Ex.No: 1 **Create a Webpage with Image Mapping**

Date:

Aim:

To create a webpage of Image mapping using HTML.

Algorithm:

1. Start the program.
2. Get the India map image and link it to the package.
3. Fix the hotspots in that image.
4. Map the reference of the hotspots in the image.
5. Mention the derived link.
6. Click the link to get the desired image.
7. Stop the program.

Program:

Map.html

```
<html>
<head>
<title>Home - States of India!!</title>
</head>
<body>
<img align="right" src = "map.png" usemap="#india">
<map name="india">
<area shape="rect" coords="287,532,328,653" href="ap.html">
<area shape="circle" coords="325,718,3" href="py.html">
<area shape="rect" coords="278,696,313,725" href="tn.html"></map>
<h1><u>Republic of India</u></h1>
<img src="flag.png"width="123" height="123">
<p>India is the Seventh Largest country in the world by geographical area, the second most populous country with over 1.2 billion people, and the most populous democracy in the world. India is a federal constitutional Republic with a parliamentry democracy consisting of 28 states and 7 Union Territories.</p>
<h2>Features</h2>
<ul>
<li><b>Population</b> - 1,028,610,328 (2001 census).
<li><b>Capital </b> - New Delhi
<li><b>Largest City </b> - Mumbai
<li><b>Currency </b> - Indian Rupee.
```

```
<li><b>Time Format</b> - IST (UTC + 5:30)
<li><b>National Sport </b> - Hockey
<li><b>Current PM </b> - Narendra Modi
<li><b>Current President </b> - Ramnath Kovind
</ul>
<h2><b>To view the details of states please click on the specified
area in the map!!</b></h2>
</body>
</html>
```

Tn.html:

```
<html>
<head>
<title>Tamil Nadu - India</title>
</head>
<body>
<h1>Tamil Nadu</h1>
<h3>is one of the  states of India. Its capital and largest city is
Chennai. Tamil Nadu lies in the
southernmost part of the Indian Peninsula and is bordered by the
States of Puducherry, Kerala,
Karnataka and Andhra Pradesh. It is bound by the Eastern Ghats in the
north, the Nilgiri, the
Anamalai Hills, and Palakkad on the west, by the Bay of Bengal in the
east, the Gulf of Mannar, the
Palk Strait in the south east, and by the Indian Ocean in the
south.</h3>
<h3>
<ol>
<li><i>Districts </i> - 38
<li><i>Capital City </i> - Chennai
<li><i>Largest City </i> - Chennai
<li><i>Governor </i> - Shri Banwarilal purohit
<li><i>Chief Minister</i> - Mr.E.Palanisamy
<li><i>Popultation </i> - 66,396,000
<li><i>Dance </i> - Bharthanatyam
<li><i>Festivals</i> - Pongal, Alanganallur Jallikattu etc.,
<li><i>Cuisine </i> - Dosai, Adai, Idly, Vadai, Pongal,
Appam(Aappam), Paniyaram, Puttu(Pittu),
Uppumavu(Uppuma), Santhakai(Noodles), Idiyappam and Uthappam.
<li><i>Tourist spots </i>
<ul>
```

```
<li>Mamallapuram (Shore Temple)
<li>Brihadeeshwara Temple
<li>Ooty
<li>Kodaikanal.
<li>Kanyakumari. (Thiruvalluvar statue etc.,)
<li>Marina Beach(chennai)
<li>Madurai Meenakshi Amman Temple.
<li>Thanjavur.
<li>Velankanni.
<li>Rameswaram.
</ul>
</ol>
</body>
</html>
```

Ap.html:

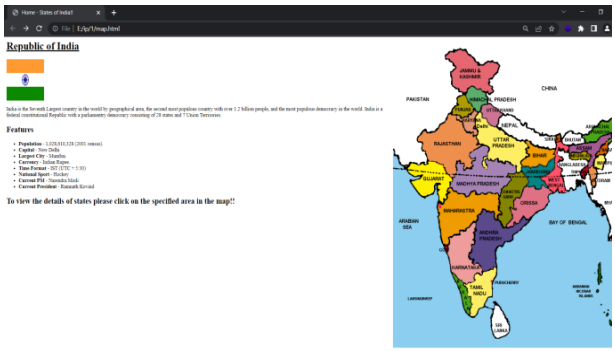
```
<html>
<head>
<title>Andhra Pradesh - India</title>
</head>
<body>
<h1>Andhra Pradesh</h1>
<h3>A.P., is a state situated on the southeastern coast of India. It
is India's fourth largest state by area
and fifth largest by population.</h3>
<h3>
<ul>
<li><i>Districts </i> - 13
<li><i>Capital City </i> - Amaravathi
<li><i>Largest City </i> - Hyderabad
<li><i>Governor </i> - Biswabhusan Harichandan
<li><i>Chief Minister</i> - Y.S. Jaganmohan Reddy
<li><i>Popultation </i> - 76,210,007
<li><i>Tourist spots </i> - Tirumala Tirupati, Charminar, Golconda
Fort, Chandragiri Fort,
Chowmahalla Palace, Falaknuma Palace etc.,
</ul></body>
</html>
```

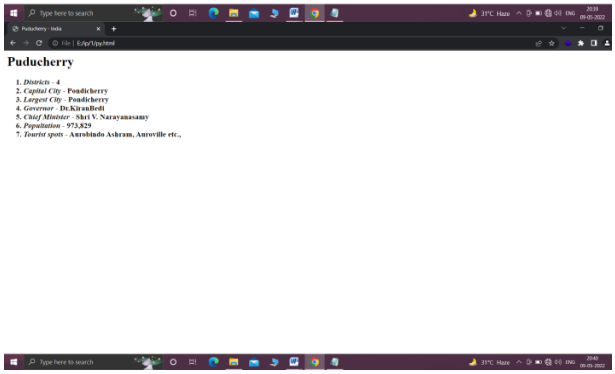
Py.html:

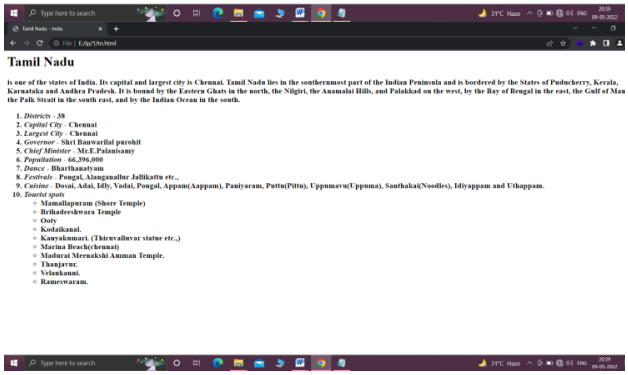
```
<html>
<head>
```

```
<title>Puducherry - India</title>
</head>
<body>
<h1>Puducherry</h1>
<h3><ol>
<li><i>Districts </i> - 4
<li><i>Capital City </i> - Pondicherry
<li><i>Largest City </i> - Pondicherry
<li><i>Governor </i> - Dr.KiranBedi
<li><i>Chief Minister</i> - Shri V. Narayanasamy
<li><i>Popultation </i> - 973,829
<li><i>Tourist spots </i> - Aurobindo Ashram, Auroville etc.,
</ol>
</body>
</html>
```

Output:







Result:

Thus the webpage of Image mapping using HTML has been created and executed successfully.

Ex.No:2 **Create a webpage using HTML with CSS**

Date:

Aim:

To create a webpage using HTML and CSS.

Algorithm:

1. Start the program.
2. Create a web page with framesets consisting two frames.
3. In the first frame include the links.
4. In the second frameset display the webpage of the link.
5. Create a external style sheets.
6. Create a inline and internal style and make a link to the external style sheet.
7. Stop the program.

Program:

Inline.html:

```
<html>
<title>html</title>
<body style="background-color:#00fa9a;">
<h1 style="color:red;text-align:center;">
ADHIPARASAKTHI ENGINEERING COLLEGE</h1>
<h2 style="color:#fff8dc;text-align:center;">
</br>MELMARUVATHUR
</br>KANCHIPURAM
</br>TAMILNADU
</BR></h2>
<h1>DEPARTMENT</H1>
<h3><ul>
<li>CSE</li>
<li>ECE</li>
<li>MECH</li>
<li>CIVIL</li>
<li>CHEMICAL</li>
<li>EEE</li>
<li>IT</li>
</ul></H3>
</body>
</html>
```

Internal.html:

```
<html>
```

```
<title>html</title>
<head>
<style>
body{
background-color:#f9ceee;
}
h2
{ color:blue;text-align:center;}
h1{color:blue;text-align:center;}
</style>
</head>
<body>
<h1>
ADHIPARASAKTHI ENGINEERING COLLEGE</h1>
<h2>
</br>MELMARUVATHUR
</br>KANCHIPURAM
</br>TAMILNADU
</BR></h2>
<h1><strong>DEPARTMENT</strong></h1>
<h3><ul>
<li>CSE</li>
<li>ECE</li>
<li>MECH</li>
<li>CIVIL</li>
<li>CHEMICAL</li>
<li>EEE</li>
<li>IT</li>
</ul></H3>
</body>
</html>
```

Style.css:

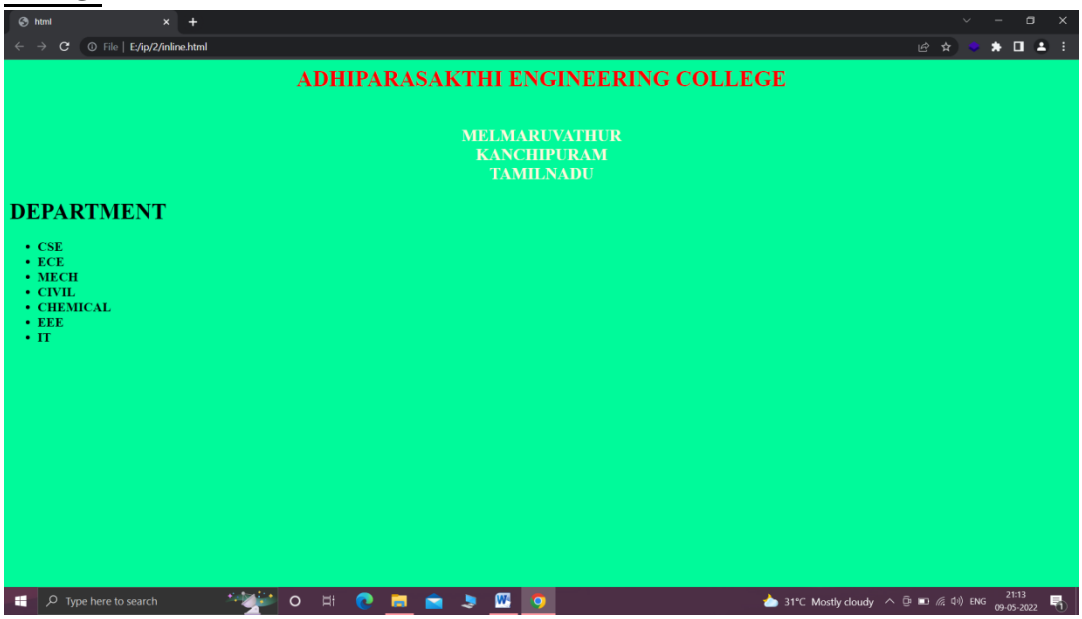
```
body{
background-color:#8e44ad;
}
h2
{color:blue;
text-align:center;}
h1
{color:blue;
text-align:center;}
```

Style.html:

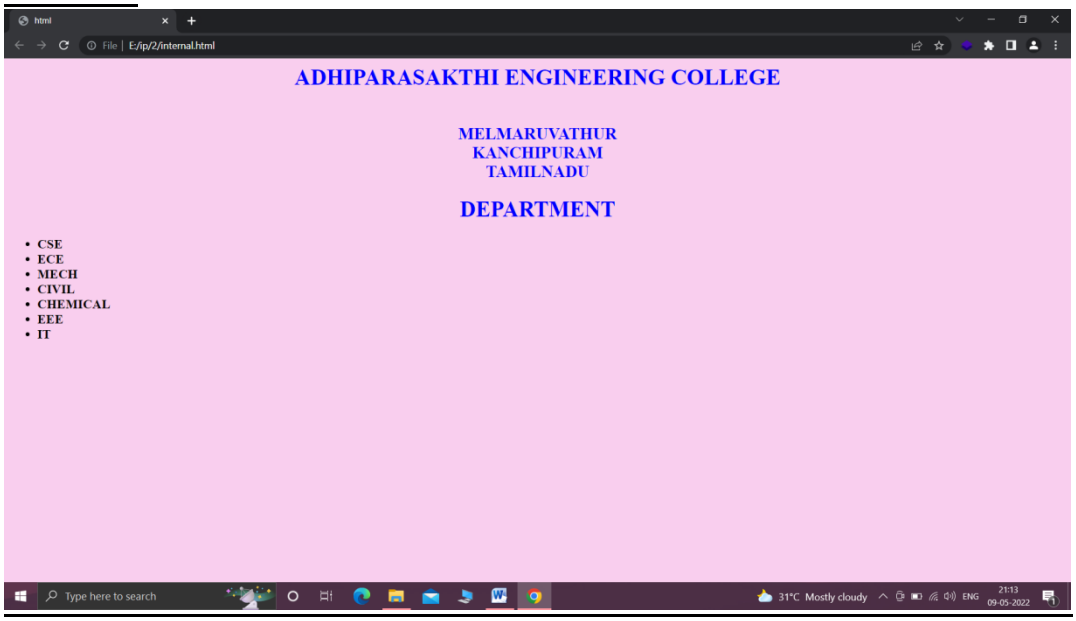
```
<html>
<head>
<link rel="stylesheet" href="style.css">
</head>
<body>
<h1>
ADHIPARASAKTHI ENGINEERING COLLEGE</h1>
<h2><center>
</br>MELMARUVATHUR
</br>KANCHIPURAM
</br>TAMILNADU
</br></center></h2>
<h1><strong>DEPARTMENT</strong></h1>
<h3><ul>
<li>CSE</li>
<li>ECE</li>
<li>MECH</li>
<li>CIVIL</li>
<li>CHEMICAL</li>
<li>EEE</li>
<li>IT</li>
</ul></H3>
</body>
</html>
```

