Web Application Development Lab

Experiment No – 01

Aim – Authentication using Java Servlet

Theory

The following is an authentication form, which validates the Login ID and Password keyed in by the user and returns an appropriate page generated by a Servlet code. First of all you will create one table in M.S Access as shown below:

Table Definitions:

Table Name	: login[SchoolDemo.mdb]
Primary Key	: Nil
Foreign Key	: Nil

Column Definition:

Column Name	Data Type	Width
Loginname	Text	20
Password	Text	20

Table Description:

Column Name	Description
Loginname	Identification of the person filling the Login form.
Password	Password entered by the person

Explanation:

When the user submits the login name and password. A check is made in the table for that user name and password. If the user name and password match a single entry a welcome page will be returned, or else access denied page will be returned.

After create table in M.S. Access database now you will create DSN.

Test Records:

login[SchoolDemo.mdb]

Loginname	Password
laura	Cath
mirella	mrsbean
bintu	12345

Following is the source code of the HTML page i.e. Login.html:

```html
<HTML>
 <HEAD>
 <TITLE> SCT's User Authentication Form </TITLE>
 </HEAD>

 <BODY Background="images/grid1.gif">
 <BR><BR>

 <CENTER>
 <H2><B> User's Authentication Page </B></H2>
 </CENTER>

 <FORM Action="../servlets/login" Method="POST">
 <BR><BR>

 <TABLE Border="0" CellPadding="5" CellSpacing="0" Width="400"
Align="Center">
  <FONT Color="#000000" Size="2">
  <TR>
   <TD Align="Right">
    <B>Login Name:</B>
   </TD>
   <TD>
    <INPUT Type="Text" Name="Loginid" Size="20">
   </TD>
  </TR>

  <TR>
  <TD Align="Right">
   <B>Password:</B>
  </TD>
  <TD>
```

```html
    <INPUT Type="Password" Name="Password" Size="20">
   </TD>
  </TR>
  </FONT>
 </TABLE>
 <BR><BR>

 <P></P>
 <P></P>
 <CENTER>
  <Input Type="Submit" Value="Submit" Name="Submit">
  <Input Type="Reset" Value="Reset" Name="Reset">
 </CENTER>
 </FORM>
</BODY>
</HTML>
```

The following is the source code for "login.java:

```java
import java.sql.*;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class login extends HttpServlet
{
 Connection conn;

 public void service(HttpServletRequest request,
HttpServletResponse response)
  throws IOException
 {
```

```java
ServletOutputStream out=response.getOutputStream();

          String url="jdbc:odbc:MyDsn";

 try
 {
  String login=request.getParameter("Loginid");
  String pass=request.getParameter("Password");


  Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
  conn=DriverManager.getConnection(url);
  Statement stmt=conn.createStatement();
  ResultSet rs=stmt.executeQuery("select * from login where
loginname='" + login + "' and password= '" + pass + "'");


  response.setContentType("text/html");
  response.setStatus(HttpServletResponse.SC_OK);


  if(rs.next()==false)
  {
   out.println("<BR><BR><BR><BR><BR>");
          out.println("<html><head><title>Login
check</title></head><body>");
   out.println("<CENTER><B>Unknown User</B>");
   out.println("<BR><BR>");
   out.println("<h3> Access Denied</h3></CENTER>");
   out.println("<BR><BR><BR>");
   out.println("<CENTER><Input Type=Button
Value=Back></CENTER>");
   out.println("</body></html>");
  }
  else
  {
   out.println("<html><head><title>Login
Check</title></head><body>");
```

©**Talentio Solutions India Private Limited**
5th Floor, Mayfair Building, SP Road, Begumpet, Hyderabad – 500 003
www.talentio.in

```
    out.println("<BR><BR><BR><BR><BR>");
    out.println("<CENTER><B>Welcome " + " " +
rs.getString("loginname") + "</B></CENTER>");
    out.println("<CENTER>");
    out.println("<h3> You have been Authenticated</h3></CENTER>");
    out.println("<BR><BR><BR>");
    out.println("<CENTER><Input Type=Button
Value=HOME></CENTER>");
    out.println("</body></html>");
  }
  conn.close();
 }
 catch(SQLException SQLExcp)
 {
  out.println("SQLException: " + SQLExcp);
 }
 catch(ClassNotFoundException clsNotFndExcp)
 {
  System.out.println("Cannot find the class: "+ clsNotFndExcp);
 }
 }
}
```

To run the above servlet program , first of all run Apache Tomcat
from "Start -> All Programs -> Apache Tomcat 4.0 -> Start Tomcat."

Now compile Java Servlet Program using below command as shown
diagram 1.1

Diagram 1.1 Compile Java Servlet

Now, copy "SimpleServlet.class" File and then paste it under

"C:/Program Files/Apache Tomcat 4.0/webapps/examples/WEB-INF/classes/"

Now, open your any web browser and type html URL where you saved your login.html file. for example:
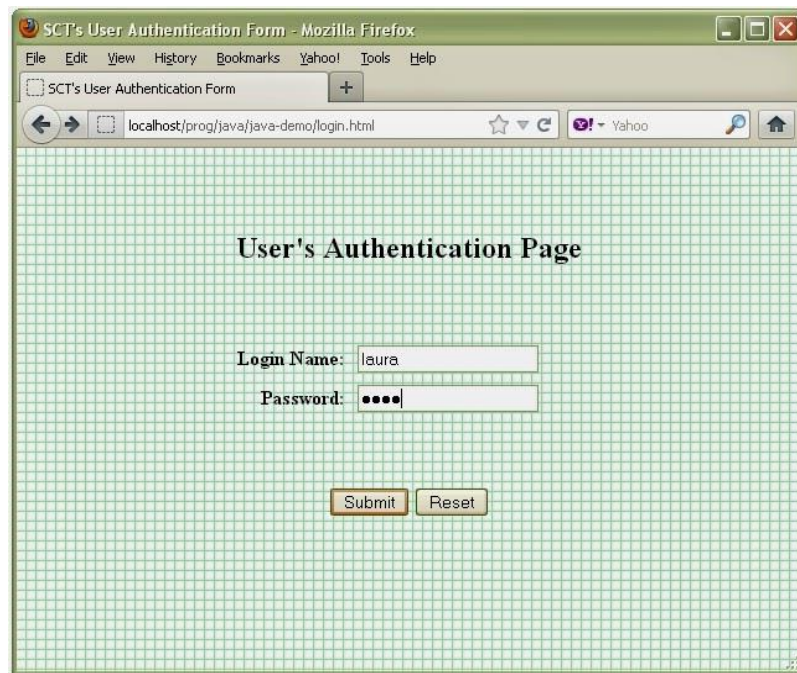

Diagram 1.2 Output of Login.html
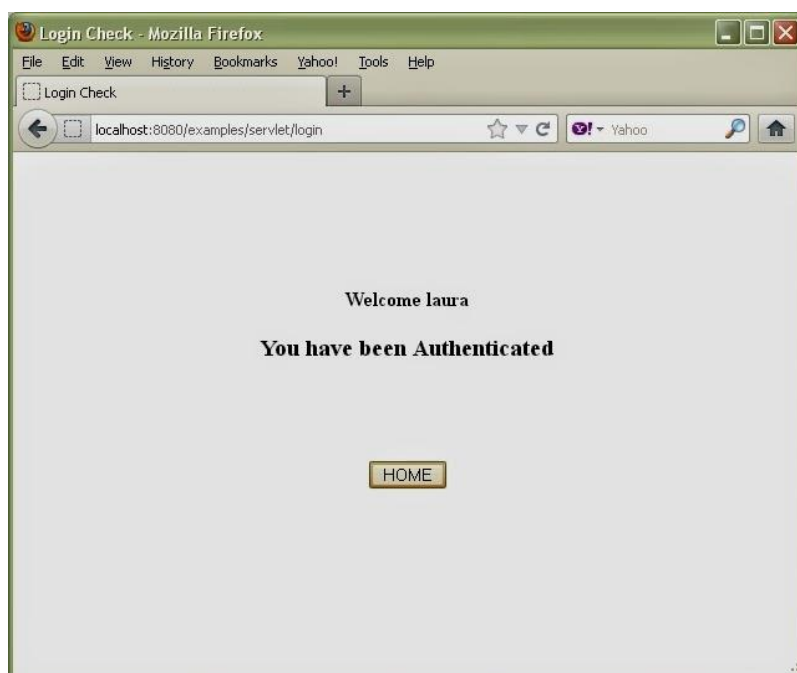
Diagram 1.3 Output of login.class for a valid username and password

Diagram 1.4 Output of login.class for an invalid username and password

Conclusion

Authentication using Java Servlet is done successfully.

©**Talentio Solutions India Private Limited**
5th Floor, Mayfair Building, SP Road, Begumpet, Hyderabad – 500 003
www.talentio.in

Experiment No – 02

Aim – Authentication using JSP.
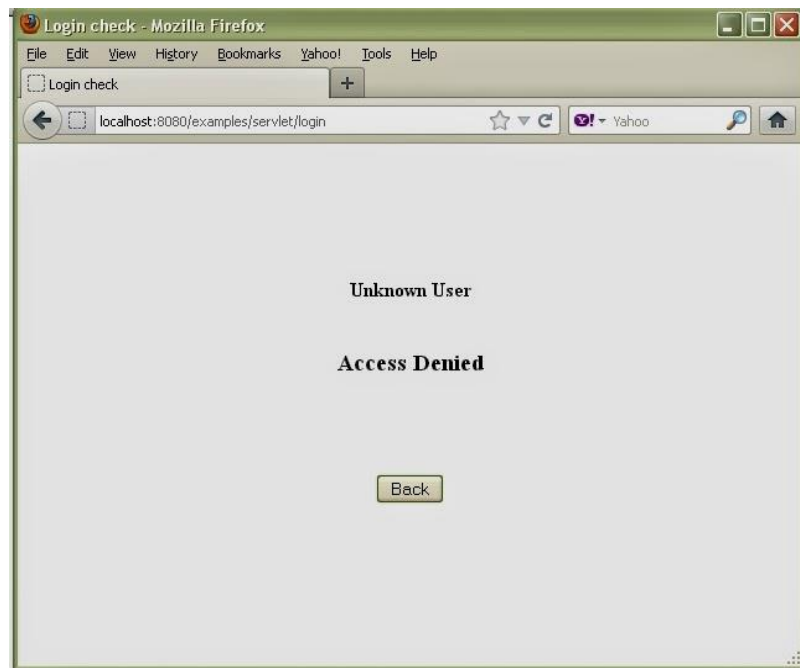
Theory

JavaServer Pages and servlets make several mechanisms available to Web developers to secure applications. Resources are protected declaratively by identifying them in the application deployment descriptor and assigning a role to them.

Several levels of authentication are available, ranging from basic authentication using identifiers and passwords to sophisticated authentication using certificates.

Role Based Authentication

The authentication mechanism in the servlet specification uses a technique called role-based security. The idea is that rather than restricting resources at the user level, you create roles and restrict the resources by role.

