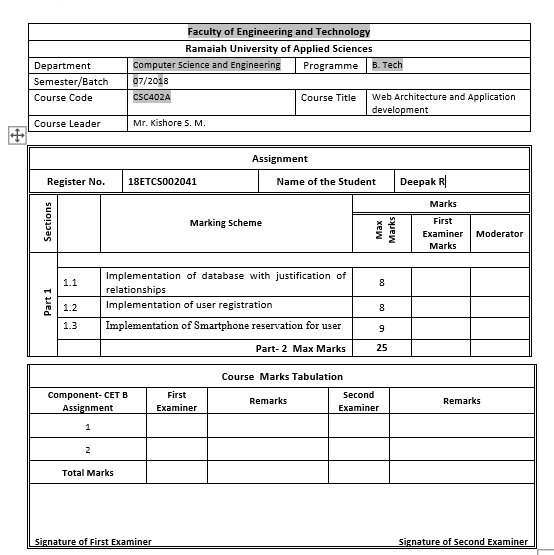


|  |  |
| --- | --- |
| **Assignment** | |
| **Course Code** | **CSC402A** |
| **Course Name** | **Web Architecture and Application development** |
| **Programme** | **B.Tech** |
| **Department** | **Computer Science and Engineering** |
| **Faculty** | **Engineering and Technology** |

|  |  |
| --- | --- |
| **Name of the Student** | **Deepak R** |
| **Reg. No.** | **18ETCS002041** |
| **Semester/Year** | **6th/2021** |
| **Course Leader(s)** | **Mr. Kishore S. M.** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Declaration Sheet | | | | | | | | |
| Student Name | Deepak R | | | | | | | |
| Reg. No | 18ETCS002041 | | | | | | | |
| Programme | B.Tech | | | | | Semester/Year | 6th/2021 | |
| Course Code | CSC402A | | | | | | | |
| Course Title | Web Architecture and Application development | | | | | | | |
| Course Date |  | | to |  | | | | |
| Course Leader | Mr. Kishore S. M. | | | | | | | |
| Declaration  The assignment submitted herewith is a result of my own investigations and that I have conformed to the guidelines against plagiarism as laid out in the Student Handbook. All sections of the text and results, which have been obtained from other sources, are fully referenced. I understand that cheating and plagiarism constitute a breach of University regulations and will be dealt with accordingly. | | | | | | | | |
| Signature of the Student | |  | | | | | Date |  |
| Submission date stamp  (by Examination & Assessment Section) | |  | | | | | | |
| Signature of the Course Leader and date | | | | | Signature of the Reviewer and date | | | |
|  | | | | |  | | | |



**Assignment**

**Instructions to students:**

1. The assignment consists of 2 questions.
2. Maximum marks is 25.
3. The assignment has to be neatly word processed as per the prescribed format.
4. The maximum number of pages should be restricted to 9.
5. The printed assignment must be submitted to the course leader.
6. Submission Date: XXXXXXX
7. Submission after the due date is not permitted.

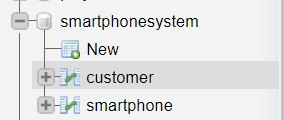
**Preamble:**

The course on web architecture and application development is aimed at preparing the students to design, develop and test web applications by applying different programming techniques. The students are taught the overview of software architecture and architectural styles. They apply different web technologies to design and develop web applications. They also analyze different software architectures, their benefits and shortcomings. This assignment assesses how well a student can analyze the scenario, design a well-defined user interface for the web application and implement the same. The first part of the assignment is aimed at assessing the student’s ability to design a web application. The second part of the assignment is aimed at assessing the student’s ability to implement an efficient web application.

**Scenario:**  (25 Marks)

In an online Smartphone shopping Web application, users can register and login to the web application. The online smartphone application maintains account details for each user (user ID, user name, phone number, shipping address and items purchased etc.). The user may select any item from the list of available items or can search for all the available smartphones. It is assumed that an item purchased is reserved and made available to the user offline.

**Solution for 1.1 Implementation of database with justification of relationships**



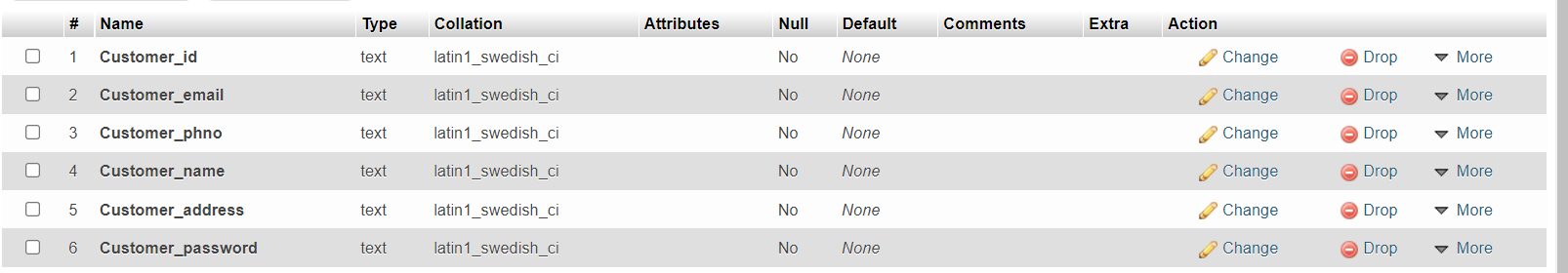


Figure 1: Schema of the Customer details table

The Customer table is created with attributes Customer\_id which is of datatype

text , Customer\_email which is of datatype text,Customer\_ Password is an another attribute with the datatype text,Customer\_phno with datatype text,Customer\_name with datatype textCutomer\_address with datatype text .