Output:

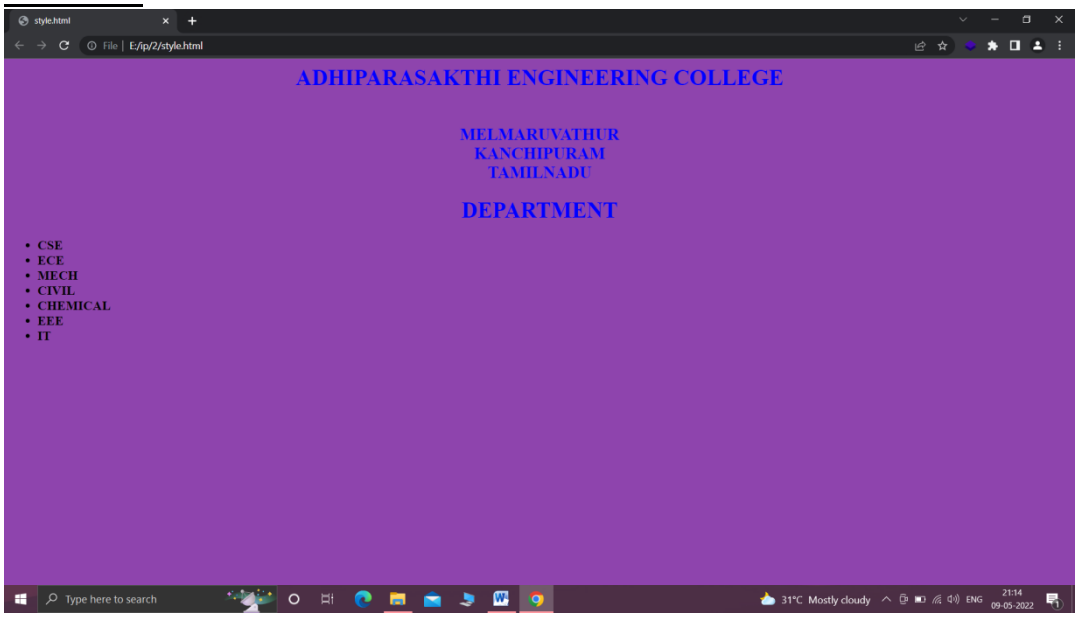
Inline:



Internal:



External:



Result:

Thus the webpage using HTML and CSS has been created and executed successfully.

Ex.No:3 **Form Validation using JavaScript**

Date:

Aim:

To create a webpage with form validation using HTML and JS.

Algorithm:

1.Create a webpage which contains a form with details like Name ,Address, etc.

2.Use the java script for form validation.

3.Save the document.

4.Open the browser & run the file.

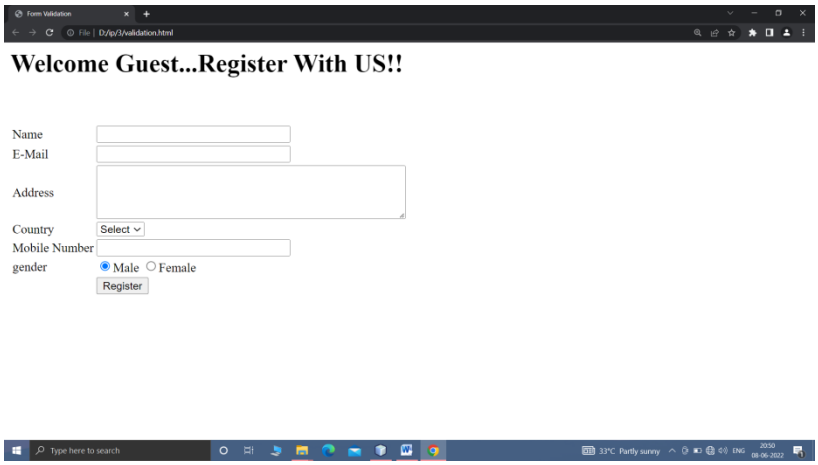
Program:

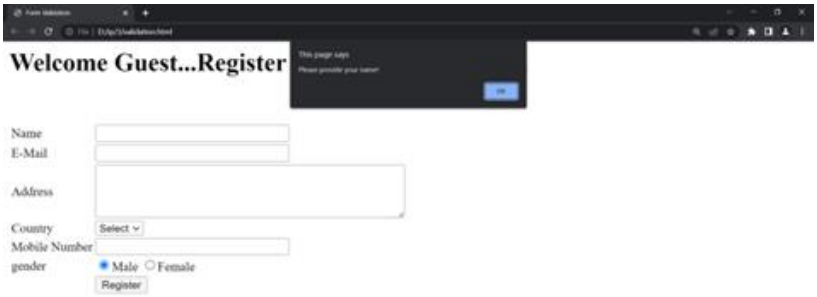
```
<html>
<head>
<title>Form Validation</title>
<script type="text/javascript">
function validate()
{
if (document.myForm.Name.value == "" )
{
alert( "Please provide your name!" );
document.myForm.Name.focus();
return false;
}
if (document.myForm.EMail.value == "" )
{
alert( "Please provide your Email!" );
document.myForm.EMail.focus() ;
return false;
}
if (document.myForm.Address.value == "" )
{
alert( "Please provide your Address!" );
document.myForm.Address.focus() ;
return false;
}
if (document.myForm.Country.value == "-1" )
{
alert( "Please provide your country!" );
return false;
```

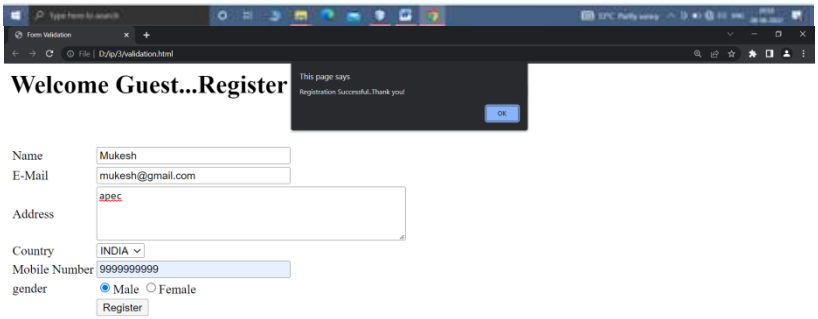
```
}
if(document.myForm.Mobile.value==""||isNaN(document.myForm.Mobile.val
ue )
||document.myForm.Mobile.value.length != 10 ){
alert ("Provide Your valid Mobile Number");
document.myForm.Mobile.focus() ;
return false;
}
alert("Registration Successful..Thank you!");
return true;
}
</script>
</head>
<body>
<h1>Welcome Guest...Register With US!!</h1><br><br>
<form action="FormValidation.html" name="myForm"
onsubmit="return validate()">
<table border="0">
<tr>
<td>Name</td>
<td><input type="text" name="Name" size="30" /></td>
</tr>
<tr>
<td>E-Mail</td>
<td><input type="text" name="EMail" size="30"/></td>
</tr>
<tr>
<td>Address</td>
<td> <textarea rows="4" cols="50"
name="Address"></textarea> </td>
</tr>
<tr>
<td>Country</td>
<td>
<select name="Country">
<option value="-1" selected>Select</option>
<option value="1">USA</option>
<option value="2">UK</option>
<option value="3">INDIA</option>
</select>
</td>
</tr>
<tr>
```

```
<td>Mobile Number</td>
<td><input type="text" name="Mobile" Size="30"/></td>
</tr>
<tr>
<td>gender</td>
<td>
<input type="radio" name="group1" value="Male" checked
/>Male
<input type="radio" name="group1”
value="Female">Female
</td>
</tr>
<tr>
<td align="right"></td>
<td><input type="submit" value="Register" /></td>
</tr>
</table>
</form>
</body>
</html>
```

Output:







Result:

Thus the webpage with form validation using HTML and JS has been created and executed successfully.

Ex.No:4a) **Invoking Servlet from HTML forms**

Date:

Aim:

To create a webpage for invoking Servlet from HTML forms.

Algorithm:

1.Start the program.

2.Create the form as Server with textfield,submit Button and reset button.

3.The class Server implements the interface servlet.

4.Create the out object for the PrintWriter class and call the method Getwriter as response.getwriter.

5.Display the server port, server name, protocol, character encoding, content length.

6.Create the class as enumeration with parameters as object.

7.Stop the program.

Program:

index.html:

```
<!Doctype html>
<HTML>
    <HEAD>
        <TITLE>Sending a request</TITLE>
    </HEAD>
    <BODY>
        <FORM ACTION= "Server" METHOD="POST">
            <BR><BR> Author: <INPUT TYPE="TEXT" NAME="Author">
            <INPUT TYPE="SUBMIT" NAME="Submit">
            <INPUT TYPE="RESET" VALUE="Reset">
        </FORM>
    </BODY>
</HTML>
```

Server.java:

```
import javax.servlet.*;
import java.io.PrintWriter;
import java.io.IOException;
import java.util.Enumeration;
public class Server implements Servlet {
    public void init(ServletConfig config) throws ServletException {}
    public void destroy() {}
```

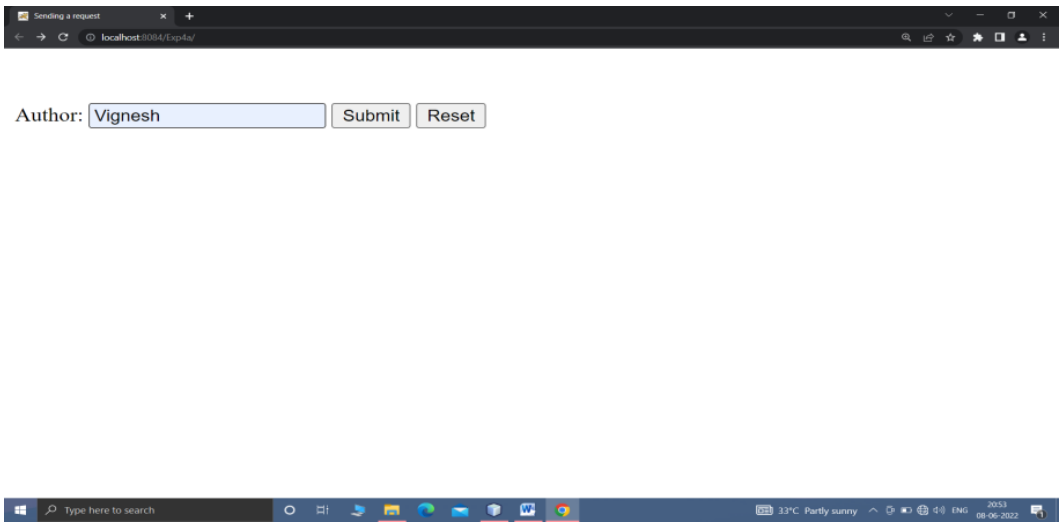
```
    public void service(ServletRequest request, ServletResponse
response) throws ServletException, IOException {
        PrintWriter out = response.getWriter();
        out.println("<HTML>");
        out.println("<HEAD>");
        out.println("<TITLE>");
        out.println("ServletResponse");
        out.println("</TITLE>");
        out.println("</HEAD>");
        out.println("<BODY>");
        out.println("<B>Demonstrating the ServletResponse
object</B>");
        out.println("<BR>");
        out.println("<BR>Server Port: " + request.getServerPort());
        out.println("<BR>Server Name: " + request.getServerName());
        out.println("<BR>Protocol: " + request.getProtocol());
        out.println("<BR>Character Encoding: " +
request.getCharacterEncoding());
        out.println("<BR>Content Type: " + request.getContentType());
        out.println("<BR>Content Length: " +
request.getContentLength());
        out.println("<BR>Remote Address: " +
request.getRemoteAddr());
        out.println("<BR>Remote Host: " + request.getRemoteHost());
        out.println("<BR>Scheme: " + request.getScheme());
        Enumeration parameters = request.getParameterNames();
        while (parameters.hasMoreElements()) {
            String parameterName = (String) parameters.nextElement();
            out.println("<br>Parameter Name: " + parameterName);
            out.println("<br>Parameter Value: " +
request.getParameter(parameterName));
        }
        Enumeration attributes=request.getAttributeNames();
        while (attributes.hasMoreElements()) {
            String attribute = (String) attributes.nextElement();
            out.println("<BR>Attribute name: " + attribute);
            out.println("<BR>Attribute value: " +
request.getAttribute(attribute));
        }
        out.println("</BODY>");
        out.println("</HTML>");
    }
    public String getServletInfo() {
```

```
        return null;
    }
    public ServletConfig getServletConfig() {
        return null;
    }
}
```

web.xml:

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="3.0" xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd">
    <servlet>
        <servlet-name>Server</servlet-name>
        <servlet-class>Server</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>Server</servlet-name>
        <url-pattern>/Server</url-pattern>
    </servlet-mapping>
    <session-config>
        <session-timeout>
            30
        </session-timeout>
    </session-config>
</web-app>
```

Output:



Result:

Thus the webpage for invoking servlet using HTML forms has been created and executed successfully.

Ex.No:4b) **Session Tracking using Hidden Form Fields**

Date:

Aim:

To create a webpage for Session tracking using Hidden form fields.

Algorithm:

1. Create a html file which contains user information.
2. The first servlet will receive these values.
3. First servlet stores them in the hidden form fields.
4. The second servlet will display the user information with greeting message.

Program:

Index.html:

```
<!Doctype html>
<html>
    <head>
        <title>Hidden Field</title>
    </head>
    <body>
        <form action="FirstServlet" method="get">
            Name:<input type="text" name="userName"/><br/>
            <input type="submit" value="go"/>
        </form>
    </body>
</html>
```

FirstServlet.java:

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class FirstServlet extends HttpServlet {
    public void doGet(HttpServletRequest request, HttpServletResponse
response) {
        try {
            response.setContentType("text/html");
            PrintWriter out = response.getWriter();
            String n = request.getParameter("userName");
            out.print("Welcome " + n);
            out.print("<form action='SecondServlet' method ='get'>");
            out.print("<input type='hidden' name='uname' value='" + n
+ "'>");
            out.print("<input type='submit' value='go'>");
```

```
            out.print("</form>");
            out.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```

SecondServlet.java:

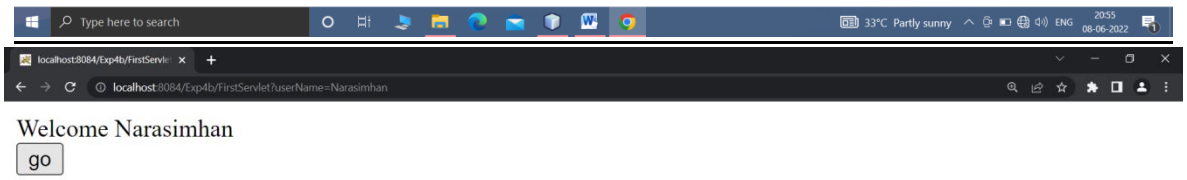
```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class SecondServlet extends HttpServlet {
    public void doGet(HttpServletRequest request, HttpServletResponse
response) {
        try {
            response.setContentType("text/html");
            PrintWriter out = response.getWriter();
            String n = request.getParameter("uname");
            out.print("Hello " + n);
            out.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```

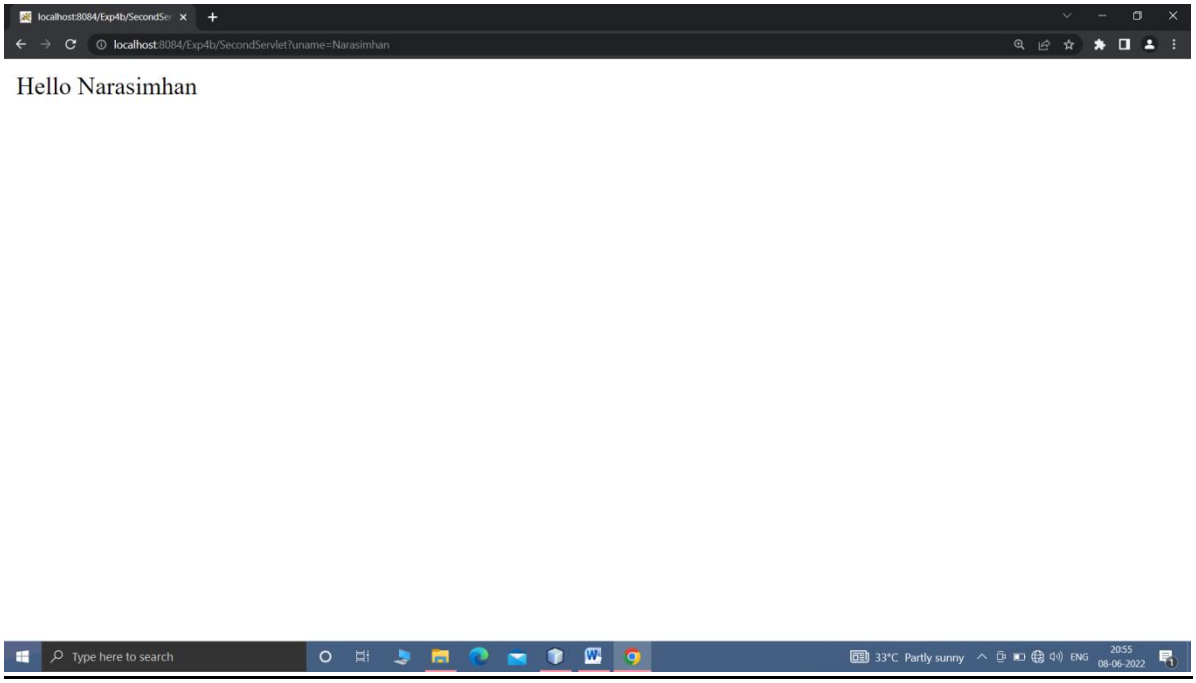
Web.xml:

```
<web-app xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd"   version="3.0"
metadata-complete="true">
    <display-name>Welcome to Tomcat</display-name>
    <description> Welcome to Tomcat   </description>
    <servlet>
        <servlet-name>FirstServlet</servlet-name>
        <servlet-class>FirstServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>FirstServlet</servlet-name>
        <url-pattern>/FirstServlet</url-pattern>
    </servlet-mapping>
    <servlet>
```

```
        <servlet-name>SecondServlet</servlet-name>
        <servlet-class>SecondServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>SecondServlet</servlet-name>
        <url-pattern>/SecondServlet</url-pattern>
    </servlet-mapping>
</web-app>
```

Output:





Result:

Thus the webpage for Session Tracking using Hidden Form fields has been created and executed successfully.

Ex.No:4c) **Session Tracking for Hit Count**

Date:

Aim:

To create a webpage for Session tracking for Page Hit count.

Algorithm:

1. Servlet program to keep track of user visiting the page.
2. The count is incremented by one when user visits.
3. The output displays the greeting message.
4. The number of previous access is also displayed.

Program:

Index.html:

```
<!Doctype html>
<html>
    <head>
        <title>Hidden Field</title>
    </head>
    <body>
        <form action="Pagehitcount" method="get">
        Name:<input type="text" name="userName"/><br/>
        <input type="submit" value="go"/>
        </form>
    </body>
</html>
```

Pagehitcount.java:

```
import java.io.*;
import java.sql.Date;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class Pagehitcount extends HttpServlet {
    private int hitCount;
    public void init() {
        hitCount = 0;
    }
    public void doGet(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {
        response.setContentType("text/html");
        hitCount++;
```

```
        PrintWriter out = response.getWriter();
        String title = "Total Number of Hits";
        String docType = "<!doctype html public \"-//w3c//dtd html
4.0 " + "transitional//en\">\n";
        out.println(docType+"<html>\n" + "<head><title>" + title +
"</title > </head >\n" +"<body bgcolor=\"#f0f0f0\">\n" +"<h1
align=\"center\">" + title + "</h1>\n"+ "<h2 align=\"center\">" +
hitCount + "</h2>\n" +"</body>\n</html >");
 }
public void destroy() {    }
}
```

web.xml:

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="3.0" xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd">
    <servlet>
        <servlet-name>Pagehitcount</servlet-name>
        <servlet-class>Pagehitcount</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>Pagehitcount</servlet-name>
        <url-pattern>/Pagehitcount</url-pattern>
    </servlet-mapping>
    <session-config>
        <session-timeout>
            30
        </session-timeout>
    </session-config>
</web-app>
```

Output:

Result:

Thus the webpage for Session tracking for Page hit count has been created and executed successfully.

Ex.No:5 **Three-Tier Application for Online Exam using Servlet**

Date:

Aim:

To write programs in Java to create three-tier applications using servlets for conducting online examination for displaying student mark list. Assume that student information is available in a database which has been stored in a database server.

Algorithm:

1. Create a HTML index page which accepts the Seat number and name followed by the answers for a set of questions.
2. Invoke the servlet when user presses submit button.
3. In servlet enable JDBC connection wherein you have already created an SQL table called student with seatno, name and total as its column.
4. Insert the entry of user by query and execute query update, create another query to display all the entries in the table and Execute that query to display the final output.
5. Include appropriate exception handlers for each key steps involved.

Program:

index.html:

```
<!Doctype html>
<html>
    <head>
        <title> Database test</title>
    </head>
    <body>
    <center>
        <form action="exam" method=POST>
            <div align="left"><br>
                <b>seat number:</b> <input type="text"
name="Seat_no">
                <div align="right"><br>
                    <b>Name:</b> <input type="text" name="Name"
size="50"><br>
                </div>
                <br>
```

```
                <br>
                <b>1.Is JAVA a platform independency</b><br/>
                <input type="radio" name="group1" value="True">True
                <input type="radio" name="group1"
value="False">False<br>
                <b>2.ASP .NET is a client side programming</b><br/>
                <input type="radio" name="group2" value="True">True
                <input type="radio" name="group2"
value="False">False<br>
                <b>3.MATHEMATICS is the backbone of
engineering</b><br/>
                <input type="radio" name="group3" value="True">True
                <input type="radio" name="group3"
value="False">False<br>
                <b>4.You are working in IBM machines</b><br/>
                <input type="radio" name="group4" value="True">True
                <input type="radio" name="group4"
value="False">False<br>
                <b>5.C++ is a fully OOP's language</b><br/>
                <input type="radio" name="group5" value="True">True
                <input type="radio" name="group5"
value="False">False<br>
                <br><br><br>
                <center>
                    <input type="submit" value="submit"><br><br>
                </center>
            </div>
        </form>
    </center>
    </body>
</html>
```

exam.java:

```
import java.sql.*;
import java.io.*;
import javax.servlet.*;
import java.sql.Connection;
import javax.servlet.http.*;
public class exam extends HttpServlet {
    String message, Seat_no1, Name, ans1, ans2, ans3, ans4, ans5;
    int Total = 0;
    Connection connect;
    Statement stmt = null;
    ResultSet rs = null;
```

```
    @Override
    public void doPost(HttpServletRequest request,
HttpServletResponse response)
            throws ServletException, IOException {
        try {
            String driverName = "com.mysql.jdbc.Driver";
            Class.forName(driverName);
            connect =
DriverManager.getConnection("jdbc:mysql://localhost:3306/studentdb2",
"root", "");
            message = "Connection Successful";
        } catch (ClassNotFoundException cnfex) {
            cnfex.printStackTrace();
        } catch (SQLException sqlex) {
            sqlex.printStackTrace();
        } catch (Exception excp) {
            excp.printStackTrace();
        }
        Seat_no1 = request.getParameter("Seat_no");
        Name = request.getParameter("Name");
        ans1 = request.getParameter("group1");
        ans2 = request.getParameter("group2");
        ans3 = request.getParameter("group3");
        ans4 = request.getParameter("group4");
        ans5 = request.getParameter("group5");
        if (ans1.equals("True")) {
            Total += 2;
        }
        if (ans2.equals("False")) {
            Total += 2;
        }
        if (ans3.equals("True")) {
            Total += 2;
        }
        if (ans4.equals("True")) {
            Total += 2;
        }
        if (ans5.equals("False")) {
            Total += 2;
        }
        try {
            stmt = connect.createStatement();
```

```
            String query = "INSERT into studenttable VALUES
("+Seat_no1+",'"+Name+"',"+Total + ")";
            stmt.executeUpdate(query);
            stmt.close();
        } catch (SQLException ex) {
            System.out.println("HI");
        }
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        out.println("<html>");
        out.println("<body bgcolor=white>");
        out.println("<h3>DataBase Updated");
        out.println("<br><br>");
        out.println("<b>" + "The Student Database is as follows");
        out.println("<table border=5>");
        try {
            stmt = connect.createStatement();
            String query;
            query = "SELECT * FROM studenttable";
            rs = stmt.executeQuery(query);
            out.println("<th>" + "Seat_no" + "</th>");
            out.println("<th>" + "Name" + "</th>");
            out.println("<th>" + "Marks" + "</th>");
            while (rs.next()) {
                out.println("<tr>");
                out.println("<td>" + rs.getInt(1) + "</td>");
                out.println("<td>" + rs.getString(2) + "</td>");
                out.println("<td>" + rs.getInt(3) + "</td>");
                out.println("</tr>");
            }
            out.println("</table>");
        } catch (SQLException ex) {
        } finally {
            try {
                if (rs != null) {
                    rs.close();
                }
                if (stmt != null) {
                    stmt.close();
                }
                if (connect != null) {
                    connect.close();
                }
```

```
            } catch (SQLException e) {
            }
        }
        out.println("<center>");
        out.println("<h1>Thanks!</h1>\n");
        out.println("</center>");
        out.println("</body></html>");
    }
}
```

web.xml:

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="3.0" xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd">
    <servlet>
        <servlet-name>exam</servlet-name>
        <servlet-class>exam</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>exam</servlet-name>
        <url-pattern>/exam</url-pattern>
    </servlet-mapping>
    <session-config>
        <session-timeout>
            30
        </session-timeout>
    </session-config>
</web-app>
```

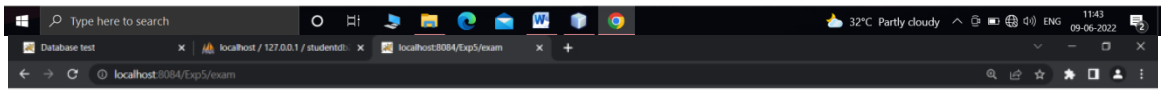
Output:

seat number:

Name:

1.Is JAVA a platform independency
True False
2.ASP .NET is a client side programming
True False
3.MATHEMATICS is the backbone of engineering
True False
4.You are working in IBM machines
True False
5.C++ is a fully OOP's language
True False

submit



DataBase Updated

The Student Database is as follows

Seat_no	Name	Marks
1	Mukesh	10
2	Vignesh	10
3	Saravanan	20
4	Thiyagu	30

Thanks!