You can define different roles in file tomcat-users.xml, which is located off Tomcat's home directory in conf. An example of this file is shown below –

```
<?xml version = '1.0' encoding = 'utf-8'?>
<tomcat-users>
  <role rolename = "tomcat"/>
  <role rolename = "role1"/>
  <role rolename = "manager"/>
```

```
   <role rolename = "admin"/>
   <user username = "tomcat" password = "tomcat" roles =
"tomcat"/>
   <user username = "role1" password = "tomcat" roles = "role1"/>
   <user username = "both" password = "tomcat" roles =
"tomcat,role1"/>
   <user username = "admin" password = "secret" roles =
"admin,manager"/>
</tomcat-users>
```

This file defines a simple mapping between username, password, and role. Notice that a given user may have multiple roles; for example, username = "both" is in the "tomcat" role and the "role1" role.

Once you have identified and defined different roles, role-based security restrictions can be placed on different Web Application resources by using the <security-constraint> element in web.xml file available in the WEB-INF directory.

Following is a sample entry in web.xml –

```
<web-app>
  ...
  <security-constraint>
    <web-resource-collection>
      <web-resource-name>SecuredBookSite</web-resource-name>
      <url-pattern>/secured/*</url-pattern>
      <http-method>GET</http-method>
      <http-method>POST</http-method>
    </web-resource-collection>

    <auth-constraint>
```

```
        <description>
          Let only managers use this app
        </description>
        <role-name>manager</role-name>
      </auth-constraint>
    </security-constraint>

    <security-role>
      <role-name>manager</role-name>
    </security-role>

    <login-config>
      <auth-method>BASIC</auth-method>
    </login-config>
    ...
</web-app>
```

The above entries would mean –

- Any HTTP GET or POST request to a URL matched by /secured/*
  would be subject to the security restriction.

- A person with the role of a manager is given access to the
  secured resources.

- The login-config element is used to describe the BASIC form of
  authentication.

If you try browsing any URL including the /security directory, the
following dialog box will be displayed asking for username and
password. If you provide a user "admin" and password "secret", then
you will have access on the URL matched by /secured/* as we have
defined the user admin with manager role who is allowed to access
this resource.

Form Based Authentication

When you use the FORM authentication method, you must supply a login form to prompt the user for a username and password. Following is a simple code of login.jsp. This helps create a form for the same purpose –

```html
<html>
  <body bgcolor = "#ffffff">

    <form method = "POST" action ="j_security_check">
      <table border = "0">
        <tr>
          <td>Login</td>
          <td><input type = "text" name="j_username"></td>
        </tr>
        <tr>
          <td>Password</td>
          <td><input type = "password" name="j_password"></td>
        </tr>
      </table>
      <input type = "submit" value = "Login!">

    </form>

  </body>
</html>
```

Here you have to make sure that the login form must contain the form elements named j_username and j_password. The action in the <form> tag must be j_security_check. POST must be used as the form method. At the same time, you will have to modify the <login-config> tag to specify the auth-method as FORM –

```xml
<web-app>
  ...
  <security-constraint>
    <web-resource-collection>
      <web-resource-name>SecuredBookSite</web-resource-name>
      <url-pattern>/secured/*</url-pattern>
        <http-method>GET</http-method>
        <http-method>POST</http-method>
    </web-resource-collection>

    <auth-constraint>
      <description>Let only managers use this app</description>
      <role-name>manager</role-name>
    </auth-constraint>
  </security-constraint>

  <security-role>
    <role-name>manager</role-name>
  </security-role>

  <login-config>
    <auth-method>FORM</auth-method>
    <form-login-config>
      <form-login-page>/login.jsp</form-login-page>
      <form-error-page>/error.jsp</form-error-page>
    </form-login-config>
  </login-config>
  ...
</web-app>
```

Now when you try to access any resource with URL /secured/*, it will display the above form asking for the user id and password. When the container sees the "j_security_check" action, it uses some internal mechanism to authenticate the caller.

If the login succeeds and the caller is authorized to access the secured resource, then the container uses a session-id to identify a login session for the caller from that point on. The container maintains the login session with a cookie containing the session-id. The server sends the cookie back to the client, and as long as the caller presents this cookie with subsequent requests, then the container will know who the caller is.

If the login fails, then the server sends back the page identified by the form-error-page setting

Here, j_security_check is the action that applications using form based login have to specify for the login form. In the same form, you should also have a text input control called j_username and a password input control called j_password. When you see this, it means that the information contained in the form will be submitted to the server, which will check name and password. How this is done is server specific.

Conculsion

Authentication using JSP is done successfully .

Experiment No - 3

Aim : Connect MySQL database using JSP.

Theory :

Create Table

To create the Employees table in the EMP database, use the following steps –

Step 1
Open a Command Prompt and change to the installation directory as follows –

```
C:\>
C:\>cd Program Files\MySQL\bin
C:\Program Files\MySQL\bin>
```

Step 2
Login to the database as follows –
```
C:\Program Files\MySQL\bin>mysql -u root -p
Enter password: ********
mysql>
```

Step 3
Create the Employee table in the TEST database as follows – –
```
mysql> use TEST;
mysql> create table Employees
  (
    id int not null,
    age int not null,
    first varchar (255),
    last varchar (255)
```

```
  );
Query OK, 0 rows affected (0.08 sec)
mysql>
```

Create Data Records

Let us now create a few records in the Employee table as follows – –
```
mysql> INSERT INTO Employees VALUES (100, 18, 'Zara', 'Ali');
Query OK, 1 row affected (0.05 sec)

mysql> INSERT INTO Employees VALUES (101, 25, 'Mahnaz', 'Fatma');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Employees VALUES (102, 30, 'Zaid', 'Khan');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Employees VALUES (103, 28, 'Sumit', 'Mittal');
Query OK, 1 row affected (0.00 sec)

mysql>
```
SELECT Operation

Following example shows how we can execute the SQL

SELECT statement using JTSL in JSP programming –
```
<%@ page import = "java.io.*,java.util.*,java.sql.*"%>
<%@ page import = "javax.servlet.http.*,javax.servlet.*" %>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix = "c"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/sql" prefix = "sql"%>

<html>
  <head>
    <title>SELECT Operation</title>
  </head>
```

```html
  <body>
    <sql:setDataSource var = "snapshot" driver =
"com.mysql.jdbc.Driver"
      url = "jdbc:mysql://localhost/TEST"
      user = "root"  password = "pass123"/>

    <sql:query dataSource = "${snapshot}" var = "result">
      SELECT * from Employees;
    </sql:query>

    <table border = "1" width = "100%">
      <tr>
        <th>Emp ID</th>
        <th>First Name</th>
        <th>Last Name</th>
        <th>Age</th>
      </tr>

      <c:forEach var = "row" items = "${result.rows}">
        <tr>
          <td><c:out value = "${row.id}"/></td>
          <td><c:out value = "${row.first}"/></td>
          <td><c:out value = "${row.last}"/></td>
          <td><c:out value = "${row.age}"/></td>
        </tr>
      </c:forEach>
    </table>

  </body>
</html>
```

Access the above JSP, the following result will be displayed –

Emp ID	First Name	Last Name	Age
100	Zara	Ali	18
101	Mahnaz	Fatma	25
102	Zaid	Khan	30
103	Sumit	Mittal	28

INSERT Operation

Following example shows how we can execute the SQL INSERT
statement using JTSL in JSP programming –

```
<%@ page import = "java.io.*,java.util.*,java.sql.*"%>
<%@ page import = "javax.servlet.http.*,javax.servlet.*" %>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix = "c"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/sql" prefix = "sql"%>

<html>
  <head>
    <title>JINSERT Operation</title>
  </head>

  <body>
    <sql:setDataSource var = "snapshot" driver =
"com.mysql.jdbc.Driver"
      url = "jdbc:mysql://localhost/TEST"
      user = "root"  password = "pass123"/>
    <sql:update dataSource = "${snapshot}" var = "result">
    INSERT INTO Employees VALUES (104, 2, 'Nuha', 'Ali');
  </sql:update>
```

```
<sql:query dataSource = "${snapshot}" var = "result">
  SELECT * from Employees;
</sql:query>

<table border = "1" width = "100%">
  <tr>
    <th>Emp ID</th>
    <th>First Name</th>
    <th>Last Name</th>
    <th>Age</th>
  </tr>

  <c:forEach var = "row" items = "${result.rows}">
    <tr>
      <td><c:out value = "${row.id}"/></td>
      <td><c:out value = "${row.first}"/></td>
      <td><c:out value = "${row.last}"/></td>
      <td><c:out value = "${row.age}"/></td>
    </tr>
  </c:forEach>
</table>

</body>
</html>
```

Access the above JSP, the following result will be displayed –

Emp ID	First Name	Last Name	Age
100	Zara	Ali	18
101	Mahnaz	Fatma	25
102	Zaid	Khan	30

103	Sumit	Mittal	28
104	Nuha	Ali	2

DELETE Operation

Following example shows how we can execute the SQL
DELETE statement using JTSL in JSP programming –

```jsp
<%@ page import = "java.io.*,java.util.*,java.sql.*"%>
<%@ page import = "javax.servlet.http.*,javax.servlet.*" %>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix = "c"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/sql" prefix = "sql"%>

<html>
  <head>
    <title>DELETE Operation</title>
  </head>

  <body>
    <sql:setDataSource var = "snapshot" driver =
"com.mysql.jdbc.Driver"
      url = "jdbc:mysql://localhost/TEST"
      user = "root" password = "pass123"/>

    <c:set var = "empId" value = "103"/>

    <sql:update dataSource = "${snapshot}" var = "count">
      DELETE FROM Employees WHERE Id = ?
      <sql:param value = "${empId}" />
    </sql:update>

    <sql:query dataSource = "${snapshot}" var = "result">
      SELECT * from Employees;
    </sql:query>
```

```
    <table border = "1" width = "100%">
      <tr>
        <th>Emp ID</th>
        <th>First Name</th>
        <th>Last Name</th>
        <th>Age</th>
      </tr>

      <c:forEach var = "row" items = "${result.rows}">
        <tr>
          <td><c:out value = "${row.id}"/></td>
          <td><c:out value = "${row.first}"/></td>
          <td><c:out value = "${row.last}"/></td>
          <td><c:out value = "${row.age}"/></td>
        </tr>
      </c:forEach>
    </table>

  </body>
</html>
```

Access the above JSP, the following result will be displayed –

Emp ID	First Name	Last Name	Age
100	Zara	Ali	18
101	Mahnaz	Fatma	25
102	Zaid	Khan	30

UPDATE Operation

Following example shows how we can execute the SQL
UPDATE statement using JTSL in JSP programming –
```
<%@ page import = "java.io.*,java.util.*,java.sql.*"%>
```

```jsp
<%@ page import = "javax.servlet.http.*,javax.servlet.*" %>
<%@ taglib uri = "http://java.sun.com/jsp/jstl/core" prefix = "c"%>
<%@ taglib uri = "http://java.sun.com/jsp/jstl/sql" prefix = "sql"%>

<html>
  <head>
    <title>DELETE Operation</title>
  </head>

  <body>
    <sql:setDataSource var = "snapshot" driver =
"com.mysql.jdbc.Driver"
      url = "jdbc:mysql://localhost/TEST"
      user = "root" password = "pass123"/>

    <c:set var = "empId" value = "102"/>

    <sql:update dataSource = "${snapshot}" var = "count">
      UPDATE Employees SET WHERE last = 'Ali'
      <sql:param value = "${empId}" />
    </sql:update>

    <sql:query dataSource = "${snapshot}" var = "result">
      SELECT * from Employees;
    </sql:query>

    <table border = "1" width = "100%">
      <tr>
        <th>Emp ID</th>
        <th>First Name</th>
        <th>Last Name</th>
        <th>Age</th>
      </tr>

      <c:forEach var = "row" items = "${result.rows}">
```

```
        <tr>
          <td><c:out value = "${row.id}"/></td>
          <td><c:out value = "${row.first}"/></td>
          <td><c:out value = "${row.last}"/></td>
          <td><c:out value = "${row.age}"/></td>
        </tr>
      </c:forEach>
    </table>

  </body>
</html>
```

Access the above JSP, the following result will be displayed –

Emp ID	First Name	Last Name	Age
100	Zara	Ali	18
101	Mahnaz	Fatma	25
102	Zaid	Ali	30

Conclusion :

Hence we have successfully implemented to connect MySQL database using JSP.