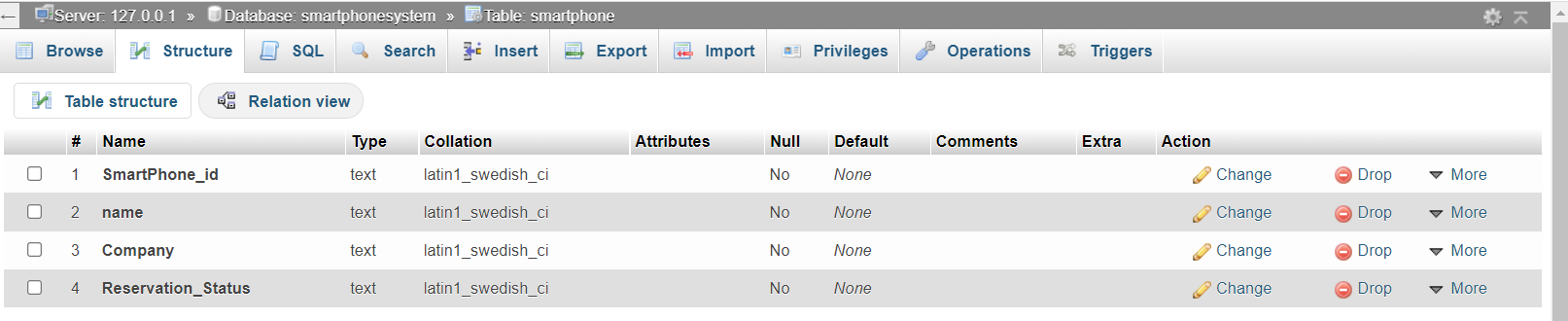


Figure 2: Schema of the Smartphone table

The smartphone table is created with attributes Smartphone\_Id which is of datatype text, Name which is of datatype text, Company which is of datatype text , Reservation\_Status which is of datatype text The default value of Reservation is set to “NO”.

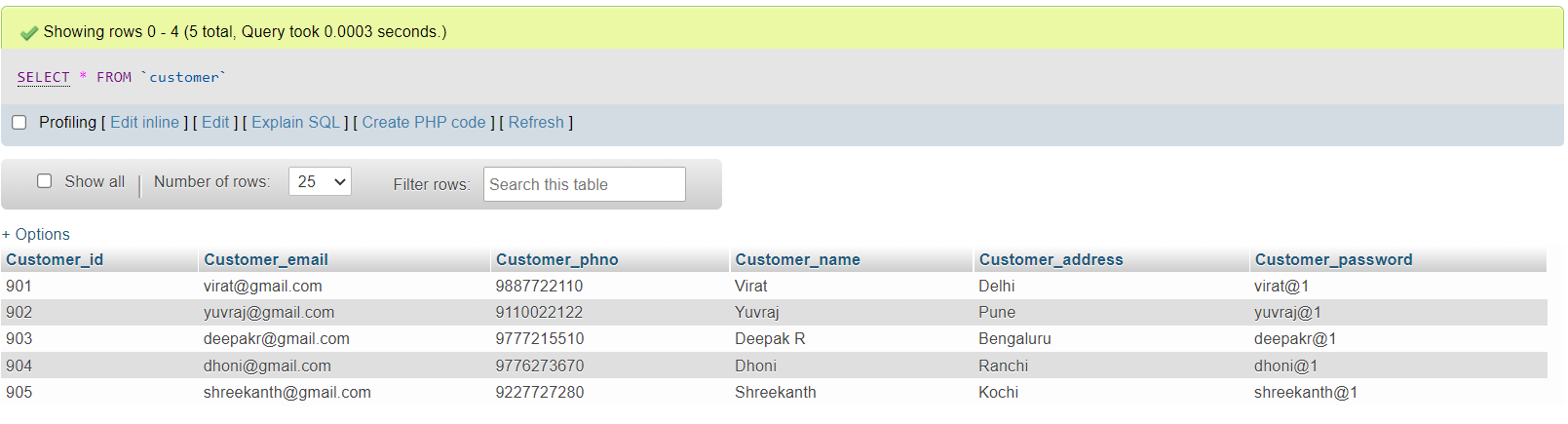


Fig 3 Customer entity Database when populated with values

represents the details of the Customer details table.