Result:

Thus the java program to create three-tier applications using servlets for conducting online examination for displaying student mark list has been created and executed successfully.

Ex.No:6 **Three-Tier Application for Book Catalogue using Servlet**

Date:

Aim:

To create the Three-tier application for book catalogue using Servlet.

Algorithm:

1.we will create a html form for entering the user name,password and card ID.

2.From the above HTML form, the servlet program is invoked in which the validity of the user name,password and card id is checked.

3.If it is a valid user then the welcome message will be displayed otherwise the “invalid user” message will be displayed. In this servlet we set the cookies in which the current user name is stored.

4.On successful login , the information from the cookie is checked and shopping cart page for corressponding user can be displayed.

Program:

index.html:

```
<!DOCTYPE html>
<html>
    <body bgcolor="skyblue">
        <br /><br /><br /><br /><br />
        <h1 align="center"><U>ONLINE BOOK STORAGE</U></h1><br /><br
/><br />
        <h2 align="center"><pre>
        <b>Welcome to online book storage.
        Press LOGIN if you are having id
        otherwise press REGISTRATION
        </b></pre></h2>
        <br /><br /><pre>
        <div align="center">
            <a href="login.html">LOGIN</a>
            <a href="reg.html">REGISTRATION</a></div></pre>
    </body>
</html>
```

login.html:

```
<!Doctype html>
<html>
```

```
    <body bgcolor="skyblue"><br /><br /><br />
        <form name="myform" method="post" action="login">
            <div align="center"><pre>
                LOGIN ID :<input type="text" name="id" /><br />
                PASSWORD :<input type="password" name="pwd"
/></pre><br /><br />
            </div>
            <br /><br />
            <div align="center">
                <input type="submit" value="ok" onclick="validate()"
/>
                      
                <input type="reset" value="clear" />
            </div>
        </form>
    </body>
</html>
```

Reg.html:

```
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
    <head><title>Registration</title></head>
    <body bgcolor="skyblue"><br/><br/>
        <form name="myform" method="post" action="reg">
            <div align="center"><pre>
                NAME :<input type="text" name="name" /><br />
                ADDRESS :<input type="text" name="addr" /><br />
                CONTACT NUMBER :<input type="text" name="phno" /><br
/>
                LOGIN ID :<input type="text" name="id" /><br />
                PASSWORD :<input type="password" name="pwd"
/></pre><br /><br />
            </div> <br /><br />
            <div align="center">
                <input type="submit" value="ok" onclick="validate()"
/>
                      <input
type="reset" value="clear" />
            </div>
        </form>
    </body>
</html>
```

Catalog.html:

```
<!DOCTYPE html>
<html>
    <body bgcolor="skyblue"><br /><br /><br />
        <form method="post" action="catalog">
            <div align="center"><pre>
            BOOK TITLE :<input type="text" name="title" /><br />
            </pre><br/><br/>
            </div><br/><br/>
            <div align="center">
                <input type="submit" value="ok" name="button1"/>
                      
                <input type="reset" value="clear" name="button2"/>
            </div>
        </form>
    </body>
</html>
```

Order.html:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <body bgcolor="skyblue"><br /><br />
        <form method="post" action="order">
            <div align="center"><pre>
LOGIN ID :<input type="text" name="id" /><br/>
PASSWORD :<input type="password" name="pwd"/>
TITLE :<input type="text" name="title" /><br/>
NO. OF BOOKS :<input type="text" name="no" /><br/>
DATE :<input type="text" name="date" /><br />
CREDIT CARD NUMBER:<input type="password" name="cno" /><br /></pre>
                <br /><br /> </div>
            <br /><br />
            <div align="center">
                <input type="submit" value="ok" name="button1"/>
                      <input
type="reset" value="clear" name="button2"/>
            </div>
        </form>
    </body>
</html>
```

profile.html:

```
<!DOCTYPE html>
<html>
```

```
    <body bgcolor="skyblue"><br /><br /><br />
        <form name="myform" method="post" action="profile">
            <div align="center"><pre>
                LOGIN ID :<input type="text" name="id" /><br />
                </pre><br/><br/>
            </div> <br /><br />
            <div align="center">
                <input type="submit" value="ok" onclick="validate()"
/>
                      <input
type="reset" value="clear" />
            </div>
        </form>
    </body>
</html>
```

login.java:

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

public class login extends HttpServlet {
    Connection connect;
    Statement stmt=null;
    ResultSet rs=null;
    @Override
    public void doPost(HttpServletRequest req, HttpServletResponse
resp)
            throws ServletException, IOException {

        PrintWriter pw = resp.getWriter();
        pw.println("<html><body bgcolor=\"skyblue\"");
        String id = req.getParameter("id");
        String pwd = req.getParameter("pwd");
        try {
            String driverName = "com.mysql.jdbc.Driver";
            Class.forName(driverName);
            connect =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bookstore",
"root", "");
```

```
            stmt = connect.createStatement();
            String sqlstmt = "select id,password from login";
            rs = stmt.executeQuery(sqlstmt);
            int flag = 0;
            while (rs.next()) {
                if (id.equals(rs.getString(1)) &&
pwd.equals(rs.getString(2))) {
                    flag = 1;
                }
            }
            if (flag == 0) {
                pw.println("SORRY INVALID ID TRY AGAIN ID<br><br>");
                pw.println("<a href=\"login.html\">press LOGIN to
RETRY</a>");
            } else {
                pw.println("VALID LOGIN ID<br><br>");
                pw.println("<h3><ul>");
                pw.println("<li><a
href=\"profile.html\"><fontcolor=\"black\">USER PROFILE</font>
</a></li><br><br>");
                pw.println("<li><a
href=\"catalog.html\"><fontcolor=\"black\">BOOKS
CATALOG</font></a></li><br><br>");
                pw.println("<li><a
href=\"order.html\"><fontcolor=\"black\">ORDER CONFIRMATION</font>
</a></li><br><br>");
            }
            pw.println("</body></html>");
        } catch (Exception e) {
            resp.sendError(500, e.toString());
        }
    }
}
```

reg.java:

```
import java.sql.*;
import java.sql.Connection;
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class reg extends HttpServlet
```

```
{
    Connection connect;
    Statement stmt=null,stmt1=null;
    ResultSet rs=null;
public void doPost(HttpServletRequest req,HttpServletResponse resp)
throws ServletException,IOException
{
PrintWriter pw=resp.getWriter();
pw.println("<html><body bgcolor=\"skyblue\")");
String name=req.getParameter("name");
String addr=req.getParameter("addr");
String phno=req.getParameter("phno");
String id=req.getParameter("id");
String pwd=req.getParameter("pwd");
int no=Integer.parseInt(phno);
try
{
String driverName = "com.mysql.jdbc.Driver";
Class.forName(driverName);
connect =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bookstore",
"root", "");
stmt=connect.createStatement();
String sqlstmt="select id,password from login";
rs=stmt.executeQuery(sqlstmt);
int flag=0;
while(rs.next())
{
if(id.equals(rs.getString(1))&&pwd.equals(rs.getString(2)))
{
flag=1;
} }
if(flag==1)
{
pw.println("SORRY INVALID ID ALREADY EXISTS TRY AGAIN WITH NEW
ID<br><br>");
pw.println("<a href=\"reg.html\">press REGISTER to RETRY</a>");
}
else
{
stmt1=connect.createStatement();
stmt1.executeUpdate("insert into login
values('"+name+"','"+addr+"','"+no+"','"+id+"','"+pwd+"')");
```

```
pw.println("YOUR DETAILS ARE ENTERED<br><br>");
pw.println("<a href=\"login.html\">press LOGIN to login</a>");
}
pw.println("</body></html>");
}
catch(Exception e)
{ resp.sendError(500,e.toString());
} }}
```

catalog.java:

```
import java.sql.*;
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class catalog extends HttpServlet
{
    Connection connect;
    Statement stmt=null;
    ResultSet rs=null;
public void service(HttpServletRequest req,HttpServletResponse resp)
throws ServletException,IOException
{
PrintWriter pw=resp.getWriter();
pw.println("<html><body bgcolor=\"skyblue\")");
String title=req.getParameter("title");
try
{
String driverName = "com.mysql.jdbc.Driver";
Class.forName(driverName);
connect =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bookstore",
"root", "");
stmt=connect.createStatement();
String sqlstmt="select * from book";
rs=stmt.executeQuery(sqlstmt);
int flag=0;
while(rs.next())
{
pw.println(",div align=\"center\">");
pw.println("TITLE :"+rs.getString(1)+"<br>");
pw.println("AUTHOR :"+rs.getString(2)+"<br>");
pw.println("VERSION :"+rs.getString(3)+"<br>");
pw.println("PUBLISHER :"+rs.getString(4)+"<br>");
```

```
pw.println("COST :"+rs.getString(5)+"<br>");
pw.println("</div");
flag=1;
}
if(flag==0)
{
pw.println("SORRY INVALID TITLE TRY AGAIN <br><br>");
pw.println("<a href=\"catalog.html\">press HERE to RETRY</a>");
}
pw.println("</body></html>");
}
catch(Exception e)
{
resp.sendError(500,e.toString());
}
}
}
```

order.java:

```
import java.sql.*;
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class order extends HttpServlet
{
    Connection connect;
    Statement stmt=null,stmt1=null,stmt2=null;
    ResultSet rs=null,rs1=null;
public void service(HttpServletRequest req,HttpServletResponse resp)
throws ServletException,IOException
{
PrintWriter pw=resp.getWriter();
pw.println("<html><body bgcolor=\"skyblue\")");
String id=req.getParameter("id");
String pwd=req.getParameter("pwd");
String title=req.getParameter("title");
String count1=req.getParameter("no");
String date=req.getParameter("date");
String cno=req.getParameter("cno");
int count=Integer.parseInt(count1);
try
{
String driverName = "com.mysql.jdbc.Driver";
```

```
Class.forName(driverName);
connect =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bookstore",
"root", "");
stmt=connect.createStatement();
String sqlstmt="select id,password from login";
rs=stmt.executeQuery(sqlstmt);
int flag=0,x;
while(rs.next())
{
if(id.equals(rs.getString(1))&&pwd.equals(rs.getString(2)))
{
flag=1;
}
}
if(flag==0)
{
pw.println("SORRY INVALID ID TRY AGAIN ID<br><br>");
pw.println("<a href='order.html'>press HERE to RETRY</a>");
}
else
{
stmt2=connect.createStatement();
String s="select cost from book where title='"+title+"'";
rs1=stmt2.executeQuery(s);
int flag1=0;
while(rs1.next())
{
x=Integer.parseInt(rs1.getString(1));
int amount=count*x;
pw.println("AMOUNT :'"+amount+"'<br><br><br><br>");
stmt1=connect.createStatement();
stmt1.executeUpdate("insert into details
values('"+id+"','"+title+"','"+amount+"','"+cno+"','"+date+"')");
pw.println("YOUR ORDER has taken<br>");
flag1=1;
}
if(flag1==0)
{
pw.println("SORRY INVALID ID TRY AGAIN ID<br><br>");
pw.println("<a href=\"order.html\">press HERE to RETRY</a>");
}
}
```

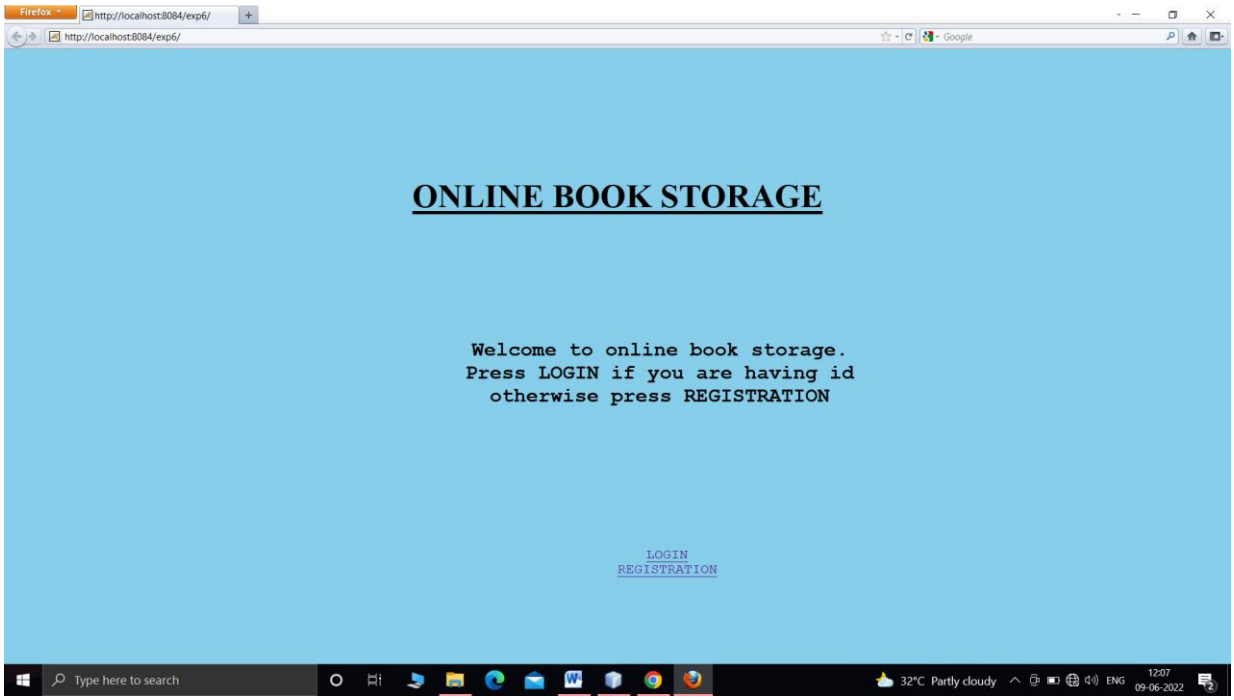
```
pw.println("</body></html>");
connect.close();
}
catch(Exception e)
{
resp.sendError(500,e.toString());
}

}}
```