Experiment No – 04

Aim : Design and development of Online Book Shop using JSP/Node.js & React .js

Theory :

The goal of this project is to show the core concepts of building SPA with ExpressJS and Angular.

1. Wrapped each major feature into a module
2. Lazy-loading for most of the modules so the app can start faster
3. Preload lazy-loaded modules after the app starts so they can be ready for use as soon as possible
4. Shared module for compoennts, directives and pipes that can be imported into any feature module
5. Services for each major feature
6. Guards to prevent unauthorized users to view routes that require authentication or admin rights
7. Interceptors for attaching JWT token to the request headers, showing notifications from the server response and error handling
8. Custom directives
9. Custom pipe
10. TypeScript models
11. Reactive forms for handling user input

Installation Steps

Book Store requires

- **MongoDB** v3.6+
- **NodeJS** v8+
-

To start the database (port: 27017): Install MongoDB, open new cmd window (in project root) and run

1. $ cd server
2. $ start-mongodb

To add initial seeding: (do this step once only the first time you start the app) After you start MondoDB open new cmd window (in project root) and run

1. $ cd server
2. $ seedBooks

To start the server (port: 8000): open new cmd window (in project root) and run

1. $ cd server
2. $ npm install (if you havent already installed the dependencies)
3. $ npm start

To start the client (port: 4200): open new cmd window (in project root) and run

1. $ cd client
2. $ npm install (if you havent already installed the dependencies)
3. $ ng serve

Features :

1. **Anonymous users**
   0. Login/Register

      1. View all books
      2. View books details, rating and comments

2. **Authenticated users**
      0. Buy books
      1. Rate books
      2. Comment books
      3. View user profiles
      4. View his own purchases history
      5. Create favorite books list
      6. Can change his own avatar

3. **Admin users**
      0. Add books to the store
      1. Edit books
      2. Delete books
      3. Edit/Delete offensive user comments
      4. Block/Unblock user from commenting
      5. Change unappropriate user avatars

Conclusion :

Hence we have successfully implemented design and development of Online Book Shop using JSP/Node.js & React .js .

Experiment No – 05

ONLINE EXAMINATION

AIM:

Design and development of Online Examination using JSP/Node.js & React.js

CODE:

```html
<html>
<head>
<title>ONLINE EXAM</title>
</head>
<body bgcolor="powderblue" align="center">
<center>
 <font face="Arial Black" size="3">
 <table border="1" cellspacing="5" cellpadding="10" width="100%">
 <tr>
 <td colspan="6" align="center">ONLINE EXAM PAGE</td>
 </tr>
 <tr>
<td align="center"><a href="registration.html"
target="des_page">SIGN UP</a></td>
<td align="center"><a href="login.html"
target="des_page">LOGIN</a></td>
<td align="center"><a href="home.html"
target="des_page">HOME</a></td>
<td align="center"><a href="" target="des_page">REPORT</a></td>
<td align="center"><a href="" target="des_page">LOGOUT</a></td>
<marquee bgcolor="pink" height="50"><font size="6">WELCOME TO
ONLINE EXAM WEBSITE</marquee>
</tr>
```

```html
    </table>
<br><br><br><br><br><br><br><br><br><br><br>
"EXAMS WILL BE UPDATED SHORTLY"
 </font>
</body>
</html>
```

registration.html
```html
<html>
<head>
 <title>Registration Page</title>
</head>
<body bgcolor="powderblue">
<center>
<h3 align="center"><u>REGISTRATION PAGE</u></h3>
<table border="3">
<tr><td>
<form name="f1" action="" method="post" onsubmit="">
<table cellspacing="10" cellpadding="5">
 <tr><td>NAME</td><td><input type="text" size="30"
name="uname"/></td></tr>
 <tr><td>PASSWORD</td><td><input type="password" size="30"
name="pass"/></td></tr>
 <tr><td>E-MAIL ID</td><td><input type="text" size="30"
name="email"/></td></tr>
 <tr><td> PHONE NUMBER</td><td><input type="text" size="15"
name="phone"/></td></tr>
 <tr><td>GENDER</td><td><input type="radio" name="gen"
value="m" />MALE
 <input type="radio" name="gen" value="f" />FEMALE </td></tr>
 <tr><td>DATE OF BIRTH</td>
 <td><select name="day">
 <option value="day">DAY</option>
<option value="1">1</option>
<option value="2">2</option>
```

```html
<option value="3">3</option>
<option value="4">4</option>
<option value="5">5</option>
<option value="6">6</option>
<option value="7">7</option>
<option value="8">8</option>
<option value="9">9</option>
<option value="10">10</option>
<option value="11">11</option>
<option value="12">12</option>
<option value="13">13</option>
<option value="14">14</option>
<option value="15">15</option>
<option value="16">16</option>
<option value="17">17</option>
<option value="18">18</option>
<option value="19">19</option>
<option value="20">20</option>
<option value="21">21</option>
<option value="22">22</option>
<option value="23">23</option>
<option value="24">24</option>
<option value="25">25</option>
<option value="26">26</option>
<option value="27">27</option>
<option value="28">28</option>
<option value="29">29</option>
<option value="30">30</option>
<option value="31">31</option>
</select>
<select name="month">
<option value="month">MONTH</option>
<option value="jan">JANUARY</option>
<option value="feb">FEBRUARY</option>
<option value="mar">MARCH</option><option
```

```
value="apr">APRIL</option>
<option value="may">MAY</option>
<option value="jun">JUNE</option>
<option value="jul">JULY</option>
<option value="aug">AUGUST</option>
<option value="sep">SEPTEMBER</option>
<option value="oct">OCTOBER</option>
<option value="nov">NOVEMBER</option>
<option value="dec">DECEMBER</option>
</select>
<select name="year">
<option value="year">YEAR</option>
<option value="1986">1986</option>
<option value="1987">1987</option>
<option value="1988">1988</option>
<option value="1989">1989</option>
<option value="1990">1990</option>
<option value="1991">1991</option>
<option value="1992">1992</option>
<option value="1993">1993</option>
<option value="1994">1994</option>
<option value="1995">1995</option>
<option value="1996">1996</option>
<option value="1997">1997</option>
<option value="1998">1998</option>
<option value="1999">1999</option>
<option value="2000">2000</option>
<option value="2001">2001</option>
<option value="2002">2002</option>
<option value="2003">2003</option>
<option value="2004">2004</option>
<option value="2005">2005</option>
<option value="2006">2006</option>
<option value="2007">2007</option>
<option value="2008">2008</option>
```

```html
<option value="2009">2009</option>
<option value="2010">2010</option>
<option value="2011">1980</option>
<option value="2012">1981</option>
<option value="2013">1982</option>
<option value="2014">1983</option>
</select></td></tr>
<tr><td>LANGUAGES KNOWN</td>
<td>
<input type="checkbox" value="eng" name="lang" />ENGLISH
<input type="checkbox" value="tel" name="lang" />TELUGU
<input type="checkbox" value="hin" name="lang" />HINDI
<input type="checkbox" value="tam" name="lang" />TAMIL
</td></tr>
<tr>
<td>ADDRESS</td>
<td><textarea name="addr" cols="25"
rows="5"></textarea></td></tr>
<tr><td colspan="2" align="center"><input type="submit"
value="SUBMIT"/>
      <input type="reset"
value="RESET" /></td>
</tr>
</table>
</form>
</td></tr></table>
</center>
</body>
</html>

login.html
html>
<head>
<title>Login page</title>
 </head>
```

©**Talentio Solutions India Private Limited**
5th Floor, Mayfair Building, SP Road, Begumpet, Hyderabad – 500 003
www.talentio.in

```html
<body>
<center>
<font face="Arial Black" size="4"><u><b>LOGIN
FORM</b></u></font>
<br><br>
<form name="f1" action="" method="post">
<table frame="box" cellspacing="10">
 <tr>
 <td>Login</td>
 <td><input type="text" size="25"></td>
 </tr>
 <tr>
 <td>Password</td>
 <td><input type="password" size="25"></td>
 </tr>
 <tr>
<td colspan="2" align="center"><input type="submit"
value="SUBMIT">
     
<input type="reset" value="RESET"></td>
 </tr>
</table>
 </form>
</center>
</body>
</html>
```

©Talentio Solutions India Private Limited
5th Floor, Mayfair Building, SP Road, Begumpet, Hyderabad – 500 003
www.talentio.in

WELCOME TO ONLINE EXAM WEBSITE

ONLINE EXAM PAGE

| SIGN UP | LOGIN | HOME | REPORT | LOGOUT |

"EXAMS WILL BE UPDATED SHORTLY" registration.html

REGISTRATION PAGE

NAME	
PASSWORD	
E-MAIL ID	
PHONE NUMBER	
GENDER	○ MALE ○ FEMALE
DATE OF BIRTH	DAY ∨ MONTH ∨ YEAR ∨

Conclusion :

Hence we have successfully studied, Design and development of Online Examination using JSP/Node.js & React.js

EXPERIMENT NO. - 06

Aim : Design and development of online ticket reservation system using JSP/Node.js & React.js

Code :

home.html:

```html
<html>
  <head>
    <title>Tickets</title>
    <style>
       body {
 background-image: url("train.jpg");
 background-repeat: no-repeat;
 background-size: cover;
 width: 500px;
 margin: 0 auto;
 padding: 50px;
}
#bm{
 background-color: rgba(158, 158, 158, 0.512);
 border-radius: 5%;
}

div.elem-group {
 margin: 20px 0;
}

div.elem-group.inlined {
 width: 49%;
 display: inline-block;
```

```css
  float:right;
  margin-left: 1%;
}

label {
  display: block;
  font-family: 'Nanum Gothic';
  padding-bottom: 10px;
  font-size: 1.25em;
  color: rgb(0, 0, 0);
}

input, select, textarea {
  border-radius: 2px;
  border: 2px solid #777;
  box-sizing: border-box;
  font-size: 1.25em;
  font-family: 'Nanum Gothic';
  width: 100%;
  padding: 10px;
}

div.elem-group.inlined input {
  width: 95%;
  display: inline-block;
}

textarea {
  height: 250px;
}

hr {
  border: 1px dotted #ccc;
}
```

```css
button {
  height: 50px;
  background: orange;
  border: none;
  color: white;
  font-size: 1.25em;
  font-family: 'Nanum Gothic';
  border-radius: 4px;
  cursor: pointer;
}

button:hover {
  border: 2px solid black;
}
#submit{
    margin: 10px 0 0 150px;
}
#Title{
  text-align: center;
  font-family:'Courier New', Courier, monospace;
  font-size: xx-large;
  color:rgb(0, 0, 0);
}
    </style>
    <script src="ticket.js"></script>
  </head>
  <body>
    <div id="bm">
    <div class="elem-group">
      <label id="Title">Train Ticket Reservation</label>
    </div>
      <div class="elem-group">
        <label for="name">Your Name</label>
        <input type="text" id="name" name="passenger_name"
placeholder="John Doe"  required>
```