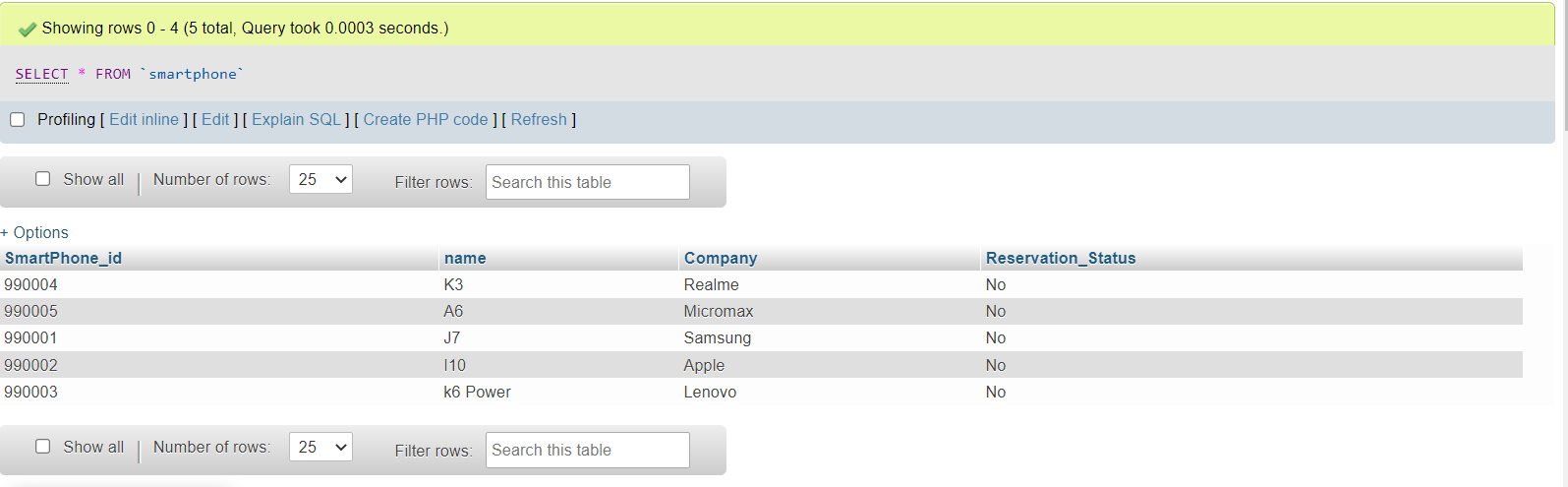


Fig 3 Smartphone entity Database when populated with values

represents the details of the Smartphone details table.

Created database before designing the HTML page. Which happens first because from web page when user request for some text book to check the status of reservation which wants to execute the sql queries and to store in on particular variable which will be displayed to the user. In case if data base which created is not valid or table name is not valid which cannot get any of information. In same case if data base is not created at all which cannot validate any of information to the Customer.

* 1. **Solution for Implementation of user registration Code**

**Index.php**

<!DOCTYPE html>

<!--

To change this license header, choose License Headers in Project Properties.

To change this template file, choose Tools | Templates

and open the template in the editor.

-->

<html>

<head>

<meta charset="UTF-8">

<title> Smartphone Online Booking System</title>

<style>

.center {

text-align: center;

}

</style>

</head>

<body>

<?php

$Customer\_id = $Customer\_address = $Customer\_email = $Customer\_phno = $Customer\_name = "" ;

if($\_SERVER["REQUEST\_METHOD"]=="POST"){

$Customer\_id = $\_POST['Customer\_id'];

$Customer\_address = $\_POST['Customer\_address'];

$Customer\_email = $\_POST['Customer\_email'];

$Customer\_phno = $\_POST['Customer\_phno'];

$Customer\_name = $\_POST['Customer\_name'];

$Customer\_password = $\_POST['Customer\_password'];

$con = mysqli\_connect("localhost","root","root","smartPhonesystem");

$query = "INSERT INTO `Customer` (Customer\_id, Customer\_address, Customer\_email, Customer\_phno , Customer\_name , Customer\_password) VALUES ('$Customer\_id', '$Customer\_address', '$Customer\_email', '$Customer\_phno' , '$Customer\_name' , '$Customer\_password')";

$result = mysqli\_query($con,$query);

if($result){

echo ("Registration Succesful");

}

else

{

echo ("Fail");

}

}

?>

<form action="" method="post" >

<div class="center">

<h1>Smartphone Online Booking System </h1>

<label>Customer\_id</label></br><input type="text" name="Customer\_id"><br/>

<label>Customer\_address</label></br><input type="text" name="Customer\_address"><br/>

<label>Customer\_email</label></br><input type="text" name="Customer\_email"><br/>

<label>Customer\_phno</label></br><input type="text" name="Customer\_phno"><br/>

<label>Customer\_name</label></br><input type="text" name="Customer\_name"><br/>

<label>Customer\_password</label></br><input type="text" name="Customer\_password"><br/></br>

<button type="submit" name="submit" value="Register" >Update</button>

</div>

</form>

</body>

</html>

The server name, user name, password and the database name are assigned to respective variables. The connection between the database and the PHP application is created by passing the server name, user name, password and database name to the mysqli. The established connection is verified. If the connection is not established between the database and the PHP application, Connection failed message is displayed. The user details that is username, password, userid and the email id entered by the user in the text fields are passed to the php script using the $\_POST method and the details are stored in the corresponding variables. When the details entered in the password and confirm password fields are same, the INSERT SQL query is executed and the all the details entered by the user are inserted into the users table and the results are stored in the result variable. If the connection between the database and the PHP application still exists, the New record created successfully message is displayed else the password did not match message is displayed. The figure is the user registration form of the Library Management system web application. It contains four text fields, for the Customer name, password, Customer\_id and another for the email id. It also contains one button, submit. The page also contains a link for the dashboard page of the Smartphone Online Booking system.

