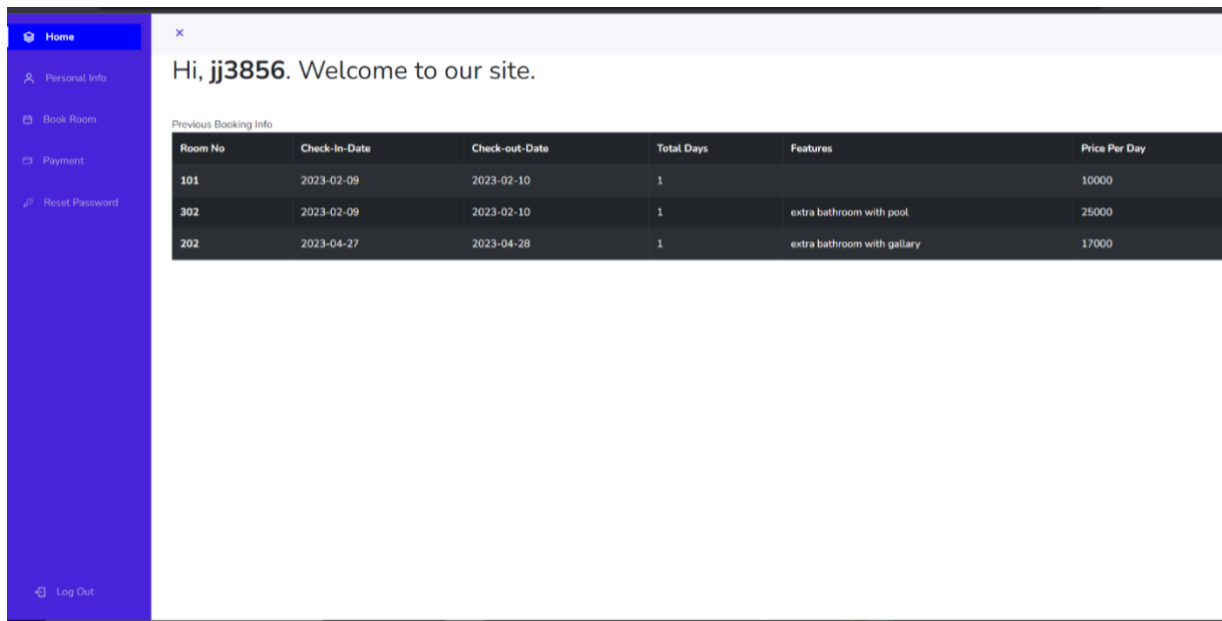


4.1.1 Login Page: A login page is a web page that allows users to enter their username and password in order to gain access to a secure area or service on a website. The page typically includes fields for the user to enter their login credentials, as well as a button to submit the information and log in.



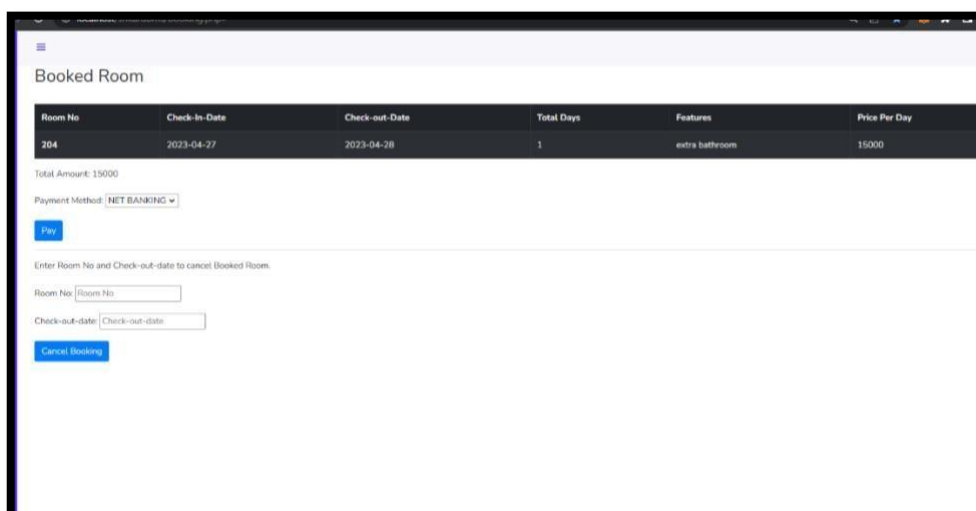
4.1.2 Booking page: A room booking page is a web page that allows users to reserve or book a specific room for a specified date or period. This type of page is often used by hotels, conference centers, and other businesses that offer meeting or event spaces. The room booking page typically includes a calendar or availability chart that displays the available dates and times for the room. Users can then select their preferred date and time, as well as the duration of their booking. Some room booking pages may also allow users to choose from a variety of room types or configurations, depending on their needs. Once the user has selected their booking details, they will typically be asked to enter their contact and payment information to confirm the reservation. This may include their name, email address, phone number, and credit card information.

In addition to these basic features, some room booking pages may also offer additional options such as catering services, audiovisual equipment rental, or other amenities that can be added to the booking. The goal of a room booking page is to provide a convenient and efficient way for users to reserve a room or event space, while also providing the business with an easy way to manage their bookings and availability.