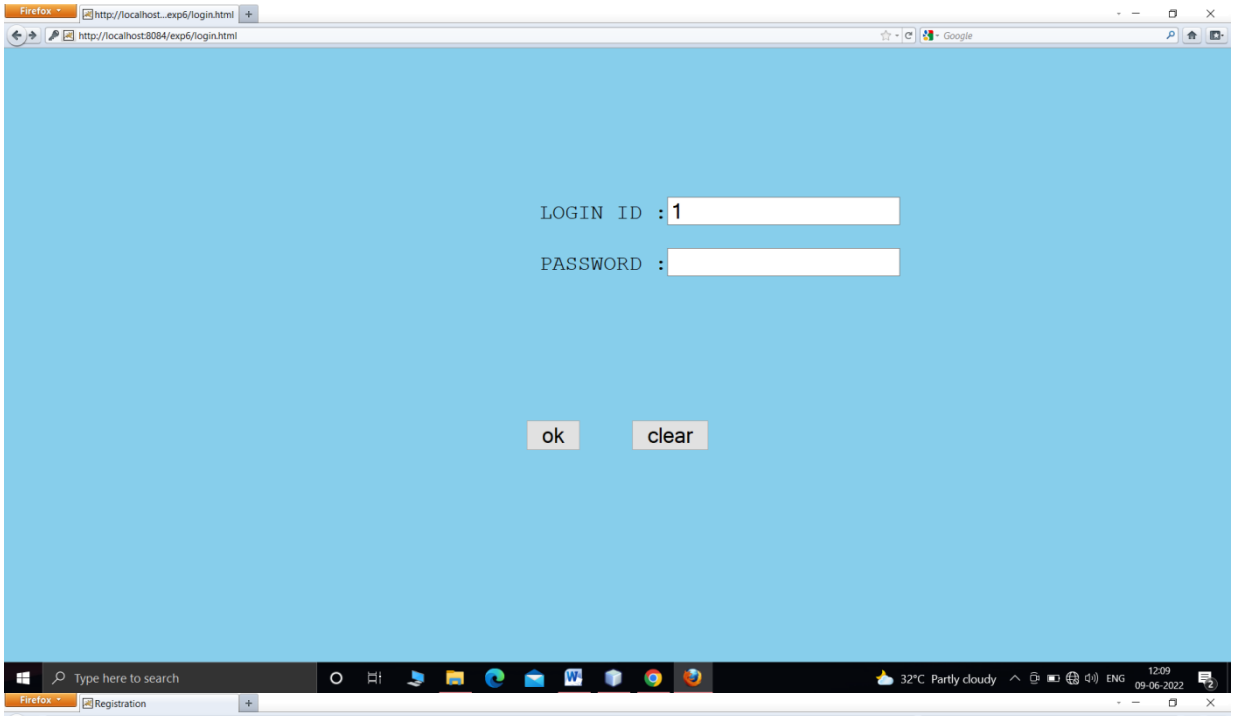
profile.java:

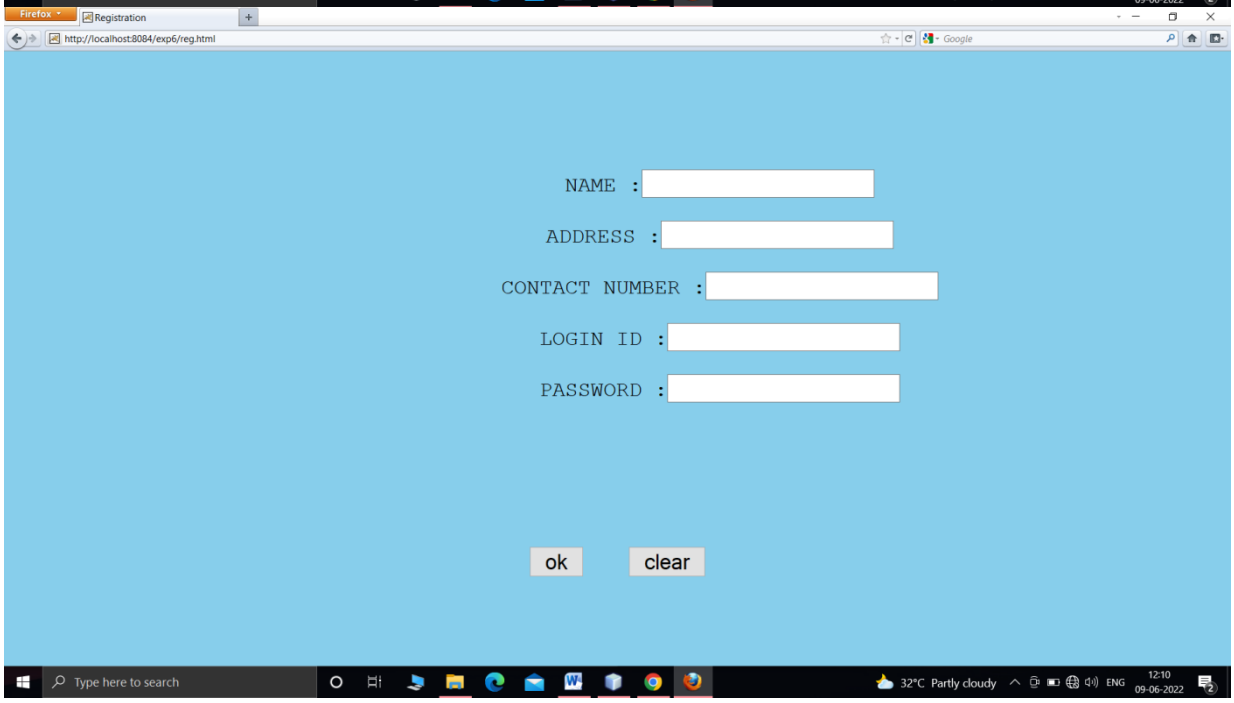
```
import java.sql.*;
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class profile extends HttpServlet {

    Connection connect;
    Statement stmt = null;
    ResultSet rs = null;

    public void service(HttpServletRequest req, HttpServletResponse
resp)
            throws ServletException, IOException {
        PrintWriter pw = resp.getWriter();
        pw.println("<html><body bgcolor=\"skyblue\")");
        String id = req.getParameter("id");
        try {
            String driverName = "com.mysql.jdbc.Driver";
            Class.forName(driverName);
            connect =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bookstore",
"root", "");
            stmt = connect.createStatement();
            String sqlstmt = "select * from login where id=" + id +
"";
            rs = stmt.executeQuery(sqlstmt);
            int flag = 0;
            pw.println("<br><br><br>");
            while (rs.next()) {
                pw.println("<div align=\"center\">");
                pw.println("NAME :" + rs.getString(1) + "<br>");
```

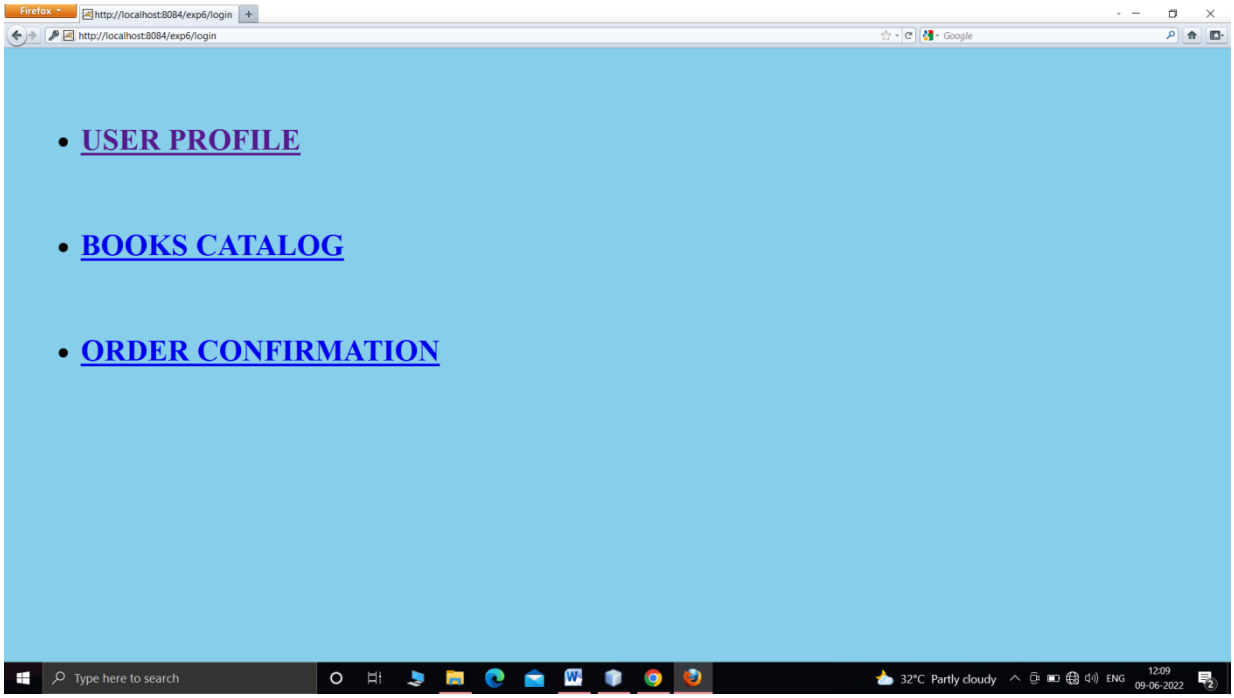
```
                pw.println("ADDRESS :" + rs.getString(2) + "<br>");
                pw.println("PHONE NO :" + rs.getString(3) + "<br>");
                pw.println("</div>");
                flag = 1;
            }
            if (flag == 0) {
                pw.println("SORRY INVALID ID TRY AGAIN ID<br><br>");
                pw.println("<a href=\"profile.html\">press HERE to
RETRY</a>");
            }
            pw.println("</body></html>");
        } catch (Exception e) {
            resp.sendError(500, e.toString());
        }
    }
}
```

Output:




Firefox
http://localhost...exp6/login.html
http://localhost:8084/exp6/login.html
LOGIN ID : 1
PASSWORD :
ok
clear
Type here to search
32°C Partly cloudy
ENG
12:09
09-06-2022


Firefox
Registration
http://localhost:8084/exp6/reg.html
NAME :
ADDRESS :
CONTACT NUMBER :
LOGIN ID :
PASSWORD :
ok
clear
Type here to search
32°C Partly cloudy
ENG
12:10
09-06-2022



Result:

Thus the three-tier application for book catalogue using servlet has been created and executed successfully.

Ex.No:7 **Three-Tier Application for Book Catalogue using JSP**

Date:

Aim:

To create a Three-tier application for Book catalogue using JSP.

Algorithm:

1.we will create a html form for entering the user name, password and card ID.

2.From the above HTML form, the JSP program is invoked in which the validity of the user name, password and card id is checked.

3.If it is a valid user then the welcome message will be displayed otherwise the "invalid user" message will be displayed. In this JSP we set the cookies in which the current user name is stored.

4.On successful login , the information from the cookie is checked and shopping cart page for corresponding user can be displayed.