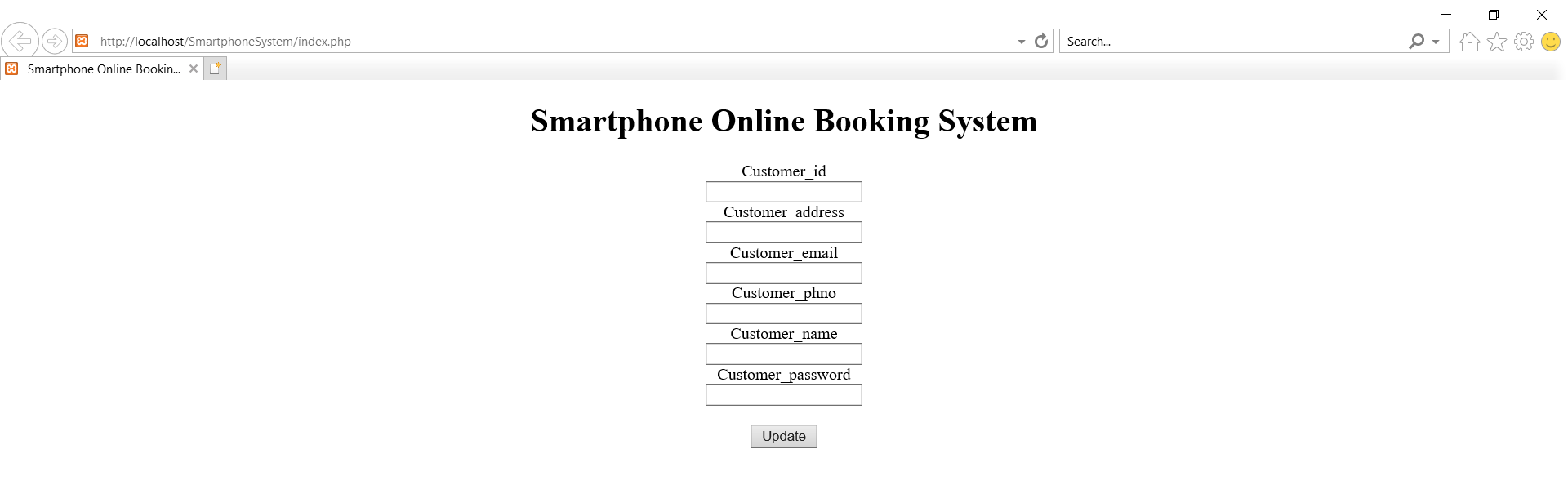
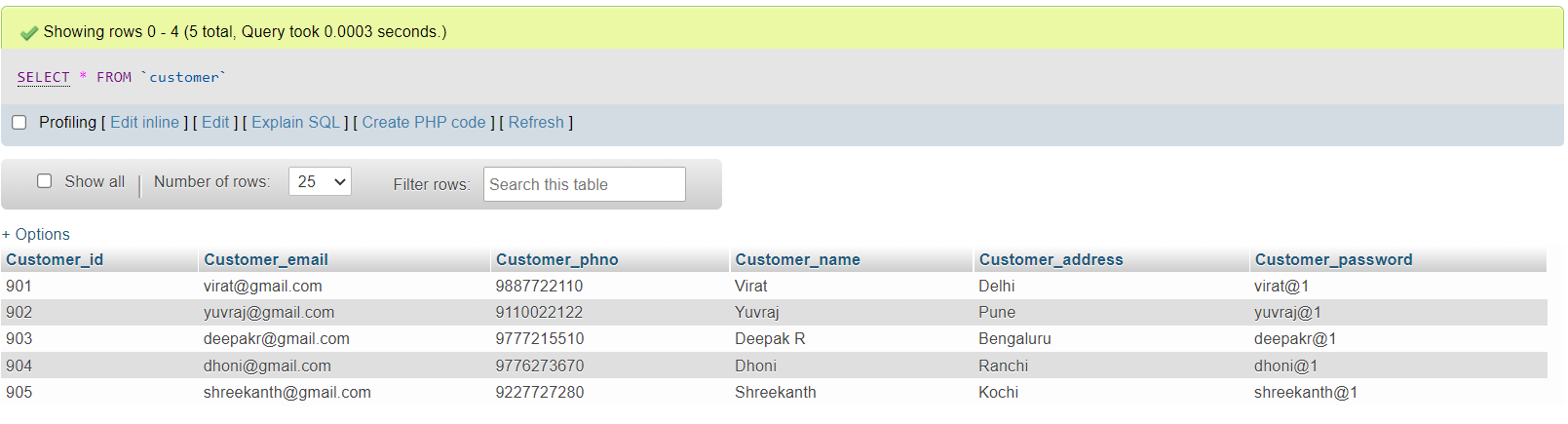


Figure 4.2: UI design for registration page

The figure is the user registration form of the Smartphone Online Booking system web application. It contains four text fields, for the Customer name, password, Customer\_id and another for the email id. It also contains one button, submit. The page also contains a link for the dashboard page of the Smartphone online booking system.