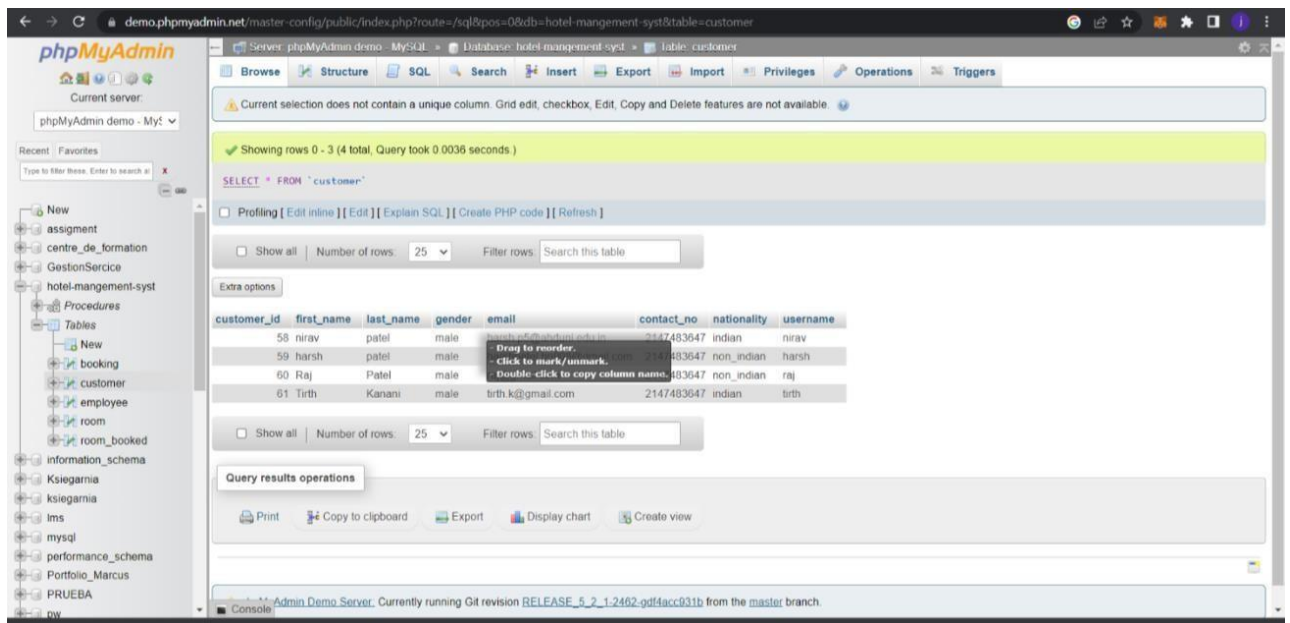


4.1.3 Payment page

A payment page is a web page that allows users to make a payment for a product or service they have purchased online. This type of page typically appears after the user has selected their desired items and proceeded to checkout. The payment page will typically display a summary of the items the user is purchasing, along with the total cost and any applicable taxes or fees. Users will then be asked to enter their payment information, such as their credit card number, expiration date, and security code. Some payment pages may also offer alternative payment options, such as PayPal or net banking which allow users to pay without entering their credit card information directly on the site.



4.2 connectivity used for database access



The screenshot displays the phpMyAdmin web interface. The left sidebar shows a tree view of the database structure, including 'hotel-mangement-syst' and its tables. The main panel shows the 'customer' table with 4 rows of data. A tooltip is visible over the 'email' column of the second row, indicating actions like 'Drag to reorder', 'Click to mark/unmark', and 'Double-click to copy column name'. The bottom status bar shows the current server and Git revision.

customer_id	first_name	last_name	gender	email	contact_no	nationality	username
58	nirav	patel	male	nirav.patel@hotel.mgmt.edu.in	2147483647	indian	nirav
59	harsh	patel	male	harsh.patel@hotel.mgmt.edu.in	2147483647	non_indian	harsh
60	Raj	Patel	male	raj.k@hotel.mgmt.edu.in	2147483647	non_indian	raj
61	Tirth	Kanani	male	tirth.k@gmail.com	2147483647	indian	tirth