Program:

index.html:

```
<!DOCTYPE html>
<html>
    <body>
        <br><br><br><br><br><br>
        <h1 align="center"><u>ONLINE BOOK
                STORAGE</u></h1><br><br><br>
        <h2 align="center"><PRE>
<b> Welcome to online book storage.
Press LOGIN if you are having id
Otherwise press REGISTRATION
</b></PRE></h2>
<br><br><pre>
<div align="center"><a href="login.html">LOGIN</a>
<a href="reg.html">REGISTRATION</a></div></pre>
</body></html>
```

login.html:

```
<!DOCTYPE html>
<html>
    <body><br /><br /><br />
        <form name="myform" method="post" action="login.jsp">
            <div align="center"><pre>
LOGIN ID :<input type="text" name="id" /><br /> PASSWORD :<input
```

```
type="password" name="pwd"/></pre><br /><br />
            </div>
            <br/><br/>
            <div align="center">
              <input type="submit" value="ok" onclick="validate()"/>
                     <input
type="reset" value="clear"/>
            </div>
        </form>
    </body>
</html>
```

Reg.html:

```
<!DOCTYPE html>
<html>
    <body><br /><br />
        <form name="myform" method="post" action="reg.jsp">
            <table align="center" ><tr>
                    <td>NAME</td>
                    <td>:<input type="text" name="name"
/></td></tr><tr>
                    <td>ADDRESS</td>
                    <td>:<input type="text" name="addr"
/></td></tr><tr>
                    <td>CONTACT NUMBER</td>
                    <td>:<input type="text" name="phno"
/></td></tr><tr>
                    <td>LOGINID</td>
                    <td>:<input type="text" name="id"
/></td></tr><tr>
                    <td>PASSWORD</td>
                    <td>:<input type="password" name="pwd" /></td>
                </tr></table><br /><br />
            <div align="center">
                <input type="submit" value="ok" onclick="validate()"
/>
                      <input
type="reset" value="clear"/>
            </div>
        </form>
    </body>
</html>
```

Catalog.html:

```
<!DOCTYPE html>
<html>
    <body><br /><br /><br />
        <form method="post" action="catalog.jsp">
            <div align="center"><pre>
BOOK TITLE :<input type="text" name="title" /><br />
                </pre><br /><br /></div>
            <br /><br />
            <div align="center">
                <input type="submit" value="ok"
                 name="button1"/>      
                <input type="reset" value="clear" name="button2"/>
            </div>
        </form>
    </body>
</html>
```

Order.html:

```
<!DOCTYPE html>
<html>
    <body><br /><br />
        <form method="post" action="order.jsp">
            <div align="center"><pre>
ID:<input type="text" name="id" /><br />
PASSWORD:<input type="password" name="pwd" /><br/>
TITLE:<input type="text" name="title" /><br />
NO. OF BOOKS :<input type="text" name="no" /><br />
DATE:<input type="text" name="date" /><br />
CREDIT CARD NUMBER :<input type="password" name="cno"
/><br/></pre><br /><br />
</div><br /><br />
<div align="center">
<input type="submit" value="ok" name="button1"/>
      <input type="reset"
value="clear"name="button2"/>
</div></form></body></html>
```

profile.html:

```
<!DOCTYPE html>
<html>
    <body><br /><br /><br />
        <form name="myform" method="post" action="profile.jsp">
            <div align="center"><pre>
LOGIN ID :<input type="text" name="id" /><br />
```

```
                </pre><br /><br /></div>
            <br /><br />
            <div align="center">
                <input type="submit" value="ok" onclick="validate()"
/>
                      <input
type="reset" value="clear"/>
            </div>
        </form>
    </body>
</html>
```

login.java:

```
<%@page import="java.sql.*"%>
<%@page import="java.io.*"%>
<% out.println("<html><body>");
    String id = request.getParameter("id");
    String pwd = request.getParameter("pwd");
    Class.forName("com.mysql.jdbc.Driver");
    Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bookstore",
"root", "");
    Statement stmt = con.createStatement();
    String sqlstmt = "select id,password from login";
    ResultSet rs = stmt.executeQuery(sqlstmt);
    int flag = 0;
    while (rs.next()) {
        if (id.equals(rs.getString(1)) &&
pwd.equals(rs.getString(2))) {
            flag = 1;
        }
    }
    if (flag == 0) {
        out.println("<br><br>SORRY INVALID ID TRY AGAIN ID<br><br>");
        out.println("<a href=\"login.html\">press LOGIN to
RETRY</a>");
    } else {
        out.println("<br><br>VALID LOGIN ID<br><br>");
        out.println("<h3><ul>");
        out.println("<li><a
href=\"profile.html\"><fontcolor=\"black\">USER
PROFILE</font></a></li><br><br>");
```

```
        out.println("<li><a
href=\"catalog.html\"><fontcolor=\"black\">BOOKS
CATALOG</font></a></li><br><br>");
        out.println("<li><a
href=\"order.html\"><fontcolor=\"black\">ORDER
CONFIRMATION</font></a></li></ul><br><br>");
    }
    out.println("</body></html>");
    con.close();
%>
```

reg.java:

```
<%@page import="java.sql.*"%>
<%@page import="java.io.*"%>
<% response.setContentType("text/html");
    out.println("<html><body>");
    String name = request.getParameter("name");
    String addr = request.getParameter("addr");
    String phno = request.getParameter("phno");
    String id1 = request.getParameter("id");
    String pwd = request.getParameter("pwd");
    int no = Integer.parseInt(phno);
    Class.forName("com.mysql.jdbc.Driver");
    Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bookstore",
"root", "");
    Statement stmt = con.createStatement();
    String sqlstmt = "select id,password from login";
    ResultSet rs = stmt.executeQuery(sqlstmt);
    int flag = 0;
    while (rs.next()) {
        if (id1.equals(rs.getString(1)) &&
pwd.equals(rs.getString(2))) {
            flag = 1;
        }
    }
    if (flag == 1) {
        out.println("<br><br>SORRY INVALID ID ALREADY EXITS TRY AGAIN
WITH NEW ID<br><br>");
        out.println("<a href=\"reg.html\">press REGISTER to
RETRY</a>");
    } else {
        Statement stmt1 = con.createStatement();
```

```
        stmt1.executeUpdate("insert into login values('" + name +
"','" + addr + "'," + no + ",'" + id1 + "','" + pwd + "');");
        out.println("<br><br>YOUR DETAILS ARE ENTERED<br><br>");
        out.println("<a href=\"login.html\">press LOGIN to
login</a>");
    }
    out.println("</body></html>");
    con.close();%>
```

catalog.java:

```
<%@page import="java.sql.*"%>
<%@page import="java.io.*"%>
<% out.println("<html><body>");
    String title = request.getParameter("title");
    Class.forName("com.mysql.jdbc.Driver");
    Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bookstore",
"root", "");
    Statement stmt = con.createStatement();
    String sqlstmt = "select * from book where title=\'" + title +
"\'";
    ResultSet rs = stmt.executeQuery(sqlstmt);
    int flag = 0;
    while (rs.next()) {
        out.println("<div align=\"center\">");
        out.println("TITLE:" + rs.getString(1) + "<br>");
        out.println("AUTHOR :" + rs.getString(2) + "<br>");
        out.println("VERSION:" + rs.getString(3) + "<br>");
        out.println("PUBLISHER :" + rs.getString(4) + "<br>");
        out.println("COST:" + rs.getString(5) + "<br>");
        out.println("</div>");
        flag = 1;
    }
    if (flag == 0) {
        out.println("<br><br>SORRY INVALID TITLE TRY AGAIN
<br><br>");
        out.println("<a href=\"catalog.html\">press HERE to
RETRY</a>");
    }
    out.println("</body></html>");
    con.close();
%>
```

order.java:

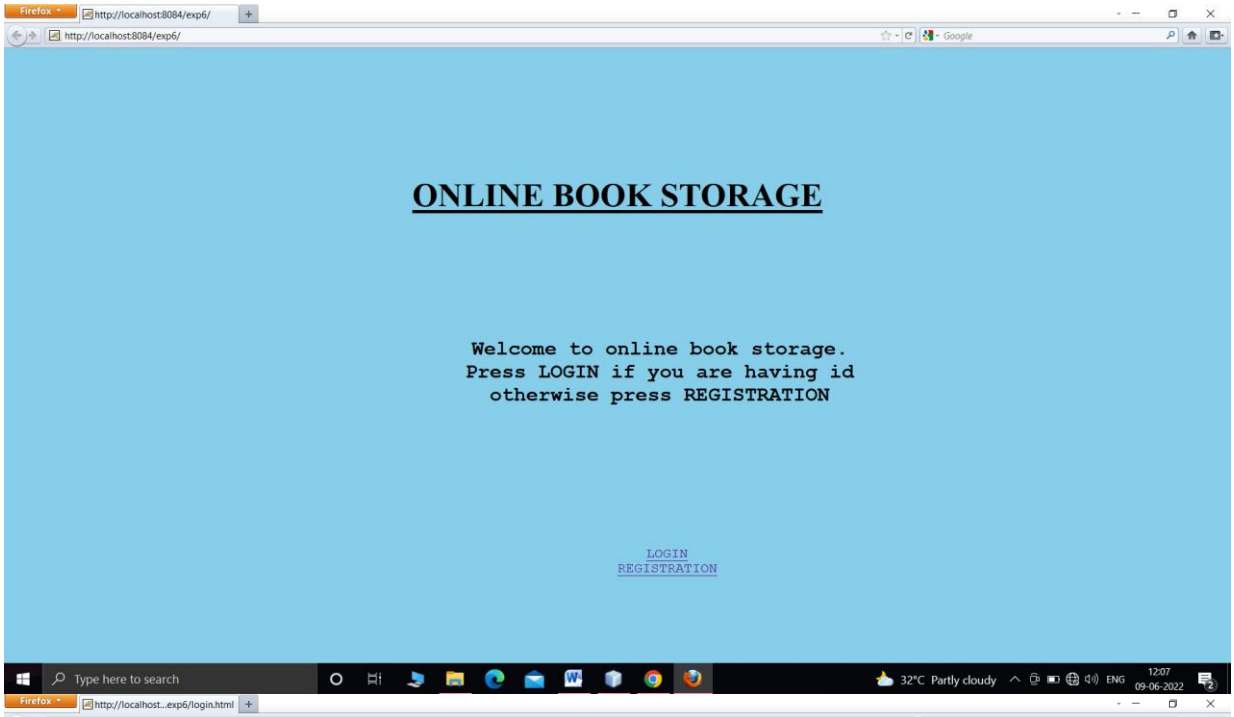
```
<%@page import="java.sql.*"%>
<%@page import="java.io.*"%>
<% int count;
    out.println("<html><body>");
    String id = request.getParameter("id");
    String pwd = request.getParameter("pwd");
    String title = request.getParameter("title");
    String count1 = request.getParameter("no");
    String date = request.getParameter("date");
    String cno = request.getParameter("cno");
    count = Integer.parseInt(count1);
    Class.forName("com.mysql.jdbc.Driver");
    Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bookstore",
"root", "");
    Statement stmt = con.createStatement();
    String sqlstmt = "select id,pwd from login";
    ResultSet rs = stmt.executeQuery(sqlstmt);
    int flag = 0, amount, x;
    while (rs.next()) {
        if (id.equals(rs.getString(1)) &&
pwd.equals(rs.getString(2))) {
            flag = 1;
        }
    }
    if (flag == 0) {
        out.println("<br><br>SORRY INVALID ID TRY AGAIN ID<br><br>");
        out.println("<a href= \"order.html \" >press HERE to
RETRY</a>");
    } else {
        Statement stmt2 = con.createStatement();
        String s = "select cost from book where title=\'" + title +
"\'";
        ResultSet rs1 = stmt2.executeQuery(s);
        int flag1 = 0;
        while (rs1.next()) {
            flag1 = 1;
            x = Integer.parseInt(rs1.getString(1));
            amount = count * x;
            out.println("<br><br>AMOUNT:" + amount +
"<br><br><br><br>");
            Statement stmt1 = con.createStatement();
```

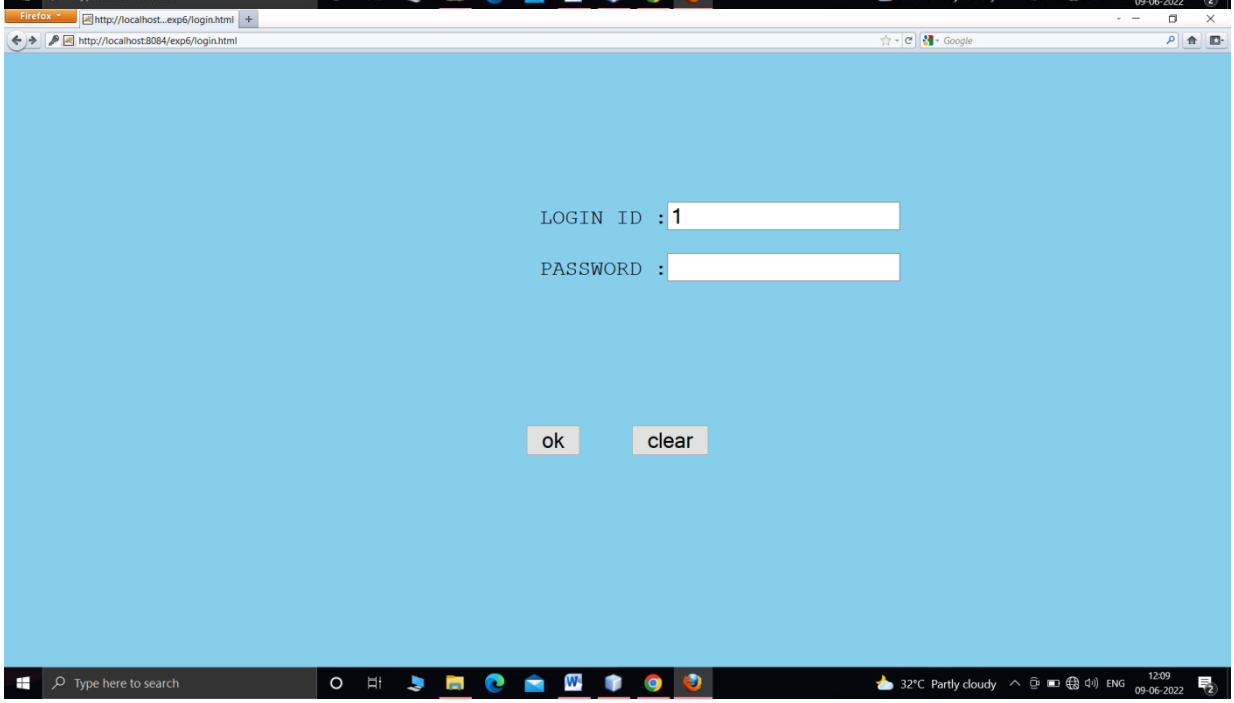
```
            stmt1.executeUpdate("insert into details values('" + id +
"','" + title + "'," + amount + ",'" + cno + "');");
            out.println("<br>YOUR ORDER has taken<br>");
        }
        if (flag1 == 0) {
            out.println("<br><br><br>SORRY INVALID ID TRY AGAIN
ID<br><br>");
            out.println("<a href=\"order.html\">press HERE to
RETRY</a>");
        }
    }
    out.println("</body></html>");
    con.close();%>
```