**1.3 Solution for Implementation of Smartphone reservation for user**

**Code for login.php**

<!DOCTYPE html>

<!--

To change this license header, choose License Headers in Project Properties.

To change this template file, choose Tools | Templates

and open the template in the editor.

-->

<html>

<head>

<meta charset="UTF-8">

<style>

.center {

text-align: center;

}

</style>

<title>Login Page</title>

</head>

<body>

<?php

// put your code here

if (isset($\_POST['Customer\_name'])) {

$Customer\_name = $\_POST['Customer\_name'];

$Customer\_password = $\_POST['Customer\_password'];

$con = mysqli\_connect("localhost","root","root","smartPhonesystem");

if (mysqli\_connect\_errno())

{

echo "Failed to connect to MySQL: " . mysqli\_connect\_error();

}

$query = "SELECT \* FROM customer WHERE Customer\_name='$Customer\_name' and Customer\_password='$Customer\_password'";

$result = mysqli\_query($con,$query);

if($result)

{

if(mysqli\_num\_rows($result)>0)

{

session\_start();

$\_SESSION['Customer\_name'] = $Customer\_name;

header("Location: home.php"); }

else{

echo("Invalid credenatials"); } }

else{

echo("Invalid credenatials");} }

else{

?>

<form role="form" id="templatemo-preferences-form" name="registration" action="" method="post">

<div class="center">

<h1>Login </h1>

<label>NAME</label><br/>

<input type="text" id="lastName" placeholder="enter name" name="Customer\_name" required> <br/>

<label>PASSWORD</label><br/>

<input type="text" id="lastName4" placeholder="enter password" name="Customer\_password" required><br/>

<br/>

<button type="submit" name="submit" value="Register" >Login</button>

</div>

</form>

<?php } ?>

</body>

</html>

**Code for Home.php**

<!DOCTYPE html>

<!--

To change this license header, choose License Headers in Project Properties.

To change this template file, choose Tools | Templates

and open the template in the editor.

-->

<html>

<head>

<meta charset="UTF-8">

<title>Library</title>

<style>

.center {

text-align: center;

}

</style>

</head>

<body>

<h1>Welcome to Online Smartphone Booking System</h1>

<?php

//Searching

if (isset($\_POST['keyword'])) {

$name = $\_POST['keyword'];

$con = mysqli\_connect("localhost","root","root","smartPhonesystem");

if (mysqli\_connect\_errno())

{

echo "Failed to connect to MySQL: " . mysqli\_connect\_error();

}

$sql="select \* from smartphone where name LIKE '%$name%' ";

$result=mysqli\_query($con,$sql);

echo "<table style='width:50%' border='1'>

<tr>

<th>SmartPhone\_id</th>

<th>name</th>

<th>Company</th>

<th>Reservation\_Status</th>

</tr>";

if(mysqli\_num\_rows($result)>0){

while($row=mysqli\_fetch\_assoc($result)){

echo "<tr>";

echo "<td><center>".$row["SmartPhone\_id"]."</center></td>";

echo "<td><center>".$row["name"]."</center></td>";

echo "<td><center>".$row["Company"]."</center></td>";

echo "<td><center>".$row["Reservation\_Status"]."</center></td>";

echo "</tr>";

}

}

else{

echo "Mobile not found";

}

}

session\_start();

$Student\_name = $\_SESSION['Customer\_name'];

echo "Hi,"."$Customer\_name"."</br>";

echo " List of Smartphones Available now";

$con = mysqli\_connect("localhost","root","root","smartPhonesystem");

if (mysqli\_connect\_errno())

{

echo "Failed to connect to MySQL: " . mysqli\_connect\_error();

}

$sql="select \* from smartphone ";

$result=mysqli\_query($con,$sql);

echo "<table style='width:50%' border='1'>

<tr>

<th>SmartPhone\_id</th>

<th>name</th>

<th>Company</th>

<th>Reservation\_Status</th>

</tr>";

if(mysqli\_num\_rows($result)>0){

while($row=mysqli\_fetch\_assoc($result)){

echo "<tr>";

echo "<td><center>".$row["SmartPhone\_id"]."</center></td>";

echo "<td><center>".$row["name"]."</center></td>";

echo "<td><center>".$row["Company"]."</center></td>";

echo "<td><center>".$row["Reservation\_Status"]."</center></td>";

echo "</tr>";

}

}

else{

echo "error";

}

?>

<form role="form" id="templatemo-preferences-form" name="registration" action="" method="post">

<div class="center">

<input type="text" id="lastName4" placeholder="Search" name="keyword" required><br/>

<br/>

<button type="submit" name="submit" value="Register" >Search</button>

</div>

</form>

<div>

<form role="form" id="templatemo-preferences-form" name="registration" action="" method="post">