CHAPTER-5

CODING AND TESTING

```
<?php
// Initialize the session
session_start();

// Check if the user is logged in, if not then redirect him to login page
if(!isset($_SESSION["loggedin"]) || $_SESSION["loggedin"] !== true){
    header("location: login.php");
    exit;
}
?>
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
        <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
        <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJlSAwiGgFAW/dAiS6JXm" crossorigin="anonymous">
        <!-- ===== BOX ICONS ===== -->
        <link href="https://cdn.jsdelivr.net/npm/boxicons@2.0.5/css/boxicons.min.css" rel="stylesheet">
        <!-- ===== CSS ===== -->
        <link rel="stylesheet" href="assets/css/styles.css">
        <script src="https://code.iconify.design/1/1.0.7/iconify.min.js"></script>
        <title>Sidebar menu responsive</title>
    </head>
    <body id="body-pd">
        <header class="header" id="header">
            <div class="header__toggle">
                <i class="bx bx-menu" id="header-toggle"></i>
            </div>
            <!-- <div class="header_img">
                
            </div -->
        </header>

        <div class="l-navbar" id="nav-bar">
            <nav class="nav">
```

```

<div>
    <div class="nav_list">
        <a href="#" class="nav__link active tablink" onclick="openCity('home', this, 'blue')" id="defaultOpen">
            <i class="bx bx-layer nav__logo-icon"></i>
            <span class="nav__logo-name">Home</span>
        </a>
        <a href="#" class="nav__link tablink" onclick="openCity('personal_info', this, 'blue')">
            <i class="bx bx-user nav__icon"></i>
            <span class="nav__name">Personal Info</span>
        </a>
        <a href="#" class="nav__link tablink" onclick="openCity('room_booking', this, 'blue')">
            <i class="iconify" data-icon="uil:calender" data-inline="false"></i>
            <span class="nav__name">Book Room</span>
        </a>
        <a href="#" class="nav__link tablink" onclick="openCity('payment', this, 'blue')">
            <i class="iconify" data-icon="fluent:payment-16-regular" data-inline="false"></i>
            <span class="nav__name">Payment</span>
        </a>
        <a href="reset-password.php" class="btn nav__link">
            <i class="iconify icon:carbon:password icon-inline:false"></i>
            <span class="nav__name">Reset Password</span>
        </a>
    </div>
</div>
<div>
    <a href="logout.php" class="btn ml-3 nav__link">
        <i class="bx bx-log-out nav__icon"></i>
        <span class="nav__name">Log Out</span>
    </a>
</nav>
</div>
<!--Home Page -->
<div id="home" class="tabcontent">
    <div class="content">
        <h1 class="my-5">Hi, <b><?php echo htmlspecialchars($_SESSION['username']); ?></b>. Welcome to our site.</h1>
    </div>
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "hotel-mangement-system";
// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
$username=htmlspecialchars($_SESSION['username']);
$sql = "SELECT customer_id FROM customer where username='$username'";
$result = $conn->query($sql);
$row = $result->fetch_assoc();
if($row==NULL){
    echo "Please Enter your personal details first to proceed further.";
}
else{
    $customer_id = $row["customer_id"];
    $sql = "SELECT payment_status FROM booking where customer_id=$customer_id";
    $result = $conn->query($sql);
}
}

```

```

while($row = $result->fetch_assoc()){ $status=$row["payment_status"];
if($status==1){
echo "Previous Booking Info";
$sql = "CALL customer_previous_booking_info_with_payment_done($customer_id)";
$result = $conn->query($sql);

```

```

?>

```

```

<br>

```

```

<table class="table table-striped table-dark table-bordered">

```

```

    <thead class="thead-dark"><tr>

```

```

        <th>Room No</th>

```

```

        <th>Check-In-Date</th>

```

```

        <th>Check-out-Date</th>

```

```

        <th>Total Days</th>

```

```

        <th>Features</th>

```

```

        <th>Price Per Day</th>

```

```

    </tr></thead>

```

```

    <tbody>

```

```

    <?php while ($r = $result->fetch_array()): ?>

```

```

        <tr>

```

```

            <th scope="row"><?php echo $r['room_no'] ?></th>

```

```

            <td><?php echo $r['check_in'] ?></td>

```

```

            <td><?php echo $r['check_out'] ?></td>

```

```

            <td><?php echo $r['total_days'] ?></td>

```

```

            <td><?php echo $r['features'] ?></td>

```

```

            <td><?php echo $r['amount'] ?></td>

```

```

        </tr>

```

```

    <?php endwhile;

```

```

        ?>

```

```

    </tbody>

```

```

</table>

```

```

<?php }

```

```

else{

```

```

    echo "No Previous Booking";

```

```

}} ?>

```

```

</div>

```

```

<!-- Personal Info Page-->

```

```

<div id="personal_info" class="tabcontent">

```

```

<?php

```

```

$servername = "localhost";

```

```

$username = "root";

```

```

$password = "";

```

```

$dbname = "hotel-mangement-system";

```

```

    // Create connection

```

```

    $conn = mysqli_connect($servername, $username, $password, $dbname);

```

```

$username=mysqli_real_escape_string($conn,$_SESSION["username"]);

```

```

$sql = "SELECT customer_id FROM customer where username='$username'";

```

```

$result = $conn->query($sql);

```

```

$row = $result->fetch_assoc();

```

```

if($row==NULL){

```

```

    <div class="container">

```

```

    <form action="<?php echo $_SERVER['PHP_SELF']; ?>" method="POST">

```

```

<div class="form-group">
  <label for="first_name">First Name</label>
  <input type="text" class="form-control" id="first_name" placeholder="First Name" name="first_name">
</div>
<div class="form-group">
  <label for="last_name">Last Name</label>
  <input type="text" class="form-control" id="last_name" placeholder="Last Name" name="last_name">
</div>
<div class="form-group">
  <label for="gender">Gender:</label>
  <select name="gender" id="Gender">
    <option value="male">Male</option>
    <option value="female">Female</option>
    <option value="other">Other</option>
  </select>
</div>
<div class="form-group">
  <label for="contact_no">Contact No</label>
  <input type="text" class="form-control" id="contact_no" placeholder="Contact No" name="contact_no">
</div>
<div class="form-group">
  <label for="email">Email address</label>
  <input type="email" class="form-control" id="email" placeholder="Enter email" name="email">
</div>
<div class="form-group">
  <label for="nationality">Nationality:</label>
  <select name="nationality" id="nationality">
    <option value="indian">Indian</option>
    <option value="non_indian">Non Indian</option>
  </select>
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "hotel-mangement-system";

// Create connection
$conn = mysqli_connect($servername, $username, $password, $dbname);

if(isset($_POST['insertdata'])){
  $first_name=$_POST['first_name'];
  $last_name=$_POST['last_name'];
  $gender=$_POST['gender'];
  $email=$_POST['email'];
  $contact_no=$_POST['contact_no'];
  $nationality=$_POST['nationality'];
  $username=htmlspecialchars($_SESSION['username']);

  $query = "INSERT INTO customer (`first_name`,`last_name`,`gender`,`email`,`contact_no`,`nationality`,`username`) VALUES ($first_name','$last_name','$gender','$email','$contact_no','$nationality','$username')";
  $query_run=mysqli_query($conn,$query);

  if($query_run){
    echo '<script> alert("Personal Information Added."); </script>';
    // header('Location:booking.php');
  }
  else{
    echo "<script> alert('$conn->error'); </script>";
  }
}