©**Talentio Solutions India Private Limited**
5th Floor, Mayfair Building, SP Road, Begumpet, Hyderabad – 500 003
www.talentio.in

```html
        </div>
        <div class="elem-group">
          <label for="email">Your E-mail</label>
          <input type="email" id="email" name="passenger_email"
placeholder="@email.com" required>
        </div>
        <div class="elem-group">
          <label for="phone">Your Phone</label>
          <input type="tel" id="phone" name="passenger_phone"
placeholder="+91 000-000-0000"  required>
        </div>
        <hr>
        <div class="elem-group inlined">
          <label for="adult">Adults</label>
          <input type="number" id="adult" name="total_adults"
placeholder="0" min="1" required>
        </div>
        <div class="elem-group inlined">
          <label for="child">Children</label>
          <input type="number" id="child" name="total_children"
placeholder="0" min="0" required>
        </div>
        <div class="elem-group inlined">
          <label for="from-place">from:</label>
          <select id="from-place" name="place" required>
            <option value="">Choose place</option>
            <option value="Hyderbad">Hyderbad</option>
            <option value="kurnool">kurnool</option>
            <option value="Nellore">Nellore</option>
            <option value="Anantapur">Anantapur</option>
            <option value="chitoor">Chitoor</option>
            <option value="Ongole">Ongole</option>
            <option value="Nandyal">Nandyal</option>
            <option value="Guntur">Guntur</option>
            <option value="Anakapalli">Anakapalli</option>
```

```html
            </select>
        </div>
          <div class="elem-group inlined">
            <label for="destination-place">to:</label>
            <select id="to-place" name="place" required>
              <option value="">Choose place</option>
              <option value="Kurnool">Kurnool</option>
              <option value="Chitoor">Chitoor</option>
              <option value="Nellor">Nellor</option>
              <option value="Hyberbad">Hyderbad</option>
              <option value="Ongole">Ongole</option>
              <option value="Anantapur">Anantapur</option>
              <option value="Nandyal">Nandyal</option>
              <option value="Guntur">Guntur</option>
              <option value="Anakapalli">Anakapalli</option>

        </select>
        </div>
        <hr>
        <div class="elem-group" style="text-align: center;">
          <label for="departion-date">Depart On:</label>
          <input type="date" id="departion-date" name="depart-on"
required>
        </div>

        <button id = "submit" type="submit" onclick="ticket()">Book
My Tickets</button>
        </div>

    </body>
</html>
```

OUTPUT:

Bill.html:

```html
<!DOCTYPE html>
<html>
  <head>
    <title>bill</title>
    <style>
      body{margin-top:20px;}
    </style>

  </head>
  <body>
    <div bgcolor="#f6f6f6" style="color: #333; height: 100%; width: 100%;" height="100%" width="100%">
      <table bgcolor="#f6f6f6" cellspacing="0" style="border-collapse: collapse; padding: 40px; width: 100%;" width="100%">
        <tbody>
          <tr>
```

```
        <td width="5px" style="padding: 0;"></td>
        <td style="clear: both; display: block; margin: 0 auto;
max-width: 600px; padding: 10px 0;">
            <table width="100%" cellspacing="0" style="border-
collapse: collapse;">
                <tbody>

                </tbody>
            </table>
        </td>
        <td width="5px" style="padding: 0;"></td>
    </tr>

    <tr>
        <td width="5px" style="padding: 0;"></td>
        <td bgcolor="#FFFFFF" style="border: 1px solid #000;
clear: both; display: block; margin: 0 auto; max-width: 600px;
padding: 0;">
            <table width="100%" style="background: #f9f9f9;
border-bottom: 1px solid #eee; border-collapse: collapse; color:
#999;">
                <tbody>
                    <tr>
                        <td width="50%" style="padding:
20px;"><strong style="color: #333; font-size: 24px;"><label
class="Amount"></label></strong> Paid</td>

                        <td align="right" width="50%" style="padding:
20px;"><h2 id = "name"></h2>Tickets Resivered</td>
                    </tr>
                </tbody>
            </table>
        </td>
        <td style="padding: 0;"></td>
        <td width="5px" style="padding: 0;"></td>
```

```
                </tr>
                <tr>
                    <td width="5px" style="padding: 0;"></td>
                    <td style="border: 1px solid #000; border-top: 0; clear:
both; display: block; margin: 0 auto; max-width: 600px; padding: 0;">
                        <table cellspacing="0" style="border-collapse:
collapse; border-left: 1px solid #000; margin: 0 auto; max-width:
600px;">
                            <tbody>
                                <tr>
                                    <td valign="top"  style="padding: 20px;">
                                      <h3
                                        style="
                                            border-bottom: 1px solid #000;
                                            color: #000;
                                            font-family: 'Helvetica Neue', Helvetica,
Arial, 'Lucida Grande', sans-serif;
                                            font-size: 18px;
                                            font-weight: bold;
                                            line-height: 1.2;
                                            margin: 0;
                                            margin-bottom: 15px;
                                            padding-bottom: 5px;
                                        "
                                      >
                                        Ticket Details
                                      </h3>
                                      <table cellspacing="0" style="border-
collapse: collapse; margin-bottom: 40px;">
                                          <tbody>
                                            <tr>
                                                <td style="padding: 5px
0;">No.Of.passenger     -</td>
                                                <td align="right" id ="passenger"
style="padding: 5px 0;">---------</td>
```

```
                                    </tr>
                                    <tr>
                                       <td style="padding: 5px 0;">Seat-
No</td>
                                       <td align="right" id="seat"
style="padding: 5px 0;">---------</td>
                                    </tr>
                                    <tr>
                                       <td style="padding: 5px
0;">from:</td>
                                       <td align="right" style="padding: 5px
0;">to:</td>
                                    </tr>
                                    <tr>
                                       <td  id="from"style="padding: 5px
0;">-</td>
                                       <td align="right"id ="to"
style="padding: 5px 0;">-</td>
                                    </tr>
                                    <tr>
                                       <td style="padding: 5px 0;">Total-
Amount</td>
                                       <td align="right" class="Amount"
style="padding: 5px 0;">$23.95</td>
                                    </tr>
                                    <tr>
                                       <td style="border-bottom: 2px solid
#000; border-top: 2px solid #000; font-weight: bold; padding: 5px
0;">Amount paid</td>
                                       <td class="Amount" align="right"
style="border-bottom: 2px solid #000; border-top: 2px solid #000;
font-weight: bold; padding: 5px 0;">$23.95</td>
                                    </tr>
                                  </tbody>
                                </table>
```

```html
                        </td>
                    </tr>
                </tbody>
            </table>
        </td>
        <td width="5px" style="padding: 0;"></td>
    </tr>


        </tbody>
    </table>
</div>
<script>

document.getElementById("name").innerHTML=sessionStorage.getItem("name");
    let pass = Number(sessionStorage.getItem("child"))+
Number(sessionStorage.getItem("adult"))
    document.getElementById("passenger").innerHTML = "-
c("+sessionStorage.getItem("child")+") +
a("+sessionStorage.getItem("adult")+") = "+ pass;
    document.getElementById("from")
.innerHTML=sessionStorage.getItem("from-place");
    document.getElementById("to")
.innerHTML=sessionStorage.getItem("to-place");
    for(var i=0; i<3;i++){

document.getElementsByClassName("Amount")[i].innerHTML =
sessionStorage.getItem("money")+"/RS";
    }
</script>
</body>
</html>
```
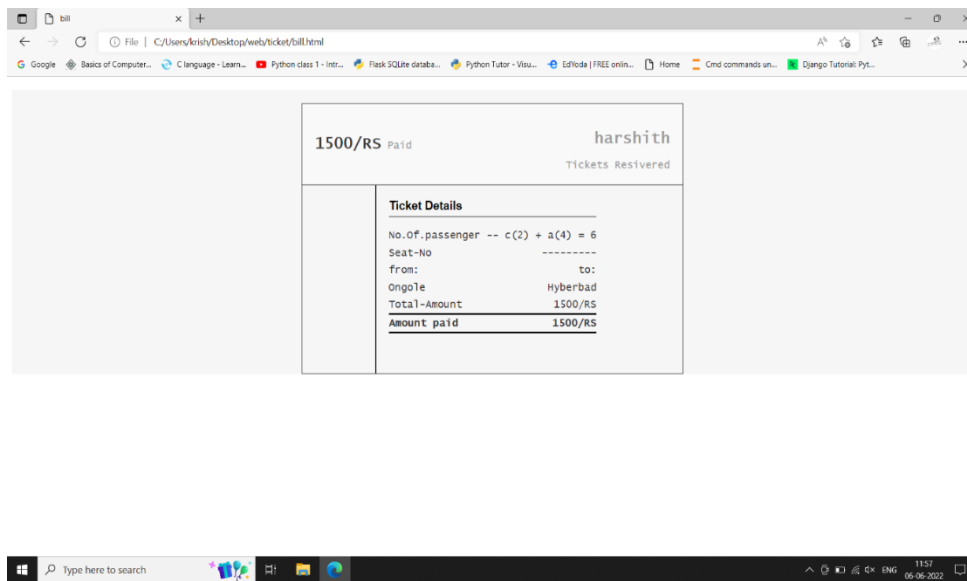
OUTPUT:

Conclusion :

Hence we have successfully studied, Design and development of online ticket reservation system using JSP/Node.js & React.js.