<div class="center">

<input type="text" id="lastName4" placeholder="Enter Smartphone Id" name="keyword" required><br/>

<br/>

<button type="reserve">Reserve</button>

</div>

</form>

<?php

if(isset($\_POST['keyword'])){

$Bookid = $\_POST['keyword'];

$con = mysqli\_connect("localhost", "root", "root", "librarysystem");

if (mysqli\_connect\_errno()) {

echo "Failed to connect to MySQL: " . mysqli\_connect\_error();

}

$sql = "UPDATE smartphone SET Reservation\_Status = 'Yes' WHERE Smartphone\_id = '$Smartphone\_id'";

$result = mysqli\_query($con, $sql);

if($result == 1){

echo "Reserved Success";

}

else{

echo "fail";

}

}

?>

</div>

</body>

</html>

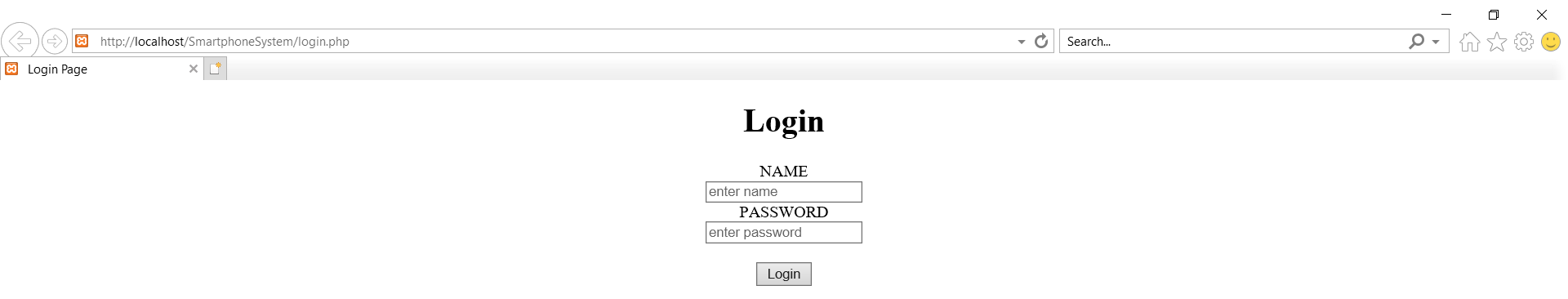
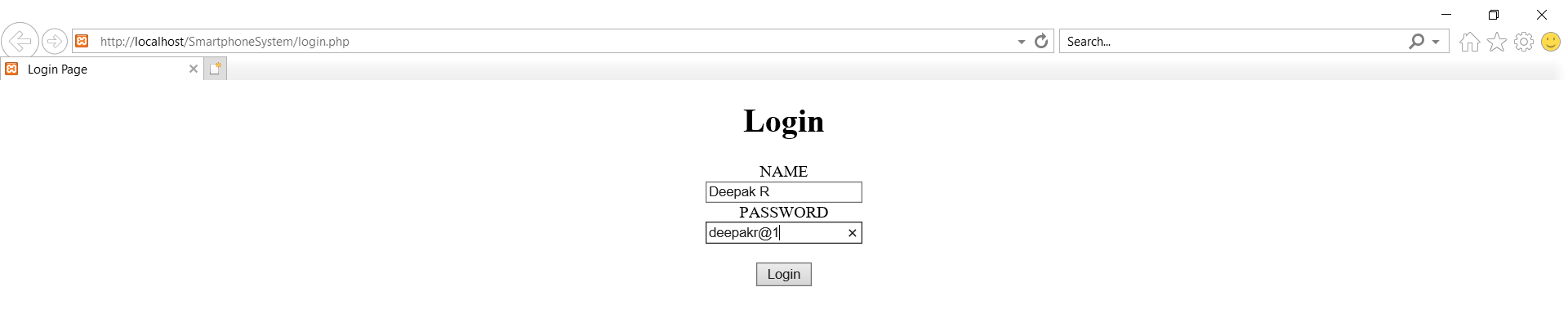
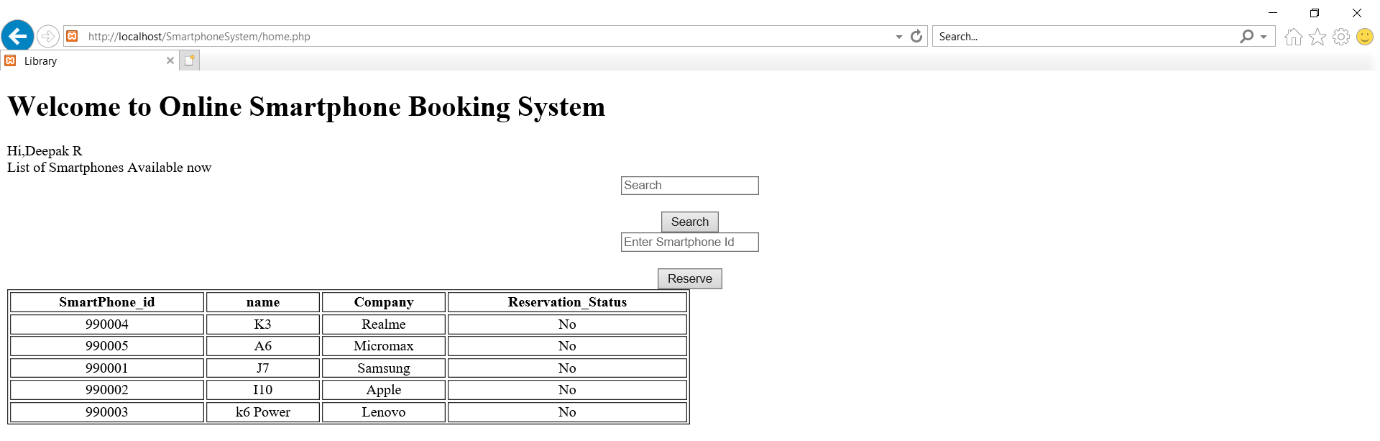