```

```

        <button type="submit" class="btn btn-primary" value="submit" name="insertdata" >Submit</button>
    </form>
</div>

<?php
}
elseif(isset($_POST['update'])){
    ?>

    <div class="container">
    <form action="booking.php" method="POST">
        <br>
        <div class="form-group">
            <label for="first_name">First Name</label>
            <input type="text" class="form-control" id="first_name" placeholder="First Name" name="first_name">
        </div>
        <div class="form-group">
            <label for="last_name">Last Name</label>
            <input type="text" class="form-control" id="last_name" placeholder="Last Name" name="last_name">
        </div>
        <div class="form-group">
            <label for="gender">Gender:</label>
            <select name="gender" id="Gender">
                <option value="male">Male</option>
                <option value="female">Female</option>
                <option value="other">Other</option>
            </select>
        </div>
        <div class="form-group">
            <label for="contact_no">Contact No</label>
            <input type="text" class="form-control" id="contact_no" placeholder="Contact No" name="contact_no">
        </div>
        <div class="form-group">
            <label for="email">Email address</label>
            <input type="email" class="form-control" id="email" placeholder="Enter email" name="email">
        </div>
        <div class="form-group">
            <label for="nationality">Nationality:</label>
            <select name="nationality" id="nationality">
                <option value="indian">Indian</option>
                <option value="non_indian">Non Indian</option>
            </select>
        </div>

        <button type="submit" class="btn btn-primary" value="submit" name="updated" >Update</button>
        <button type="submit" class="btn btn-secondary" value="submit" name="cancel" >Cancel</button>

    </form>
</div>

<?php
}
elseif(isset($_POST['cancel'])){

```

```

else{
    echo "You have already submitted your personal information.";
    ?>
    <br>
    <br>
    <span>If you want to update your information than click on the update button.</span>
    <br>
    <br>
    <form action="booking.php" method="post">
    <button type="submit" class="btn btn-primary" value="submit" name="update" >Update</button>
    </form>
<?php
}
$conn->close();
?>
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "hotel-mangement-system";
    // Create connection
    $conn = mysqli_connect($servername, $username, $password, $dbname);

if(isset($_POST['updated'])){
    $first_name=$_POST['first_name'];
    $last_name=$_POST['last_name'];
    $gender=$_POST['gender'];
    $email=$_POST['email'];
    $contact_no=$_POST['contact_no'];
    $nationality=$_POST['nationality'];
    $username=htmlspecialchars($_SESSION["username"]);

    $query = "CALL update_customer_info('$first_name','$last_name','$gender','$email','$contact_no','$nationality','$username')";
    $query_run=mysqli_query($conn,$query);
    if($query_run){
        echo '<script> alert("Data Saved"); </script>';
        // header('Location:booking.php');
    }
    else{
        echo "<script> alert('$conn->error'); </script>";
    }
}
$conn->close();
?>
</div>
<!--Room Booking -->
<div id="room_booking" class="tabcontent">
<form action="booking.php" method="POST">
    <br>
    <div class="form-group">
    <label>Check Availability</label>
    </div>
    <div class="form-group">
    <label for="date">Check-in Date</label>
    <input class="date-1" type="date" name="check-in-date" placeholder="Check-in Date" >
    <!-- </div>
    <div class="form-group"> -->
    <label for="date">check-out Date</label>

```



```

<!-- <div class="form-group">
<span class="date">Check-in Date</span>
<input class="date-1" type="date" name="check-in-date" id="">
<span class="date">check-out Date</span>
<input class="date-1" type="date" name="check-out-date" >
</div> -->
<button type="submit" class="btn btn-primary" value="submit" name="available_room">Check Availability</button>
</form>
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "hotel-mangement-system";

$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
if(isset($_POST['available_room'])){
    $date = strtotime($_POST['check-in-date']);
    $check_in= date('Y-m-d', $date );
    $date = strtotime($_POST['check-out-date']);
    $check_out= date('Y-m-d', $date );
    $sql = "CALL available_room('$check_in','$check_out')";
    $result = $conn->query($sql);
    <br>
<table class="table table-striped table-light table-bordered">
    <thead class="thead-dark"><tr>
        <th>Room No</th>
        <th>Floor No</th>
        <th>Room name</th>
        <th>No of Single Bed</th>
        <th>No of Double Bed</th>
        <th>No of Accomodate</th>
        <th>Features</th>
        <th>Price Per Day</th>
    </tr></thead>
    <tbody>
    <?php while ($r = $result->fetch_array()): ?>
        <tr>
            <th scope="row"><?php echo $r['room_no'] ?></th>
            <td><?php echo $r['floor_no'] ?></td>
            <td><?php echo $r['room_name'] ?></td>
            <td><?php echo $r['no_of_single_bed'] ?></td>
            <td><?php echo $r['no_of_double_bed'] ?></td>
            <td><?php echo $r['no_of_accomodate'] ?></td>
            <td><?php echo $r['features'] ?></td>
            <td><?php echo $r['amount'] ?></td>
        </tr>
    <?php endwhile;

        $conn->close(); ?>

    </tbody>
</table>
<?php
}
else{