Experiment No: 07

Aim : Design and development of online library using JSP/Node.js & React.js

Code :

Index.html:

```html
<html>
<head>
    <meta charset="ISO-8859-1">
    <title>Online Library</title>
    <style>
    *{
        box-sizing: border-box;
    }
    body
    {
        background-image:
url("C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\lib
back ground.jpg");
    }
    #topmid{
        border:0px solid black;
        color:#FFFFFF;
        text-align: center;
        font-weight: bold;
        margin-top: 0px;
        padding-left: 30%;
        font-style: oblique;
        font-size:38px;
```

```css
        }
a:hover{
        color:red;
}
a:link{
        color: green;
        text-decoration: none;
}
.tab{
        border:1px black solid;
        background-color: #FFE5CC;
        margin-left: 48%;
        width:450px;
        color:green;
        font-weight: bold;
        font-style:normal;
        text-align:center;
        font-size: 22px;
        margin-bottom:10px;
        padding:10px;
        border-radius: 10px;
}
.home{
        border:1px black solid;
        border-radius: 11px;
        background-color: #ccffcc;
        margin-left: 1%;
        width:200px;
        color:blue;
        font-weight: bold;
        font-style:italic;
        text-align:center;
        font-size: 25px;
        margin-bottom:10px;
        padding:10px;
```

```
            float:left;
            clear:both;
            padding: 5px;
        }
        .yel{
        color:yellow;
        }
        .red{
            color:red;
        }
        .green{
            color:green;
        }
        .hd{
            font-size:25px;
        }
        .brown{
            color:brown;
        }
        </style>
    </head>
    <body>
        <div id="topmid">
            <h1>Welcome to Online Library</h1>
        </div>
        <div class="home">
            <a href="index.html">Home</a>
        </div>
        <div class="home">
            <a href="ViewBooks.html">Books Available</a>
        </div>
        <table class="tab brown hd" bgcolor="black">
            <tr>
                <td>Login or Signup Below</td>
            </tr>
```

```html
        </table>
        <table class="tab" border="0px solid black">
            <tr>
                <td><a href="AdminLogin.html">Login As
Admin</a></td>
            </tr>
        </table>
        <table class="tab" border="0px solid black">
            <tr>
                <td><a href="UserLogin.html"> Login As<span>
User</span> </a></td>
            </tr>
        </table>
        <table class="tab green">
            <tr>
                <td><a href="UserRegister.html">New user !
Register Here</a></td>
            </tr>
        </table>
</body>
</html>
```
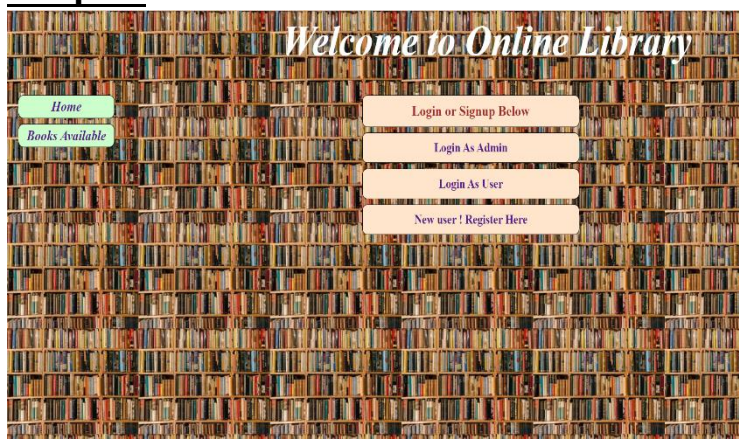
Output:

AdminLogin.html:

```html
<html>
<head>
     <meta charset="ISO-8859-1">
     <title>Online Library</title>
     <style>
     *{
          box-sizing: border-box;
     }
     body
     {
          background-image:
url("C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\lib2.jpg
");
          background-repeat: no-repeat;
          background-size: cover;
     }
     #topmid{
          border:0px solid black;
          color:#FFFFFF;
          text-align: center;
          font-weight: bold;
          margin-top: 0px;
          padding-left: 30%;
          font-style: oblique;
          font-size:38px;
     }
     a:hover{
          color:red;
     }
     a:link{
          color: green;
          text-decoration: none;
     }
```

```css
.tab{
    border:1px black solid;
    background-color: #FFE5CC;
    margin-left: 48%;
    width:450px;
    color:green;
    font-weight: bold;
    font-style:normal;
    text-align:center;
    font-size: 22px;
    margin-bottom:10px;
    padding:10px;
    border-radius: 11px;
}
.home{
    border:1px black solid;
    background-color: #ccffcc;
    margin-left: 1%;
    width:200px;
    color:blue;
    font-weight: bold;
    font-style:italic;
    text-align:center;
    font-size: 25px;
    margin-bottom:10px;
    padding:10px;
    float:left;
    clear:both;
    border-radius: 15px;
    padding: 5px;
}
.yel{
color:yellow;
}
.red{
```

```html
            color:red;
        }
        .green{
            color:green;
        }
        .hd{
            font-size:25px;
        }
        .brown{
            color:brown;
        }
    </style>
</head>
<body>
    <div id="topmid">
        <h1>Welcome to Online Library</h1>
    </div>
    <div class="home">
        <a href="index.html">Home</a>
    </div>
    <!-- <div class="home">
        <a href="index.html">Login</a>
    </div> -->
    <div class="home">
        <a href="ViewBooks.html">Books Available</a>
    </div>
    <!-- <div class="home">
        <a href="index.html">Logout</a>
    </div> -->
    <table class="tab brown hd">
        <tr>
            <td>ADMIN LOGIN</td>
        </tr>
    </table>
    <table class="tab" border="0px" >
```

```
            <tr>
                <td>
                    <form action="adminlog" method="post">
                        Username: <input type="text"
name="username"><br/><br/>
                        Password: <input type="password"
name="password"><br/><br/>
                        <input type="submit" value=" LOGIN AS
ADMIN " text-align="center">
                    </form>
                </td>
            </tr>
        </table>
        </div>
</body>
</html>
```
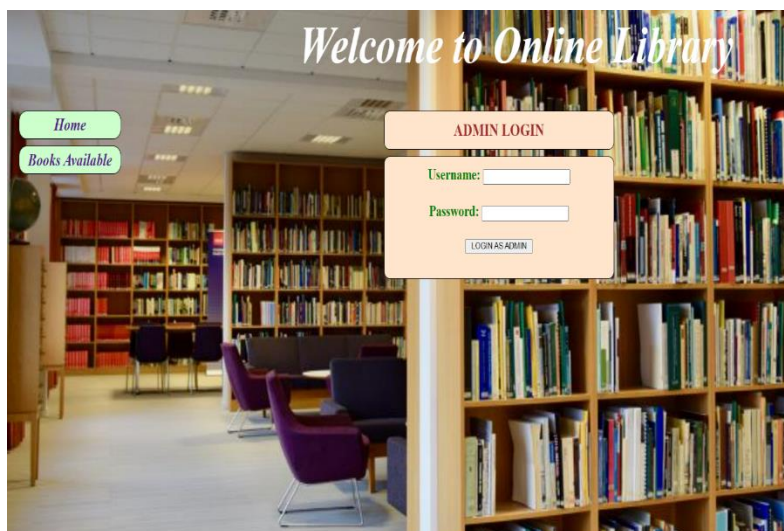
Output:

UserLogin.html:

```html
<html>
<head>
    <meta charset="ISO-8859-1">
    <title>Online Library</title>
    <style>
    *{
        box-sizing: border-box;
    }
    body
    {
        background-image:
url("C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\lib2.jpg
");
        background-repeat: no-repeat;
        background-size: cover;
    }
    #topmid{
        border:0px solid black;
        color:#FFFFFF;
        text-align: center;
        font-weight: bold;
        margin-top: 0px;
        padding-left: 30%;
        font-style: oblique;
        font-size:38px;
    }
    a:hover{
        color:red;
    }
    a:link{
        color: green;
        text-decoration: none;
    }
```

```css
.tab{
      border:1px black solid;
      background-color: #FFE5CC;
      margin-left: 48%;
      width:450px;
      color:green;
      font-weight: bold;
      font-style:normal;
      text-align:center;
      font-size: 22px;
      margin-bottom:10px;
      padding:10px;
      border-radius: 10px;
}
.home{
      border:1px black solid;
      background-color: #ccffcc;
      margin-left: 1%;
      width:200px;
      color:blue;
      font-weight: bold;
      font-style:italic;
      text-align:center;
      font-size: 25px;
      margin-bottom:10px;
      padding:10px;
      float:left;
      clear:both;
      border-radius: 10px;
}
.yel{
color:yellow;
}
.red{
      color:red;
```

```
            }
            .green{
                  color:green;
            }
            .hd{
                  font-size:25px;
            }
            .brown{
                  color:brown;
            }
            </style>
</head>
<body>
      <div id="topmid">
            <h1>Welcome to Online Library</h1>
      </div>
      <div class="home">
            <a href="index.html">Home</a>
      </div>
      <div class="home">
            <a href="ViewBooks.html">Books Available</a>
      </div>
      <table class="tab hd brown">
            <tr>
                  <td>USER LOGIN</td>
            </tr>
      </table>
      <table class="tab" border="0px" cellpadding="10"
cellspacing="10">
            <tr>
                  <td>
                        <form action="userlog" method="post">
                              Username: <input type="text"
name="username"><br/><br/>
                                    Password: <input type="password"
```

```
name="password"><br/><br/>
                            <input type="submit" value=" LOGIN AS
USER ">
                    </form>
                </td>
            </tr>
        </table>
</body>
</html>
```
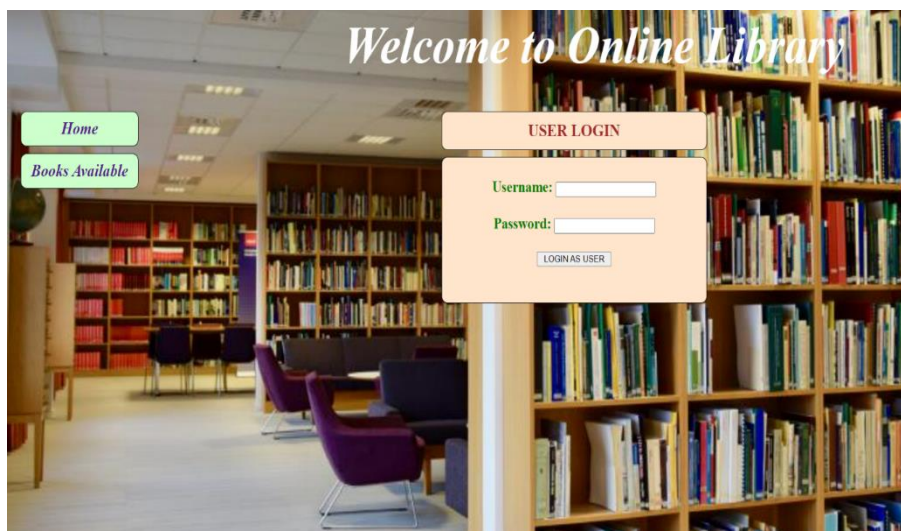
Output:

UserRegister.html:

```
<html>
<head>
        <meta charset="ISO-8859-1">
        <title>Online Library</title>
        <style>
        *{
```

```css
        box-sizing: border-box;
    }
    body
    {
        background-image:
url("C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\lib2.jpg
");
        background-repeat: no-repeat;
        background-size: cover;
    }
    #topmid{
        border:0px solid black;
        color:#FFFFFF;
        text-align: center;
        font-weight: bold;
        margin-top: 0px;
        padding-left: 30%;
        font-style: oblique;
        font-size:38px;
    }
    a:hover{
        color:red;
    }
    a:link{
        color: green;
        text-decoration: none;
    }
    .tab{
        border:1px black solid;
        background-color: #FFE5CC;
        margin-left: 48%;
        width:450px;
        color:green;
        font-weight: bold;
        font-style:normal;
```

```css
        text-align:center;
        font-size: 22px;
        margin-bottom:10px;
        padding:10px;
        border-radius: 10px;
}
.home{
        border:1px black solid;
        background-color: #ccffcc;
        margin-left: 1%;
        width:200px;
        color:blue;
        font-weight: bold;
        font-style:italic;
        text-align:center;
        font-size: 25px;
        margin-bottom:10px;
        padding:10px;
        float:left;
        clear:both;
        border-radius: 10px;
}
.yel{
color:yellow;
}
.red{
        color:red;
}
.green{
        color:green;
}
.hd{
        font-size:25px;
}
.brown{
```