Figure 5.2: UI design for Login page

The figure represents the login credentials entered by the user. The username and password are entered in the text fields. After entering the login details, submit button is clicked. When the user clicks the submit button, the corresponding SQL query for the submit button is executed to verify the login details entered by the user matches with the user details stored in the database



We are supposed to enter Correct Credentials otherwise it will fail to login

  
Figure 5.3: UI design for Dashboard page

In figure, the user enters the item type as Mobile in the text field defined to enter the item type. After entering the item type, Search button is clicked. When the user clicks the Search button, the corresponding SQL query for the Search button is executed and the details of all the items with Mobile type Mobile is displayed. In Registration page Username is also displayed where use session variable to display the user name.

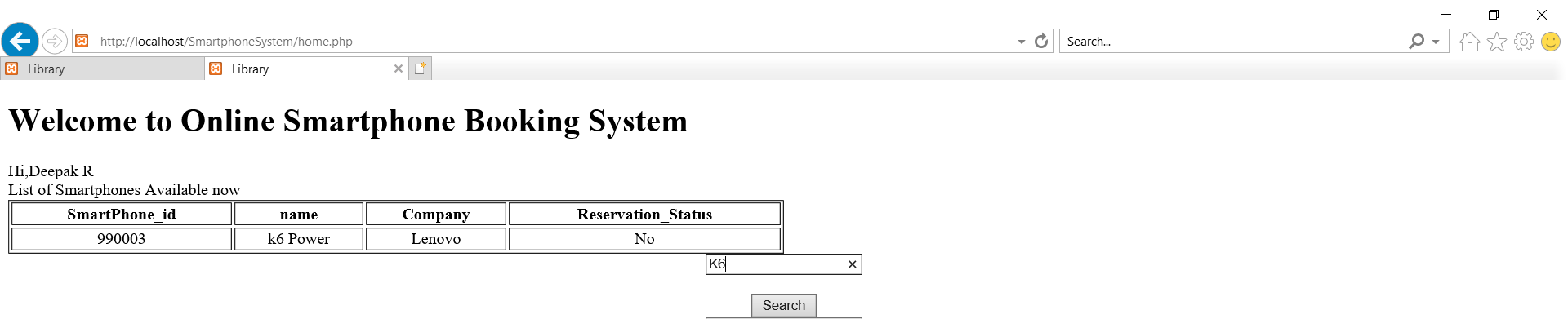
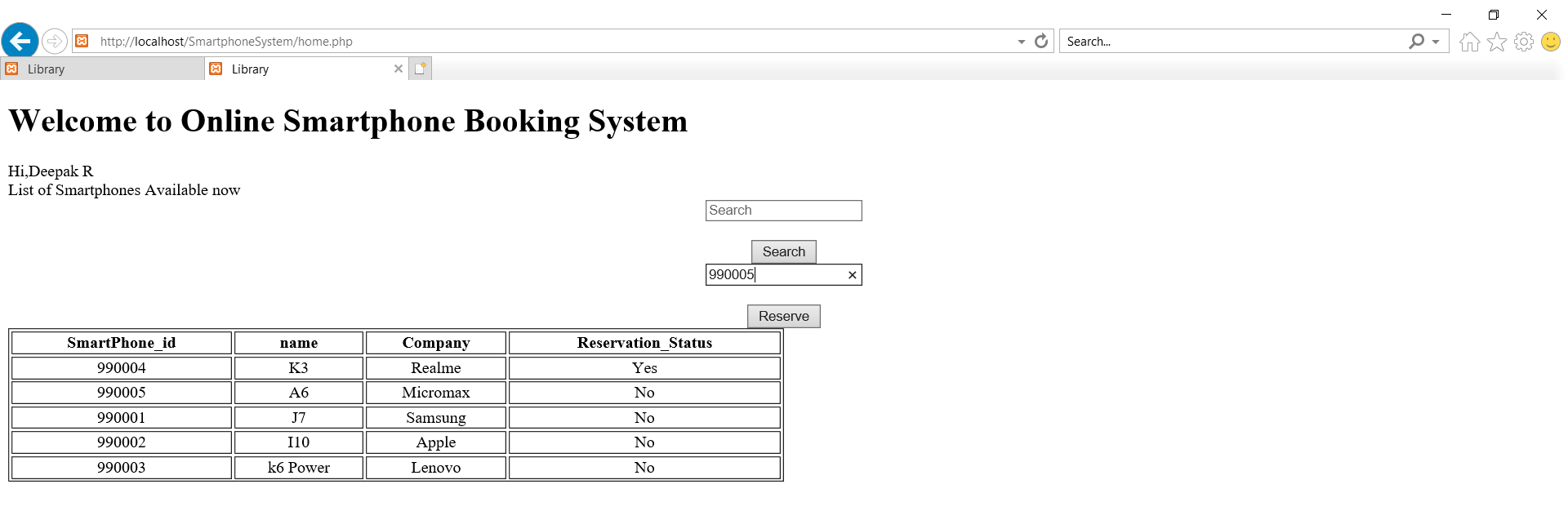
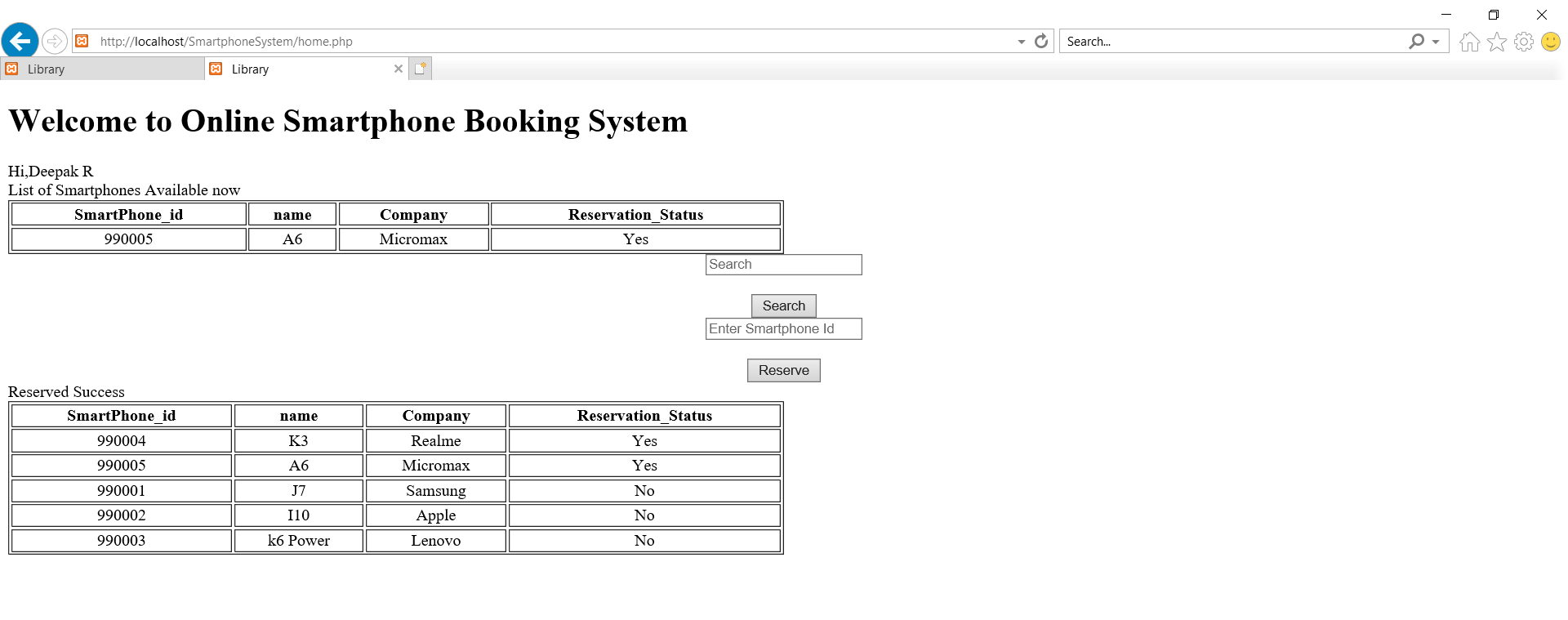


Figure UI for searching the items

In figure, the user enters the item type as Mobile in the text field defined to enter the item type. After entering the item type, Search button is clicked. When the user clicks the Search button, the corresponding SQL query for the Search button is executed and the details of all the items with book type book is displayed. In Registration page Username is also displayed where use session variable to display the user name.



In figure, the user enters the Smartphone\_id as 990005 in the text field defined to enter the Mobile name. After entering the Smartphone\_id, Reserve button is clicked. When the user clicks the Reserve button, the corresponding SQL query for the Reserve button is executed and the reservation successful message is displayed. The books table database also gets updated and the Smartphone\_id is set to YES.



In figure, once the item is reserved, if any other user logins and enters the Smartphone name in the text field and clicks the Search button, the corresponding SQL query for the Search button is executed and the details of all the Smartphone with Smartphone type is displayed because once reservation is completed other user cannot Buy that Smartphone with Reservation\_status Yes.

# Bibliography

1.Class Notes and Web Architecture lab.