```

```

<!-- Book by room no -->
<form action="booking.php" method="post">
  <!-- <span>Enter the room which you want to book: </span>
  <input type="text" name="room_no" id="" -->
<hr>
<div class="form-group">
  <label>Room Booking</label>
</div>
<div class="form-group">
  <label for="room_no">Enter the Room No which you want to book:</label>
  <input type="text" name="room_no" placeholder="Room No" >
<div class="form-group">
  <label for="date">Check-in Date</label>
  <input class="date-1" type="date" name="check-in" placeholder="Check-in Date" >
<!-- </div>
<div class="form-group"> -->
  <label for="date">check-out Date</label>
  <input class="date-1" type="date" name="check-out" placeholder="Check-out Date" >
</div>
<button type="submit" class="btn btn-primary" value="submit" name="book">Book</button>
</form>

<?php
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
  die("Connection failed: " . $conn->connect_error);
}

if(isset($_POST['book'])){
  $date = strtotime($_POST['check-in']);
  $checkin= date('Y-m-d', $date);
  $date1 = strtotime($_POST['check-out']);
  $checkout= date('Y-m-d', $date1);
  $room_no=$_POST['room_no'];

  $sql="SELECT DATEDIFF('$checkout','$checkin') AS days";
  $result = $conn->query($sql);
  $row = $result->fetch_assoc();
  // echo $row["days"];
  $days=$row["days"];

  $username=htmlspecialchars($_SESSION["username"]);
  $sql = "SELECT customer_id FROM customer where username='$username'";
  $result = $conn->query($sql);
  $row = $result->fetch_assoc();
  $customer_id = $row["customer_id"];
  $query = "INSERT INTO room_booked (customer_id`,`check_in`,`check_out`,`total_days`,`room_no`) VALUES ($customer_id','$checkin','$checkout','$days','$room_no')";
  $query_run=mysqli_query($conn,$query);
  if($query_run){
    echo '<script> alert("Room Booked"); </script>';
  }
  else{
    echo "<script> alert('$conn->error'); </script>";
  }
}
$conn->close();

```

```

<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "hotel-mangement-system";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
$username=htmlspecialchars($_SESSION["username"]);
$sql = "SELECT customer_id FROM customer where username='$username'";
$result = $conn->query($sql);
$row = $result->fetch_assoc();
if($row==NULL){

}
else{
$customer_id = $row["customer_id"];

$sql = "SELECT payment_status FROM booking where customer_id=$customer_id";
$result = $conn->query($sql);
while($row = $result->fetch_assoc()){

$status=$row["payment_status"];

if($status==0){
    ?>
    <h2>Booked Room</h2>
<?php
$sql = "SELECT amount FROM booking where customer_id=$customer_id AND payment_status=0";
$result = $conn->query($sql);
$row = $result->fetch_assoc();
$amount=$row["amount"];

$sql = "CALL payment_info($customer_id)";
$result = $conn->query($sql);

?>

<br>
<table class="table table-striped table-dark table-bordered">
    <thead class="thead-dark"><tr>
        <th>Room No</th>
        <th>Check-In-Date</th>
        <th>Check-out-Date</th>
        <th>Total Days</th>
        <th>Features</th>
        <th>Price Per Day</th>
    </tr></thead>

    <tbody>
    <?php while ($r = $result->fetch_array()): ?>
        <tr>
            <th scope="row"><?php echo $r['room_no'] ?></th>
            <td><?php echo $r['check_in'] ?></td>

```

```

        <td><?php echo $r['features'] ?></td>
        <td><?php echo $r['amount'] ?></td>

    </tr>
<?php endwhile;

?>

</tbody>
</table>
<div>
<span>Total Amount: </span>
<?php echo $amount ?>
</div>

<br>

<form action="<?php echo $_SERVER['PHP_SELF']; ?>" method="post">
<div class="form-group">
<label for="payment_method">Payment Method:</label>
    <select name="payment_method" id="payment_method">
    <option value="NET_BANKING">NET BANKING</option>
    <option value="CASH">CASH</option>
    <option value="UPI">UPI</option>
    <option value="CREID_CARD">CREDIT CARD</option>
    <option value="DEBIT_CARD">DEBIT CARD</option>
    </select>
</div>

    <button type="submit" class="btn btn-primary" value="submit" name="payment_done" >Pay</button>
</form>
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "hotel-mangement-system";
// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

if(isset($_POST['payment_done'])){
    $sql = "SELECT booking_id,amount FROM booking where customer_id=$customer_id AND payment_status=0";
    $result = $conn->query($sql);
    $row = $result->fetch_assoc();
    $amount=$row["amount"];
    $booking_id=$row["booking_id"];

$payment_method=$_POST['payment_method'];

    $query = "INSERT INTO transaction (`booking_id`,`payment_type`,`total_amount`) VALUES ('$booking_id','$payment_method','$amount')";
    $query_run=mysqli_query($conn,$query);

    if($query_run){
        echo '<script> alert("Payment Done"); </script>';
    }
    else{
        echo '<script> alert("Payment unsuccesful"); </script>';
    }
}