©Talentio Solutions India Private Limited
5th Floor, Mayfair Building, SP Road, Begumpet, Hyderabad – 500 003
www.talentio.in

```
                color:brown;
        }
        </style>
</head>
<body>
    <div id="topmid">
        <h1>Welcome to Online Library</h1>
    </div>
    <div class="home">
        <a href="index.html">Home</a>
    </div>
    <div class="home">
        <a href="ViewBooks.html">Books Available</a>
    </div>
    <table class="tab hd brown">
        <tr>
            <td>USER LOGIN</td>
        </tr>
    </table>
    <table class="tab" border="0px" cellpadding="10"
cellspacing="10">
        <tr>
            <td>
                <form action="userlog" method="post">
                    Username: <input type="text"
name="username"><br/><br/>
                    Password: <input type="password"
name="password"><br/><br/>
                    <input type="submit" value=" LOGIN AS
USER ">
                </form>
            </td>

        </tr>
    </table>
```

```html
</body>
</html><html>
<head>
    <meta charset="ISO-8859-1">
    <title>Online Library</title>
    <style>
    *{
        box-sizing: border-box;
    }
    body
    {
        background-image:
url("C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\lib2.jpg
");
        background-repeat: no-repeat;
        background-size: cover;
    }
    #topmid{
        border:0px solid black;
        color:#FFFFFF;
        text-align: center;
        font-weight: bold;
        margin-top: 0px;
        padding-left: 30%;
        font-style: oblique;
        font-size:38px;
    }
    a:hover{
        color:red;
    }
    a:link{
        color: green;
        text-decoration: none;
    }
    .tab{
```

©**Talentio Solutions India Private Limited**
5th Floor, Mayfair Building, SP Road, Begumpet, Hyderabad – 500 003
www.talentio.in

```css
        border:1px black solid;
        background-color: #FFE5CC;
        margin-left: 48%;
        width:450px;
        color:green;
        font-weight: bold;
        font-style:normal;
        text-align:center;
        font-size: 22px;
        margin-bottom:10px;
        padding:10px;
        border-radius: 10px;
}
.home{
        border:1px black solid;
        background-color: #ccffcc;
        margin-left: 1%;
        width:200px;
        color:blue;
        font-weight: bold;
        font-style:italic;
        text-align:center;
        font-size: 25px;
        margin-bottom:10px;
        padding:10px;
        float:left;
        clear:both;
        border-radius: 10px;
}
.yel{
color:yellow;
}
.red{
        color:red;
}
```

```
        .green{
              color:green;
        }
        .hd{
              font-size:25px;
        }
        .brown{
              color:brown;
        }
        .blue{
              color:blue;
        }
        input{
              border-width: 1px;
              border-radius: 5px;
        }
        </style>
</head>
<body>
        <div id="topmid">
              <h1>Welcome to Online Library</h1>
        </div>
        <div class="home">
              <a href="index.html">Home</a>
        </div>
        <div class="home">
              <a href="ViewBooks.html">Books Available</a>
        </div>
        <table class="tab brown hd">
              <tr>
                    <td>Register Here</td>
              </tr>
        </table>

        <table class="tab" border="0px">
```

©**Talentio Solutions India Private Limited**
5th Floor, Mayfair Building, SP Road, Begumpet, Hyderabad – 500 003
www.talentio.in

```html
            <tr>
                <td>
                    <form action="userreg" method="post">
                        Username : <input type="text" name="username"><br/><br/>
                        Password : <input type="password" name="password"><br/><br/>
                        FirstName: <input type="text" name="firstname"><br/><br/>
                        Last Name: <input type="text" name="lastname"><br/><br/>
                        Address : <input type="text" name="address"><br/><br/>
                        Phone No : <input type="text" name="phone"><br/><br/>
                        Email Id : <input type="text" name="mailid"><br/><br/>
                        <input type="submit" value=" I AGREE FOR ALL TERMS & CONDITIONS ! REGISTER ME ">
                    </form>
                </td>
            </tr>
        </table>
</body>
</html>
```
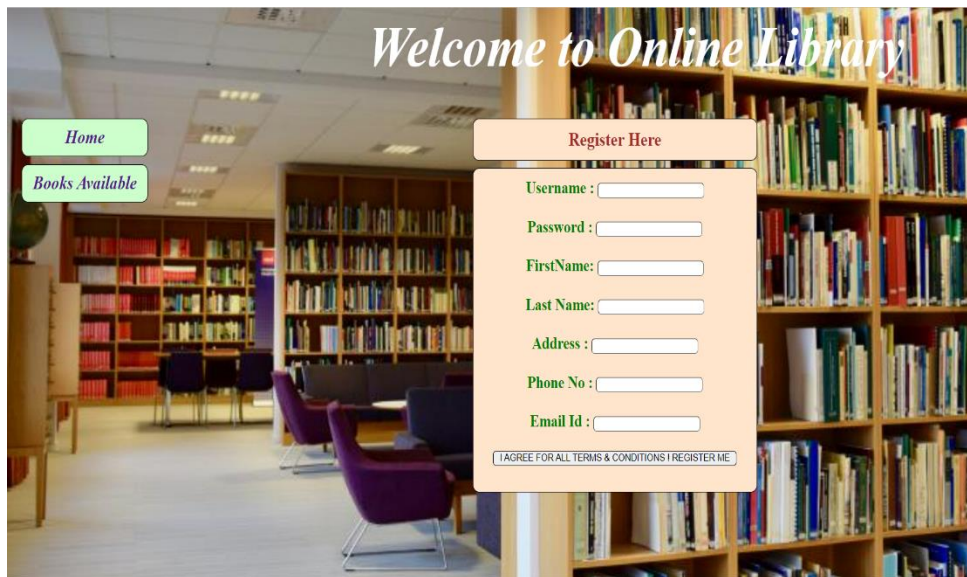
Output:

ViewBooks.html:

```html
<html>
<head>
    <meta charset="ISO-8859-1">
    <title>Online Library</title>
    <style>
    *{
        box-sizing: border-box;
    }
    body
    {
        background-image:
url("C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\lib2.jpg
");
        background-repeat: no-repeat;
        background-size: cover;
    }
    #topmid{
        border:0px solid black;
        color:#FFFFFF;
```

```css
            text-align: center;
            font-weight: bold;
            margin-top: 0px;
            padding-left: 30%;
            font-style: oblique;
            font-size:38px;
      }
      a:hover{
            color:red;
      }
      a:link{
            color: green;
            text-decoration: none;
      }
      .tab{
            border:1px black solid;
            background-color: #FFE5CC;
            margin-left: 45%;
            max-width:700px;
            color:green;
            font-weight: bold;
            font-style:normal;
            text-align:center;
            font-size: 22px;
            margin-bottom:10px;
            padding:10px;
            padding-top:2px;
      }
      .home{
            border:1px black solid;
            background-color: #ccffcc;
            margin-left: 1%;
            width:200px;
            color:blue;
            font-weight: bold;
```

```css
        font-style:italic;
        text-align:center;
        font-size: 25px;
        margin-bottom:10px;
        padding:10px;
        float:left;
        clear:both;
}
table{
        border:2px solid black;
        text-align: center;
        padding:5px;
        width:680px;
}
tr:hover {
        background-color: #f5f5f5;
        color:blue;
}
td{
        padding:10px;
        border:1px solid black;
}
th{
        color:green;
        font-size:20px;
}
.yel{
color:yellow;
}
.red{
        color:red;
}
.green{
        color:green;
}
```
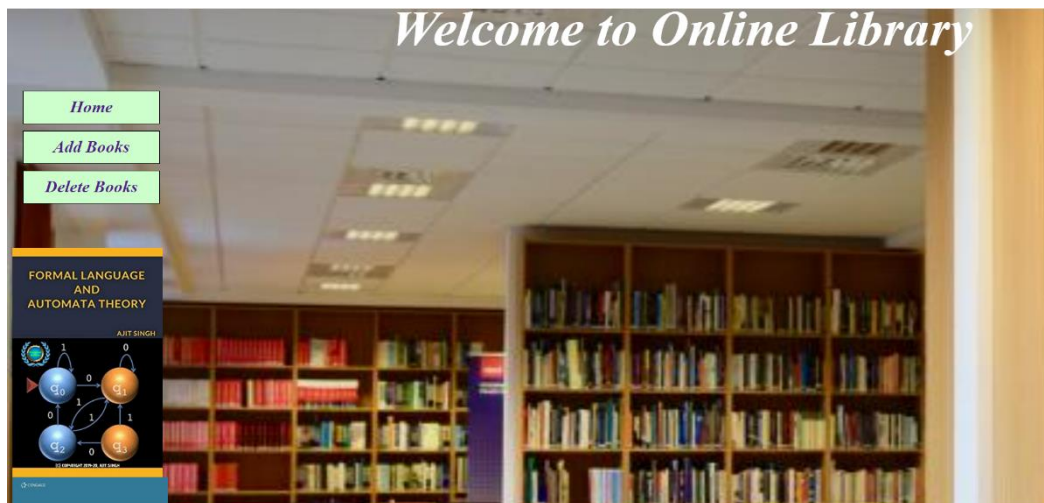
```
        .hd{
                font-size:25px;
        }
        .brown{
                color:brown;
        }
        </style>
</head>
<body>
        <div id="topmid">
                <h1>Welcome to Online Library</h1>
        </div>
        <div class="home">
                <a href="index.html">Home</a>
        </div>
        <div class="home">
                <a href="AddBook.html">Add Books</a>
        </div>
        <div class="home">
                <a href="RemoveBooks.html">Delete Books</a>
        </div>
        <br>
        <br>
        <br>
        <br>
        <br>
        <br>
        <br>
        <br>
        <br>
        <br>
        <br>
        <br>
        <br>
        <br>
        <div class="flat">
```

```html
<a
href="https://drive.google.com/file/d/1vZzznEbNIEBeMFCdpkUppM
FZv51twKcj/view?usp=sharing" target="_blank"><img
src="C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\flat.jpg
" alt="flat logo" height="350px"></a>
    </div>
    <div class="mefa">
         <a
href="https://docs.google.com/document/d/1vk1F94O-
gVK78I1dNfgLXkq8fN5D8n1T/edit?usp=sharing&ouid=10826441139
1211474051&rtpof=true&sd=true" target="_blank"><img
src="C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\mefa.j
pg" alt="mefa logo" height="300px"></a>
    </div>
    <div class="ps">
         <a
href="https://drive.google.com/file/d/1vfflCRR2P7dcGJ10pKdrT1S6x
b_B5v9Z/view?usp=sharing" target="_blank"><img
src="C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\p&s.jp
g" alt="p&s logo" height="300px"></a>
    </div>
</body>
</html>
```

Output:

AddBooks.html:

```html
<html>
<head>
     <meta charset="ISO-8859-1">
     <title>Online Library</title>
     <style>
     *{
          box-sizing: border-box;
     }
     body
     {
          background-image:
url("C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\lib2.jpg
");
          background-repeat: no-repeat;
          background-size: cover;
     }
     #topmid{
          border:0px solid black;
          color:#FFFFFF;
          text-align: center;
```

```css
        font-weight: bold;
        margin-top: 0px;
        padding-left: 30%;
        font-style: oblique;
        font-size:38px;
}
a:hover{
        color:red;
}
a:link{
        color: green;
        text-decoration: none;
}
.tab{
        border:1px black solid;
        background-color: #FFE5CC;
        margin-left: 48%;
        width:450px;
        color:green;
        font-weight: bold;
        font-style:normal;
        text-align:center;
        font-size: 22px;
        margin-bottom:10px;
        padding:10px;
}
.home{
        border:1px black solid;
        background-color: #ccffcc;
        margin-left: 1%;
        width:200px;
        color:blue;
        font-weight: bold;
        font-style:italic;
        text-align:center;
```

©**Talentio Solutions India Private Limited**
5th Floor, Mayfair Building, SP Road, Begumpet, Hyderabad – 500 003
www.talentio.in

```css
            font-size: 25px;
            margin-bottom:10px;
            padding:10px;
            float:left;
            clear:both;
    }
    .yel{
    color:yellow;
    }
    .red{
            color:red;
    }
    .green{
            color:green;
    }
    .hd{
            font-size:25px;
    }
    .brown{
            color:brown;
    }
</style>
</head>
<body>
    <div id="topmid">
            <h1>Welcome to Online Book Store</h1>
    </div>

    <div class="home">
            <a href="AdminLogin.html">Home</a>
    </div>
    <div class="home">
            <a href="ViewBooks.html">Books Available</a>
    </div>
    <table class="tab hd brown">
```

```html
                    <tr>
                            <td>Add Books</td>
                    </tr>
            </table>
            <table class="tab" border="0px" cellpadding="10"
cellspacing="10" text-color="red">
                    <tr>
                            <td>
                                    <form action="addbook" method="post">
                                            Book Code : <input type="text"
name="barcode"><br/><br/>
                                            Book Name : <input type="text"
name="name"><br/><br/>
                                            BookAuthor: <input type="text"
name="author"><br/><br/>
                                            Book Price: <input type="text"
name="price"><br/><br/>
                                            Book Qnty : <input type="text"
name="quantity"><br/><br/>
                                            <input type="submit" value=" Add These
Books ">
                                    </form>
                            </td>
                    </tr>
            </table>
            <table class="tab">
                    <tr>
                            <td><a href="index.html">Back To Home
Page</a></td>
                    </tr>
            </table>
            </div>
</body>
</html>
```
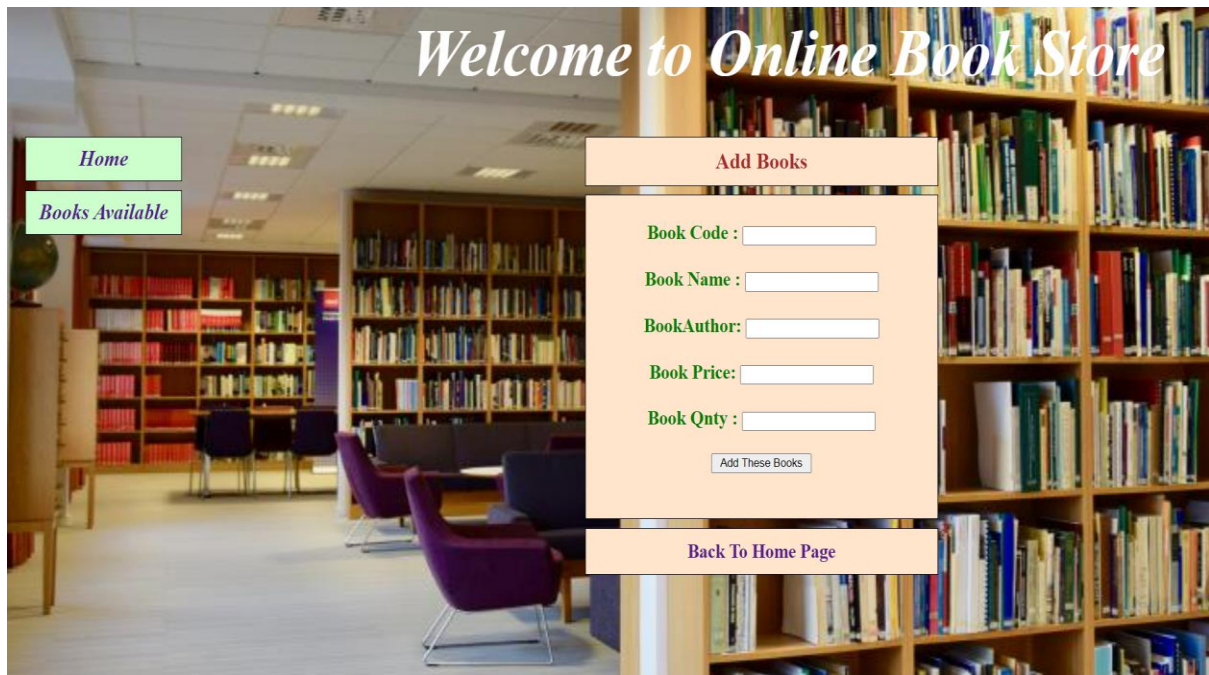
Output:

RemoveBooks.html:
```html
<html>
<head>
     <meta charset="ISO-8859-1">
     <title>Online  Library</title>
     <style>
     *{
          box-sizing: border-box;
     }
     body
     {
          background-image:
url("C:\\Users\\DELL\\Desktop\\Hemanth\\Project\\images\\lib
back ground.jpg");
     }
     #topmid{
          border:0px solid black;
          color:#FFFFFF;
          text-align: center;
          font-weight: bold;
          margin-top: 0px;
```

```css
        padding-left: 30%;
        font-style: oblique;
        font-size:38px;
}
a:hover{
        color:red;
}
a:link{
        color: green;
        text-decoration: none;
}
.tab{
        border:1px black solid;
        background-color: #FFE5CC;
        margin-left: 48%;
        width:450px;
        color:green;
        font-weight: bold;
        font-style:normal;
        text-align:center;
        font-size: 22px;
        margin-bottom:10px;
        padding:10px;
}
.home{
        border:1px black solid;
        background-color: #ccffcc;
        margin-left: 1%;
        width:200px;
        color:blue;
        font-weight: bold;
        font-style:italic;
        text-align:center;
        font-size: 25px;
        margin-bottom:10px;
```

```
                padding:10px;
                float:left;
                clear:both;
        }
        .yel{
        color:yellow;
        }
        .red{
                color:red;
        }
        .green{
                color:green;
        }
        .hd{
                font-size:25px;
        }
        .brown{
                color:brown;
        }
        </style>
</head>
<body>
        <div id="topmid">
                <h1>Welcome to Online Library</h1>
        </div>
        <div class="home">
                <a href="AdminLogin.html">Home</a>
        </div>
        <div class="home">
                <a href="ViewBooks.html">Books Available</a>
        </div>
        <div class="tab">
        <form action="remove" method="post">
                Book Code: <input type="text" name="barcode">
                        <input type="submit" value="Remove Book">
```
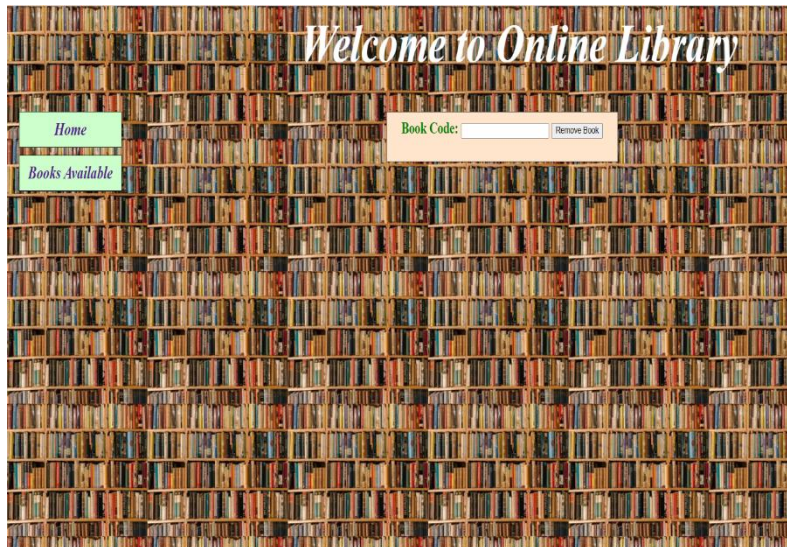
```
        </form>
        </div>
</body>
</html>
```

Output:

Conclusion :

Hence we have successfully studied, Design and development of online library using JSP/Node.js & React.js

Experiment No – 08

Aim : Design and development of online banking using JSP/Node.js & React.js

Theory :

Code:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01
Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<title>Online Banking ..</title>
<link href="style.css" rel="stylesheet" type="text/css">
<script type="text/javascript">
function ctck()
{
var sds = document.getElementById("dum");

}
</script>

</head>

<body>

<div id="top_links">


<div id="header">
    <h1>Online Banking System<span class="style1"></span></h1>
    <h1>For RIO Bank Co.Ltd<span class="style1"></span></h1>
```

```html
<h2>Extra Ordinary Service</h2>

</div>

<div id="navigation">
  <ul>
      <li><a href="create1.html">NEW CUSTOMER</a></li>
   <li><a href="login.html">LOGIN</a></li>

   <li><a href="about.jsp">ABOUT US</a></li>
   </ul>
</div>

<table cellpadding="0" cellspacing="0" id="content1"><tr
align="justify">
      <td class="con" valign="top">
      <div id="heade1"><h1>Results</h1></div>
    <p>This is  Global Business bank which is under business and
finance category for your website design.
Freedesignertemplates.com is a free collection of site templates with
HTML layouts which are frequently updated.<br><br>
      These web design layouts are developed by the professional
designers for you to make your task easy in creating a website and
are easy to download.


</p>
   </td>

   <td class="con" valign="top">
      <div id="heade2"><h1>Opportunities</h1></div>
    <p> These Global Business bank would be idle for building a
successful online businesses.  Download the required HTML
template, install it and edit the existing content with your original
text.<br><br>
```

The entire website   are pre-designed websites all you need to do is adding your own personal content and start your own website.

```
</p>
  </td>

  <td class="con" valign="top">
      <div id="heade3"><h1>Solutions</h1></div>
     <p>There are various other template categories like Art,
Finance, Nature, Night club, Communication, Computer, Music,
Religious, Fashion, Holiday, Travel, Health, Medicine. This free Global
Business bank which is built using XHTML and CSS.<br>

    These   are user friendly that any user can download and
customize it according to their wish.