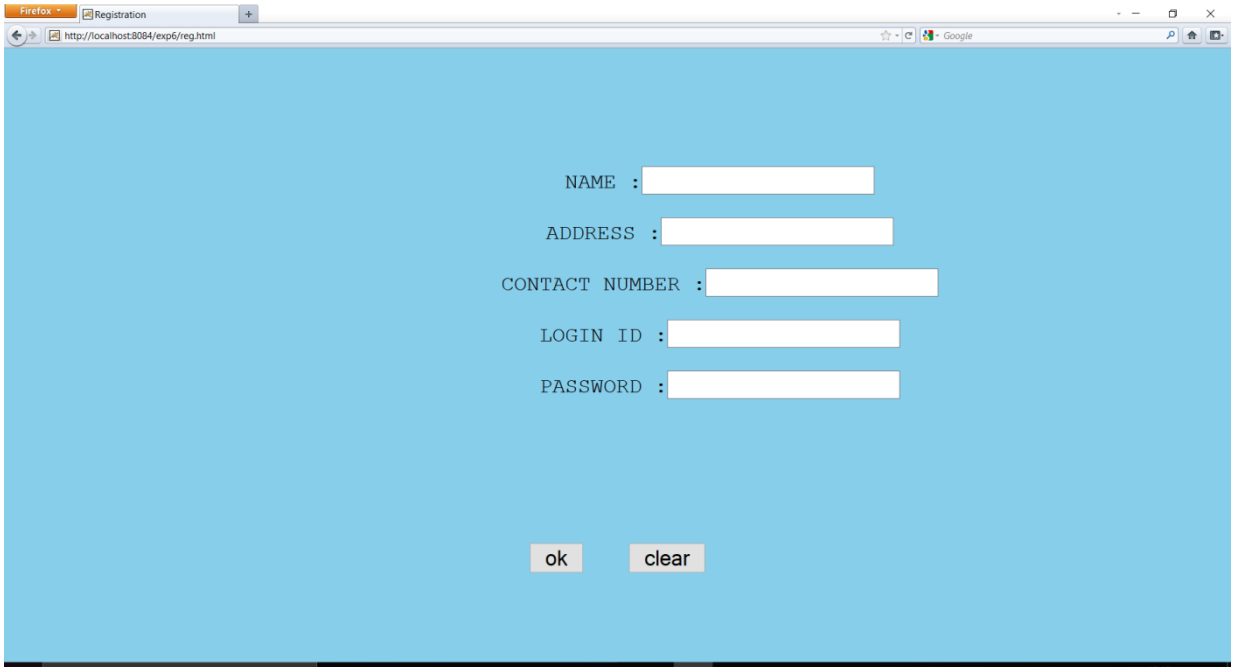
profile.java:

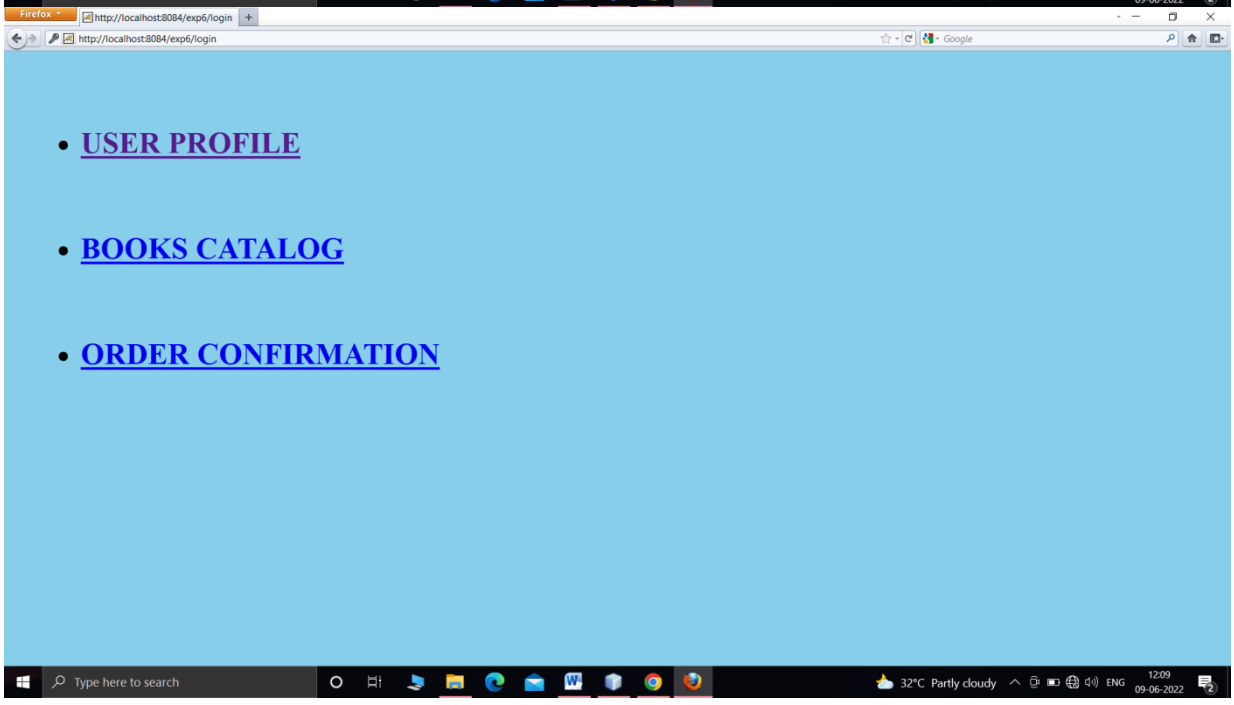
```
<%@page import="java.sql.*"%>
<%@page import="java.io.*"%>
<% out.println("<html><body>");
    String id = request.getParameter("id");
    Class.forName("com.mysql.jdbc.Driver");
    Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/bookstore",
"root", "");
    Statement stmt = con.createStatement();
    String sqlstmt = "select * from login where id=" + id + "";
    ResultSet rs = stmt.executeQuery(sqlstmt);
    int flag = 0;
    out.println("<br><br><br>");
    while (rs.next()) {
        out.println("<div align=\"center\">");
        out.println("NAME :" + rs.getString(1) + "<br>");
        out.println("ADDRESS:" + rs.getString(2) + "<br>");
        out.println("PHONE NO:" + rs.getString(3) + "<br>");
        out.println("</div>");
        flag = 1;
    }
    if (flag == 0) {
        out.println("<br><br>SORRY INVALID ID TRY AGAIN ID<br><br>");
        out.println("<a href=\"profile.html\">press HERE to
RETRY</a>");
    }
    out.println("</body></html>");
    con.close();%>
```

Output:


http://localhost:8084/exp6/
ONLINE BOOK STORAGE
Welcome to online book storage.
Press LOGIN if you are having id
otherwise press REGISTRATION
LOGIN
REGISTRATION


http://localhost:8084/exp6/login.html
LOGIN ID : 1
PASSWORD :
ok
clear





Result:

Thus the three-tier application for book catalogue using servlet has been created and executed successfully.

Ex.No:8 **Create XML document for User Information**

Date:

Aim:

To write program which takes user ID as input and returns the user details by taking the user information from XML Document.

Algorithm:

1.Save Students information in the XML file on the specific location.

2.Create and establish the connection between html file and XML file.

3.Get the user ID as input

4.Display the student's information.

Program:

Index.html:

```
<!DOCTYPE html>
<HTML>
<HEAD>
<TITLE>Searching for XML Elements </TITLE>
<SCRIPT>
function readXMLData()
{
var xmlDocumentObject, id , name , address, phone, email;
xmlDocumentObject=new XMLHttpRequest();
xmlDocumentObject.open("GET","userlist.xml",false);
xmlDocumentObject.send();
xmlDocumentObject=xmlDocumentObject.responseXML;
id = xmlDocumentObject.getElementsByTagName("userid");
name = xmlDocumentObject.getElementsByTagName("username");
address = xmlDocumentObject.getElementsByTagName("address");
phone = xmlDocumentObject.getElementsByTagName("phone");
email = xmlDocumentObject.getElementsByTagName("email");
for (i = 0; i < id.length; i++)
{
output=id[i].firstChild.nodeValue;
if (output == document.getElementById("myText").value)
{displayDIV.innerHTML = id[i].firstChild.nodeValue + "<br> " +
name[i].firstChild.nodeValue +"<br>" +address[i].firstChild.nodeValue
+"<br>"+phone[i].firstChild.nodeValue+"<br>"+email[i].firstChild.node
Value;
```

```
} } }
</SCRIPT>
</HEAD>
<BODY>
<H1>Search User</H1>
<input type="text" id="myText" value="">
<input type="BUTTON" VALUE="Get User Details"
ONCLICK="readXMLData()">
<P>
<DIV ID="displayDIV"> </DIV>
</BODY>
</HTML>
```

Userlist.html:

```
<userlist>
<userid>usr01</userid>
<username>Sathishkumar</username>
<address>Erode</address>
<phone>9213454567</phone>
<email>sathish@gmail.com</email>
<userid>usr02</userid>
<username>Praveen</username>
<address>Erode</address>
<phone>9994244540</phone>
<email>praveen@gmail.com</email>
<userid>usr03</userid>
<username>sadhik</username>
<address>Erode</address>
<phone>9994244542</phone>
<email>sadhik@gmail.com</email>
<userid>usr04</userid>
<username>ssathish</username>
<address>Dharmapurai</address>
<phone>9835994445</phone>
<email>sathish@gmail.com</email>
<userid>usr05</userid>
<username>naveen</username>
<address>Perundurai</address>
<phone>968877555</phone>
<email>naveen@gmail.com</email>
<userid>usr06</userid>
<username>Mukesh Kumar</username>
```

```
<address>Urappakkam</address>
<phone>1234567890</phone>
<email>mukesh@gmail.com</email>
<userid>usr07</userid>
<username>Vignesh</username>
<address>Kadasikulam</address>
<phone>1234567890</phone>
<email>vignesh@gmail.com</email>
<userid>usr08</userid>
<username>Sriakash</username>
<address>Aranthangi</address>
<phone>9876543210</phone>
<email>sadhik@gmail.com</email>
<userid>usr09</userid>
<username>Thiyagu</username>
<address>Orathy</address>
<phone>6379037934</phone>
<email>msthiyagu007@gmail.com</email>
<userid>usr10</userid>
<username>Saravanan</username>
<address>Vayalur Nerkunam</address>
<phone>968877555</phone>
<email>saravanan@gmail.com</email>
</userlist>
```

Output:

Result:

Thus the program which takes user ID as input and returns the user details by taking the user information from XML Document has been created and executed successfully.

Ex.No:9a) **Form Validation using PHP Regular Expression**

Date:

Aim:

To write a PHP program to validate the form using Regular Expression.

Algorithm:

1. Create a HTML form containing the text box for inputting the name, E-mail id, website is created.
2. The PHP script validates the given email address using regular expression.
3. Define variables and set to empty values
4. Check if name only contains letters and whitespace
5. Check if e-mail address is well-formed
6. Check if URL address syntax is valid

Program:

Index.php:

```
<!DOCTYPE HTML>
<html>
    <head>
        <style>
            .error {color: #FF0000;}
        </style>
    </head>
    <body>
        <?php
// define variables and set to empty values
        $nameErr = $emailErr = $genderErr = $websiteErr = "";
        $name = $email = $gender = $comment = $website = "";

        if ($_SERVER["REQUEST_METHOD"] == "POST") {
            if (empty($_POST["name"])) {
                $nameErr = "Name is required";
            } else {
                $name = test_input($_POST["name"]);
                // check if name only contains letters and whitespace
                if (!preg_match("/^[a-zA-Z-' ]*$/", $name)) {
                    $nameErr = "Only letters and white space
allowed";
                }
            }
```

```
            if (empty($_POST["email"])) {
                $emailErr = "Email is required";
            } else {
                $email = test_input($_POST["email"]);
                // check if e-mail address is well-formed
                if (!filter_var($email, FILTER_VALIDATE_EMAIL)) {
                    $emailErr = "Invalid email format";
                }
            }

            if (empty($_POST["website"])) {
                $website = "";
            } else {
                $website = test_input($_POST["website"]);
                // check if URL address syntax is valid (this regular
expression also allows dashes in the URL)
                if (!preg_match("/\b(?:(?:https?|ftp):\/\/|www\.)[-a-
z0-9+&@#\/%?=~_|!:,.;]*[-a-z0-9+&@#\/%=~_|]/i", $website)) {
                    $websiteErr = "Invalid URL";
                }
            }

            if (empty($_POST["comment"])) {
                $comment = "";
            } else {
                $comment = test_input($_POST["comment"]);
            }

            if (empty($_POST["gender"])) {
                $genderErr = "Gender is required";
            } else {
                $gender = test_input($_POST["gender"]);
            }
        }

        function test_input($data) {
            $data = trim($data);
            $data = stripslashes($data);
            $data = htmlspecialchars($data);
            return $data;
        }
        ?>
```

```
        <h2>PHP Form Validation Example</h2>
        <p><span class="error">* required field</span></p>
        <form method="post" action="<?php echo
htmlspecialchars($_SERVER["PHP_SELF"]); ?>">
            Name: <input type="text" name="name" value="<?php echo
$name; ?>">
            <span class="error">* <?php echo $nameErr; ?></span>
            <br><br>
            E-mail: <input type="text" name="email" value="<?php echo
$email; ?>">
            <span class="error">* <?php echo $emailErr; ?></span>
            <br><br>
            Website: <input type="text" name="website" value="<?php
echo $website; ?>">
            <span class="error"><?php echo $websiteErr; ?></span>
            <br><br>
            Comment: <textarea name="comment" rows="5"
cols="40"><?php echo $comment; ?></textarea>
            <br><br>
            Gender:
            <input type="radio" name="gender" <?php if
(isset($gender) && $gender == "female") echo "checked"; ?>
value="female">Female
            <input type="radio" name="gender" <?php if
(isset($gender) && $gender == "male") echo "checked"; ?>
value="male">Male
            <input type="radio" name="gender" <?php if
(isset($gender) && $gender == "other") echo "checked"; ?>
value="other">Other
            <span class="error">* <?php echo $genderErr; ?></span>
            <br><br>
            <input type="submit" name="submit" value="Submit">
        </form>

        <?php
        echo "<h2>Your Input:</h2>";
        echo $name;
        echo "<br>";
        echo $email;
        echo "<br>";
        echo $website;
        echo "<br>";
        echo $comment;
```

```
        echo "<br>";
        echo $gender;
        ?>

    </body>
</html>
```