```

```

<?php

mysqli_close($conn);?>

<hr>
<form action="<?php echo $_SERVER['PHP_SELF']; ?>" method="post">
  <div class="form-group">
    <label>Enter Room No and Check-out-date to cancel Booked Room.</label>
  </div>
  <div class="form-group">
    <label for="room_no">Room No:</label>
    <input type="text" name="room_no" placeholder="Room No" >
  </div>
  <div class="form-group">
    <label for="check_out">Check-out-date:</label>
    <input type="text" name="check_out" placeholder="Check-out-date" >
  </div>
  <button type="submit" class="btn btn-primary" value="submit" name="delete">Cancel Booking</button>
</form>
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "hotel-mangement-system";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
if(isset($_POST['delete'])){
    $room_no = $_POST['room_no'];
    $check_out = $_POST['check_out'];
    $sql = "CALL cancel_booked_room('$room_no','$check_out')";
    $query_run=mysqli_query($conn,$sql);

    if($query_run){
        echo '<script> alert("booking cancellation done."); </script>';
    }
    else{
        echo "<script> alert('$conn->error'); </script>";
    }
}
$conn->close();
}
else{
}
}}
?>

</div>
<!--===== MAIN JS =====>
<script src="assets/js/main.js"></script>
<script>
    function openCity(cityName,elmnt,color) {
        var i, tabcontent, tablinks;

```

```

        tabcontent[i].style.display = "none";
    }
    tablinks = document.getElementsByClassName("tablink");
    for (i = 0; i < tablinks.length; i++) {
        tablinks[i].style.backgroundColor = "";
    }
    document.getElementById(cityName).style.display = "block";
    elmnt.style.backgroundColor = color;

}
// Get the element with id="defaultOpen" and click on it
document.getElementById("defaultOpen").click();
</script>
<script
                                src="https://code.jquery.com/jquery-3.2.1.slim.min.js"
                                integrity="sha384-
KJ3o2DKtIkVYIK3UENzmM7KCKRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN" crossorigin="anonymous"></script>
<script
                                src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"
                                integrity="sha384-
ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q" crossorigin="anonymous"></script>
<script
                                src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"
                                integrity="sha384-
JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmYI" crossorigin="anonymous"></script>
</body>
</html>

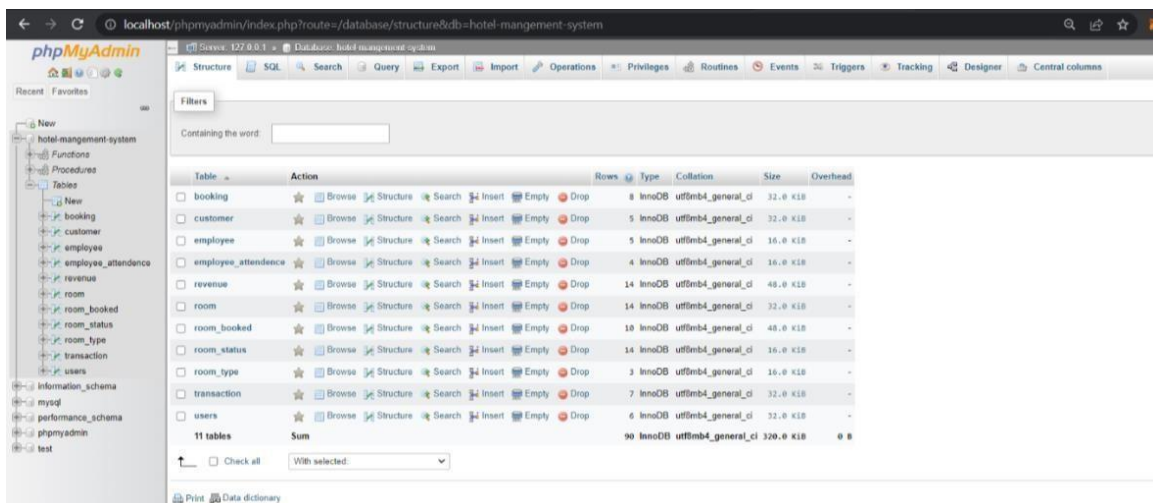
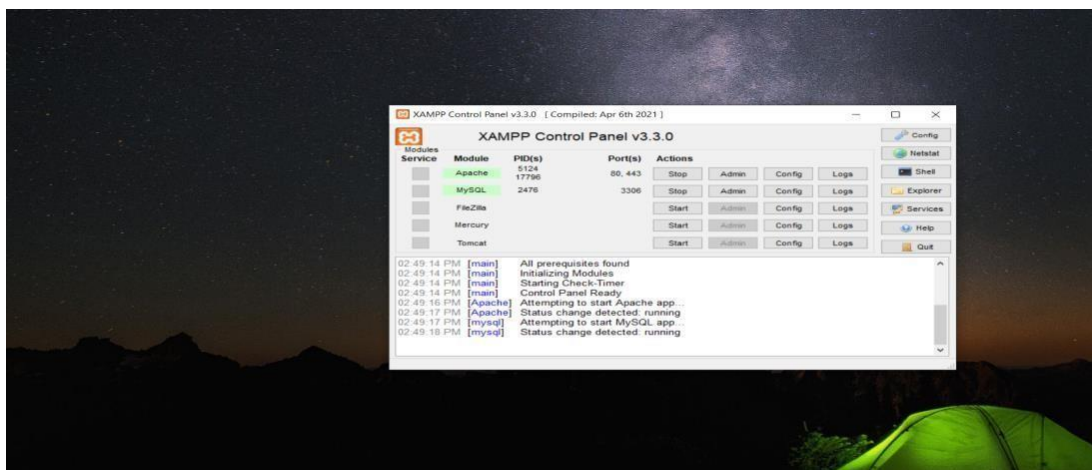
```