  </td>
</tr></table>

<table style="width:897px; background:#FFFFFF; margin:0 auto;"><tr
align="justify">
     <td width="299" valign="top" style="border-right:#666666 1px
dotted;">
     <div id="services"><h1>Services</h1><br>
          <ul>
    <li><a href="#">www.javatpoint.com</a></li>
     <li><a href="#">www.javacstpoint.com </a></li>
     <li><a href="#">www.javatpoint.com/forum.jsp</a></li>
     </ul>

  </div>
    </td>

  <td width="299" valign="top">
```

```
    <div id="welcome" style="border-right:#666666 1px
dotted;"><h1>Welcome</h1><br>
        <center><img src="images/globe_10.gif" alt="business"
width="196" height="106"></center><br>
                <p>Each people plan their site layouts depending upon
their business type. Here comes a free designer template which
provides you with a selection of different kinds of webdesign
starting from business template, fashion template, media template,
Science template, Arts template and much more.</p>


        </div>
    </td>


    <td width="299" valign="top">
        <div id="news"><h1>News &amp; Events</h1><br>
        <div class="img"><img src="images/globe_12.gif"
alt="Business"></div>
        <h2>Nov. 17, 2008.</h2>
        <p>Get your dream web design at no cost, no extra manpower
for your professional website.</p><br>
        <div class="img"><img src="images/globe_16.gif"
alt="Business"></div>
        <h2>Nov. 17, 2008.</h2>
        <p>Get your dream web design at no cost, no extra manpower
for your professional website.</p>


    </div>


    </td>
</tr></table>

<div id="footer_top">
  <div id="footer_navigation">
```

```html
    </div>

  <div id="footer_copyright" >

        <center><img  alt="business"  width="196"
height="106"></center><br>
            <p>Each people plan their site layouts depending upon
their business type. Here comes a free designer template which
provides you with a selection of different kinds of webdesign
starting from business template, fashion template, media template,
Science template, Arts template and much more.</p>

  Copyright © Your Company Name</div>
</div>

<script type="text/javascript">
document.onload = ctck();
</script>
</div>

</body>
</html>
```

Conclusion :

Hence we have successfully studied, Design and development of
online banking using JSP/Node.js & React.js

©Talentio Solutions India Private Limited
5th Floor, Mayfair Building, SP Road, Begumpet, Hyderabad – 500 003
www.talentio.in

Experiment No – 09

Aim : Design and development of online job portal using JSP/Node & Reactjs.

Theory :

Code :

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Jobs Safari - Dev Jobs</title>
    <link rel="stylesheet" href="./assets/styles/header.css">
    <link rel="stylesheet" href="./assets/styles/main.css">
    <link rel="stylesheet" href="./assets/styles/responsive.css">
    <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.15.3/css/all.min.css" integrity="sha512-
iBBXm8fW90+nuLcSKlbmrPcLa0OT92xO1BIsZ+ywDWZCvqsWgccV3gF
oRBv0z+8dLJgyAHIhR35VZc2oM/gI1w==" crossorigin="anonymous"
referrerpolicy="no-referrer" />
    <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.15.3/css/all.min.css" integrity="sha512-
iBBXm8fW90+nuLcSKlbmrPcLa0OT92xO1BIsZ+ywDWZCvqsWgccV3gF
oRBv0z+8dLJgyAHIhR35VZc2oM/gI1w==" crossorigin="anonymous"
referrerpolicy="no-referrer" />
</head>
<body>
    <header>
```

```html
    <div class="header-container">
      <div class="logo">
        <a href="https://sauravsharmaz.github.io/Jobs-Safari--JavaScript/"><img src="./assets/images/logo.png" alt="logo"></a>
      </div>
      <div class="heading">
        <span>Jobs Safari - Dev Jobs</span>
      </div>
    </div>
  </header>

  <!-- search Bar -->
  <div class="search">
    <div class="search-container">
      <div class="input-container">
        <i class="fas fa-search"></i>
        <input type="text" id="filter-jobs" name="filter-jobs" placeholder="filter by search">
      </div>
      <div class="btn-container">
        <span>Find Jobs</span>
      </div>
    </div>
  </div>

  <!-- Jobs Container -->
  <div class="job-container">
    <div class="job-container-heading">Showing All Jobs</div>
    <div class="job-tile-container">
      <!-- Job tiles starts -->

      <!-- Jobs tiles ends -->
    </div>
  </div>
```

```
</body>
<script src="./assets/scripts/main.js"></script>
</html>
```

Conclusion :

Hence we have successfully studied , Design and development of online job portal using JSP/Node & Reactjs.

Experiment No – 10

Aim : Design and development of Online Auction usinh JSP/Node.js & React.js

Theory :

Code :

```html
<!doctype html>
<html class="no-js" lang="en">

<head>
 <meta charset="utf-8" />
 <meta name="robots" content="NOINDEX, NOFOLLOW">
 <!--add no follow tag to keep out of front facing index and search engines-->
 <meta name="description" content="An auction website">
 <meta property="og:image" content="https://www.mellor.io/auction-website/img/banner.png">
 <meta name="keywords" content="Online Auctions">
 <meta name="viewport" content="width=device-width, initial-scale=1.0" />
 <title>Markatplace</title>
 <link rel="icon" type="image/png" href="./img/favicon.ico">

 <!-- Bootstrap -->
 <link href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.3.0/font/bootstrap-icons.css" rel="stylesheet">
 <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet"
```

```html
    integrity="sha384-
1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2
QvZ6jIW3" crossorigin="anonymous">
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstra
p.bundle.min.js"
    integrity="sha384-
ka7Sk0Gln4gmtz2MlQnikT1wXgYsOg+OMhuP+IlRH9sENBO0LRn5q+8
nbTov4+1p"
    crossorigin="anonymous"></script>

  <!-- Custom CSS -->
  <link rel="stylesheet" href="./css/auction-website.css">
  <link rel="preconnect" href="https://fonts.googleapis.com">
  <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
  <link
href="https://fonts.googleapis.com/css2?family=Roboto&display=sw
ap" rel="stylesheet">
</head>

<body>

  <!-- The core Firebase JS SDK is always required and must be listed
first -->
  <script src="https://www.gstatic.com/firebasejs/6.5.0/firebase-
app.js"></script>
  <script src="https://www.gstatic.com/firebasejs/6.5.0/firebase-
auth.js"></script>
  <script src="https://www.gstatic.com/firebasejs/6.5.0/firebase-
firestore.js"></script>

  <script>
    // Your web app's Firebase configuration
    const firebaseConfig = {
      apiKey: "AIzaSyCAYOYDuMKGGjTSJL5uDzG5hjQ6y_vYPiI",
```

```
    authDomain: "auction-website-b12fc.firebaseapp.com",
    databaseURL: "https://auction-website-b12fc.firebaseio.com",
    projectId: "auction-website-b12fc",
    storageBucket: "auction-website-b12fc.appspot.com",
    messagingSenderId: "791747024664",
    appId: "1:791747024664:web:215a222a81c6d0c2aeb06d"
  };
  // Initialize Firebase
  firebase.initializeApp(firebaseConfig);
  var db = firebase.firestore();
  var auth = firebase.auth();
</script>
<!-- Navbar -->
<nav class="navbar navbar-dark bg-primary">
  <div class="container-fluid">
    <a class="navbar-brand mb-0 h1">
      <img src="./img/logo.png" alt="" width="30" height="24"
class="d-inline-block align-text-top">
      The Markatplace
    </a>
    <a class="navbar-brand" id="username-display"></a>
    <button id="signup-button" class="btn btn-secondary"
type="submit" onclick="openLogin()">Sign up</button>
  </div>
</nav>
<!-- Grid of auction items -->
<div id="auction-container" class="container">
  <div id="auction-grid" class="row row-cols-1 row-cols-md-3 g-
4"></div>

  <footer class="d-flex flex-wrap justify-content-between align-
items-center py-3 my-4 border-top">
    <div class="col-md-4 d-flex align-items-center">
      <span class="text-muted">© 2022 Harry Mellor</span>
    </div>
```

```html
    <ul class="nav col-md-4 justify-content-end list-unstyled d-flex">
      <li class="ms-3"><a class="bi bi-github text-muted"
href="https://github.com/HMellor/" width="24"
        height="24"></a></li>
    </ul>
  </footer>
 </div>


 <!-- Login popup -->
 <div id="login-modal" class="modal" tabindex="-1">
  <div class="modal-dialog modal-dialog-centered modal-dialog-
scrollable">
    <div class="modal-content">
     <div class="modal-header">
      <h5 id="login-modal-title" class="modal-title">Sign up for
Markatplace Auction</h5>
     </div>
     <div class="modal-body">
      <p>We use anonymous authentication provided by Google.
Your account is attached to your device signature.</p>
      <p>The username just lets us know who's bidding!</p>
      <form onsubmit="return false;">
       <div class="form-floating mb-3">
        <input type="username" class="form-control" id="username-
input" placeholder="username"
          onkeypress="if (event.key == 'Enter') {newUserLogin()}">
        <label for="username-input">Username</label>
       </div>
       <div class="modal-footer">
        <button type="button" class="btn btn-secondary" data-bs-
dismiss="modal"
          aria-label="Cancel">Cancel</button>
        <button type="submit" class="btn btn-primary"
onclick="newUserLogin()">Sign up</button>
```

```html
        </div>
      </form>
    </div>
  </div>
</div>
<!-- Info popup -->
<div id="info-modal" class="modal" tabindex="-1">
  <div class="modal-dialog modal-dialog-centered modal-dialog-scrollable">
    <div class="modal-content">
      <div class="modal-header">
        <h5 id="info-modal-title" class="modal-title"></h5>
        <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
      </div>
      <div class="modal-body">
        <p id="info-modal-desc"></p>
        <img id="info-modal-img"></img>
      </div>
      <div class="modal-footer">
        <button type="button" class="btn btn-secondary" data-bs-dismiss="modal" aria-label="Close">Close</button>
        <button type="button" class="btn btn-primary" data-bs-dismiss="modal" aria-label="Submit bid"
          onclick="openBid(this.id)">Submit bid</button>
      </div>
    </div>
  </div>
</div>
<!-- Bid popup -->
<div id="bid-modal" class="modal" tabindex="-1">
  <div class="modal-dialog modal-dialog-centered modal-dialog-scrollable">
    <div class="modal-content">
```

```html
    <div class="modal-header">
      <h5 id="bid-modal-title" class="modal-title">Place your bid</h5>
    </div>
    <div class="modal-body">
      <p>You are about to place a bid on <strong id="bid-modal-subtitle"></strong></p>
      <p class="text-muted">(This is just a demo, you're not bidding real money)</p>
      <form onsubmit="return false;">
        <div class="form-floating mb-3">
          <input type="amount" class="form-control" id="amount-input" placeholder="amount"
            onkeypress="if (event.key == 'Enter') {placeBid()}">
          <label for="amount-input">Amount</label>
          <div id="bad-amount-feedback" class="invalid-feedback"></div>
        </div>
      </form>
    </div>
    <div class="modal-footer">
      <button type="button" class="btn btn-secondary" data-bs-dismiss="modal" aria-label="Cancel">Cancel</button>
      <button type="submit" class="btn btn-primary" onclick="placeBid()">Submit bid</button>
    </div>
   </div>
  </div>
 </div>
 <!-- Custom JS -->
 <script src="https://ajax.googleapis.com/ajax/libs/jquery/2.1.3/jquery.min.js"></script>
 <script src="./js/auctions.js"></script>
 <script src="./js/popups.js"></script>
```

```
<!-- Create anonymous account -->
<script>
 populateAuctionGrid();
 setClocks();
 dataListener()
 autoLogin();
</script>
</body>

</html>
```

Conclusion :

Hence we have successfully studied, Design and development of Online Auction usinh JSP/Node.js & React.js