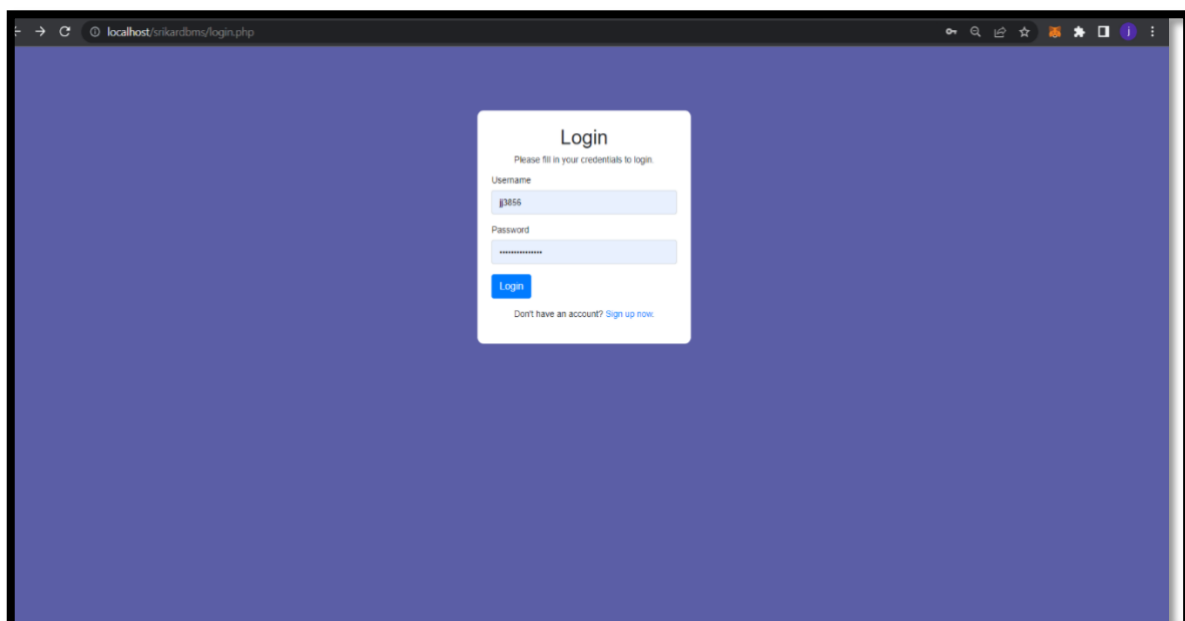
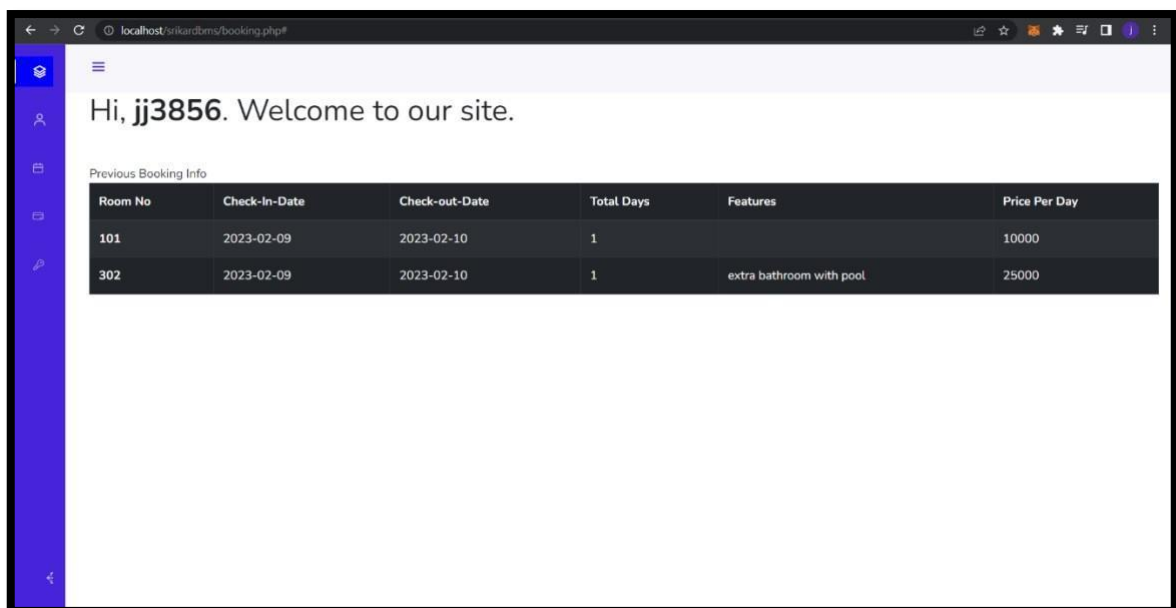
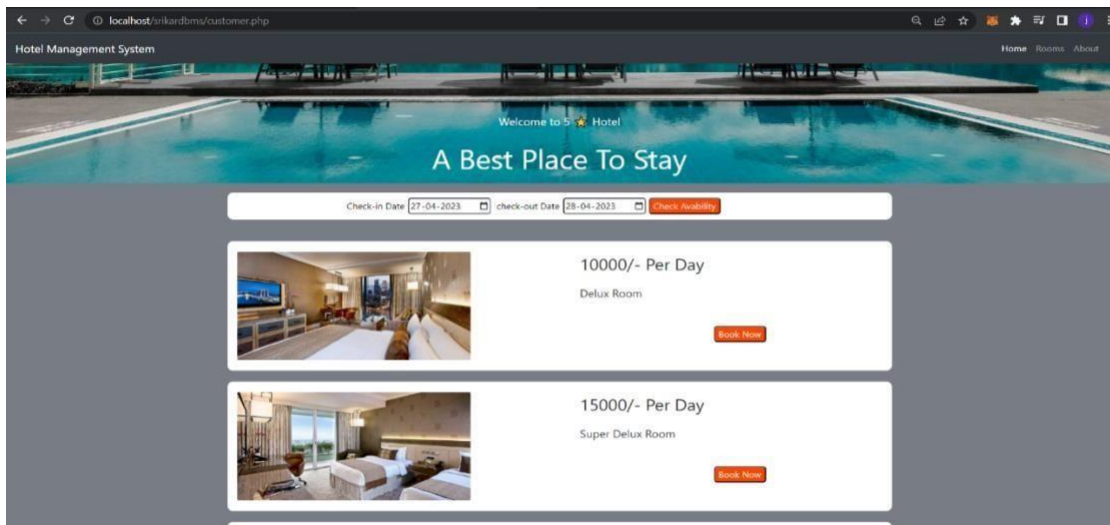
Testcases:

1. Verify that the website allows users to search for available rooms based on their desired check-in and check-out dates.
2. Verify that the website correctly displays the room availability for the selected dates.
3. Verify that the website accurately calculates the total cost of the selected rooms, including any taxes or fees.
4. Verify that the website allows users to make a reservation and receive a confirmation email.
5. Verify that the website has a secure payment gateway for users to pay for their reservations.
6. Verify that the website correctly displays information about the hotel's amenities and services.
7. Verify that the website allows users to modify or cancel their reservations if necessary.
8. Verify that the website allows users to leave reviews and ratings for the hotel.
9. Verify that the website has a responsive design and works well on different devices and browsers.
10. Verify that the website has proper navigation and all links work correctly.

11. Verify that the website has a user-friendly interface and is easy to use for non-technical users.
12. Verify that the website complies with accessibility standards and can be used by people with disabilities.
13. Verify that the website loads quickly and does not have any performance issues.
14. Verify that the website has proper error handling and displays error messages when necessary.

OUTPUT:





Conclusion

In conclusion, a hotel management system is an essential tool for managing a hotel's operations and providing a better guest experience. By implementing a web-based system, hotel managers can streamline their booking process, manage room inventory, track guest information, and analyse performance metrics. Additionally, a hotel management system can help to reduce manual errors and increase efficiency, leading to cost savings and improved profitability.

However, it is important to ensure that the hotel management system is user-friendly and accessible for both staff and guests. The system should be easy to navigate and provide clear, accurate information. Security is also a crucial aspect of a hotel management system, as it will be handling sensitive guest information and financial transactions.

Overall, a well-designed hotel management system can help to improve operational efficiency, enhance guest satisfaction, and drive business success.

REFERENCES

- [1] Hernández, E.; Sanchez-Anguix, V.; Julian, V.; Palanca, J.; Duque, N. Rainfall prediction: A deep learning approach. In International Conference on Hybrid Artificial Intelligence Systems; Springer: Cham, Switzerland, 2016; pp. 151–162.
- [2] Goswami, B.N. The challenge of weather prediction. *Resonance* **1996**, 1, 8–17.
- [3] Nayak, D.R.; Mahapatra, A.; Mishra, P. A survey on rainfall prediction using artificial neural network. *Int. J. Comput. Appl.* **2013**, 72, 16.
- [4] Kashiwao, T.; Nakayama, K.; Ando, S.; Ikeda, K.; Lee, M.; Bahadori, A. A neural network-based local rainfall prediction system using meteorological data on the internet: A case study using data from the Japan meteorological agency. *Appl. Soft Comput.* **2017**, 56, 317–330.
- [5] Mislán, H.; Hardwinarto, S.; Sumaryono, M.A. Rainfall monthly prediction based on artificial neural network: A case study in Tenggarong Station, East Kalimantan, Indonesia. *Procedia Comput. Sci.* **2015**, 59, 142–151.
- [6] Muka, Z.; Maraj, E.; Kuka, S. Rainfall prediction using fuzzy logic. *Int. J. Innov. Sci. Eng. Technol.* **20**