Output:

PHP Form Validation Example

* required field

Name: *

E-mail: *

Website:

Comment:

Gender: Female Male Other *

Submit

Your Input:

PHP Form Validation Example

* required field

Name: * Name is required

E-mail: * Email is required

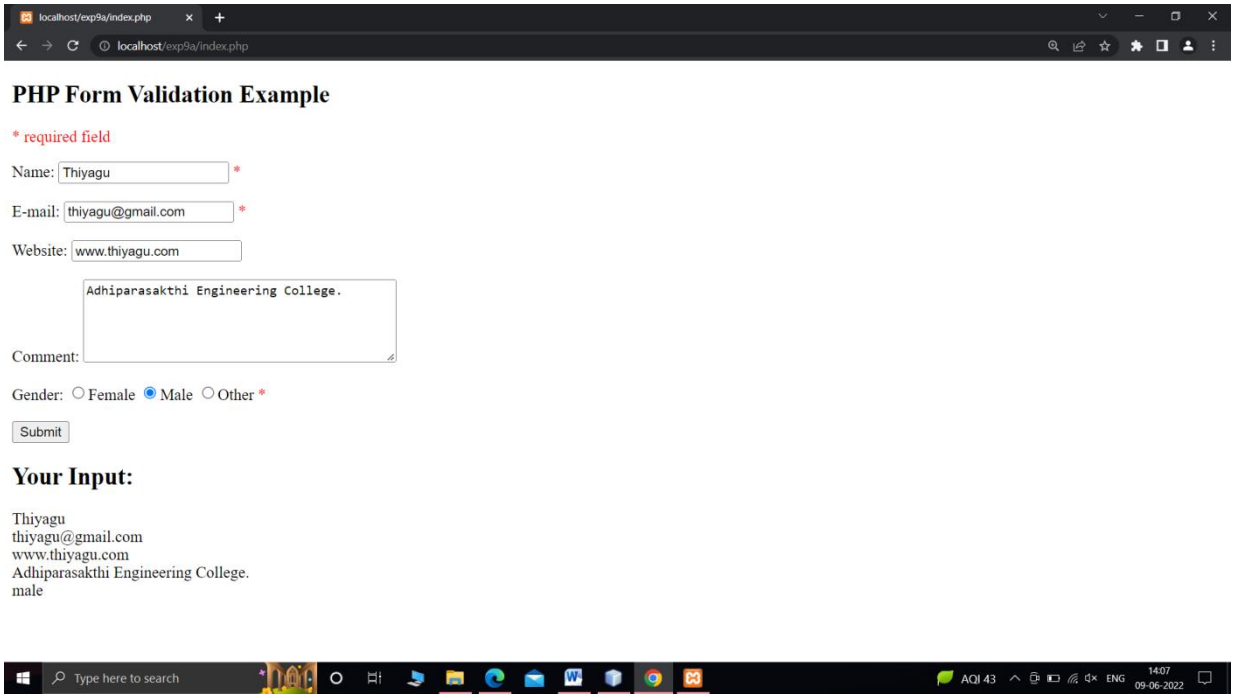
Website:

Comment:

Gender: Female Male Other * Gender is required

Submit

Your Input:



Result:

Thus the PHP program to validate the form using regular expression has been created and executed successfully.

Ex.No:9b) **PHP Stores the Form Data Into Database**

Date:

Aim:

To create PHP program to store the form data into database.

Algorithm:

1. Create a HTML form containing the text box for inputting the ID, First name, Last name, Date of birth etc.
2. The database server is connected by using php method mysql_connect().
3. The database is connected using mysql_select_db() method.
4. The data obtained from the HTML form is uploaded to the database using PHP.

Program:

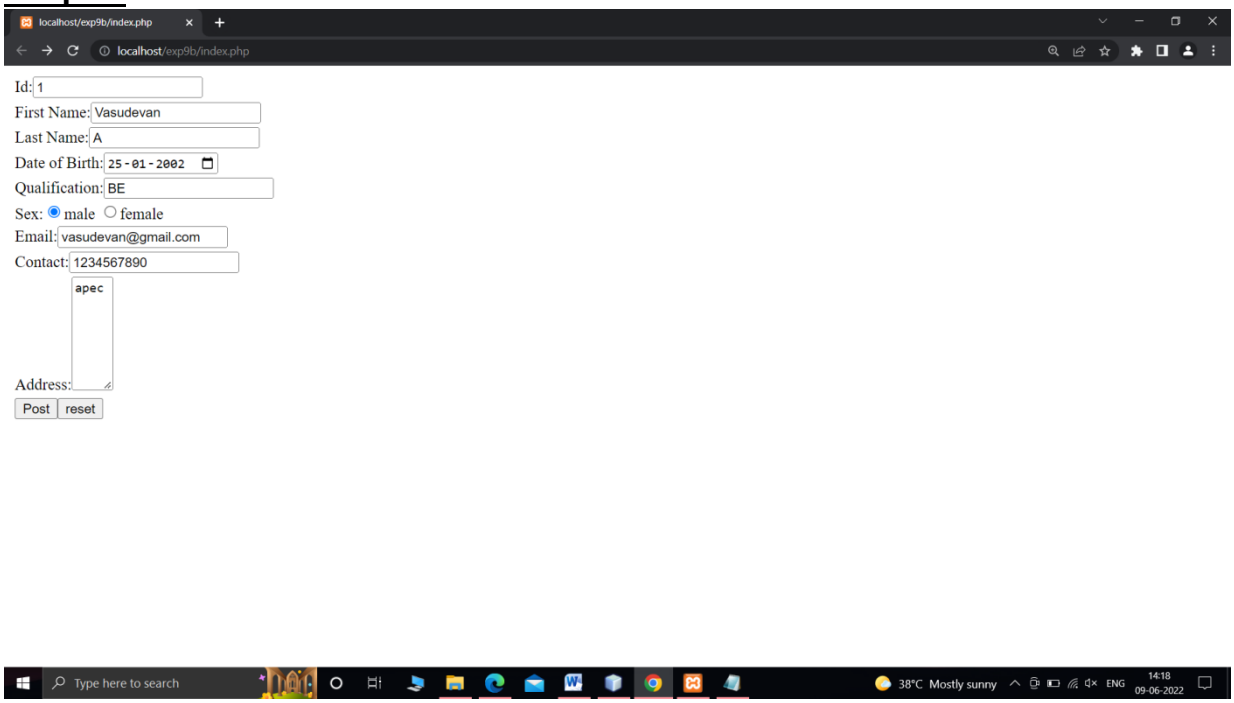
Index.php:

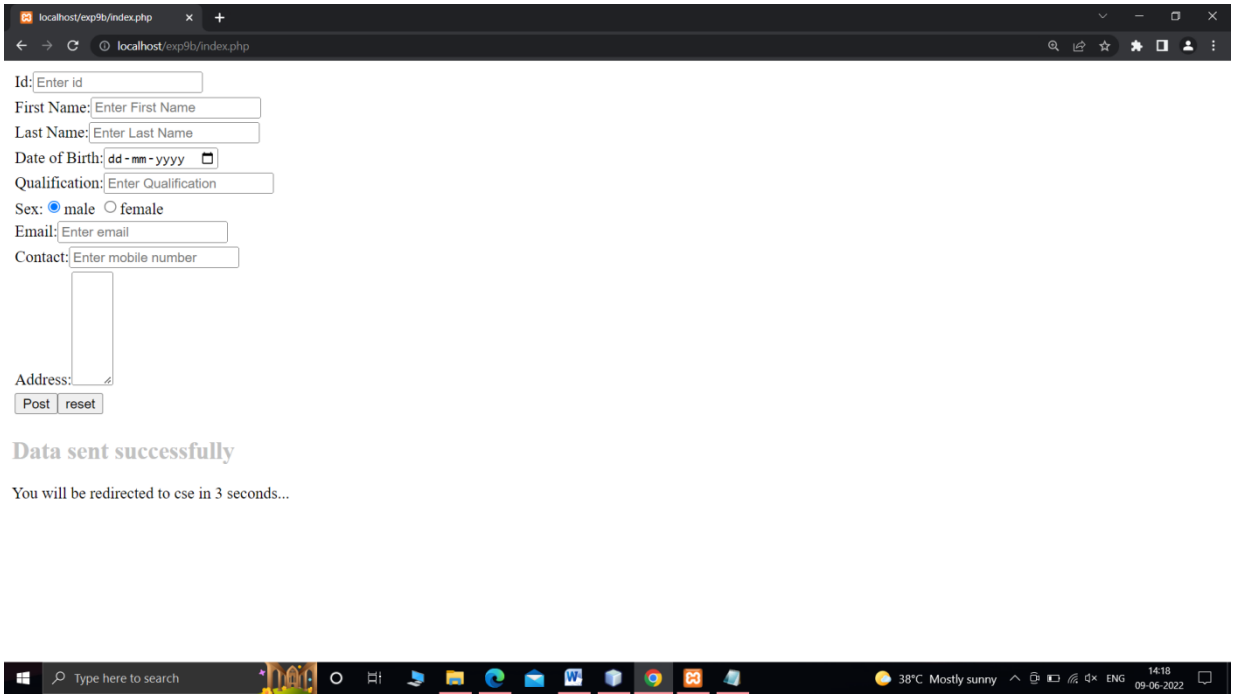
```
<!doctype html>
<html>
    <head>
    </head>
    <form  action="<?php echo $_SERVER['PHP_SELF']; ?>"
method="post">
        <table >
            <tr>
                <td>Id:<input type="text" name="roll" value="<?php if
(isset($sub)) {
    echo $roll;
} ?>"  placeholder="Enter id">
            </tr>
            <tr>
                <td>First Name:<input type="text" name="name"
maxlength="20" placeholder="Enter First Name" >
                </td>
            </tr> <tr>
                <td>Last Name:<input type="text" name="lname"
maxlength="20" placeholder="Enter Last Name"></td>
            </tr>
            <tr>
                <td>Date of Birth:<input type="Date" name="dof"
maxlength="20" placeholder="Enter Date"</td>
            </tr>
            <tr>
```

```
                <td>Qualification:<input type="text" name="qua"
maxlength="20" placeholder="Enter Qualification"></td>
            </tr>
            <tr>
                <td>Sex:<input type="radio" name="sex" value="male"
checked="checked">male
                    <input type="radio" name="sex"
value="female">female
                </td>
            </tr>
            <tr>
                <td>Email:<input type="email" name="email"
placeholder="Enter email"  autocomplete="on" ></td>
            </tr>
            <tr>
                <td>Contact:<input type="text" name="contact"
maxlength="10" placeholder="Enter mobile number"></td>
            </tr>
            <tr>
                <td>Address:<textarea rows="7" cols="3"
name="a"></textarea></td>
            </tr><tr>
                <td><input type="submit" value="Post"
name="sub"><input type="reset" value="reset"></td>
            </tr>
        </table>
    </form>
    <?php
    $a1 = mysql_connect("localhost", "root", "") or die("connection
fail");
    $b = mysql_select_db("details", $a1);
    if (isset($_POST['sub'])) {
        error_reporting(0);
        $roll = $_POST['roll'];
        $name = $_POST['name'];
        $lname = $_POST['lname'];
        $dob = $_POST['dof'];
        $age = $_POST['age'];
        $qua = $_POST['qua'];
        $sex = $_POST['sex'];
        $email = $_POST['email'];
        $contact = $_POST['contact'];
        $a = $_POST['a'];
```

```
        $hh = "INSERT INTO reg_form
VALUES('$roll','$name','$lname','$dob','$qua','$sex','$email','$conta
ct','$a')";
        $query = mysql_query($hh);
        if ($query) {
            $bg = "Data sent successfully";
        } else {
            echo"fail";
        }
    }
    ?>
    <?php
    if (isset($_POST['sub'])) {
        echo "<h2>" . "<font color=\"C1C1C1\">" . $bg . "</font>" .
"</h2>";
        header("Refresh: 3; ");
        echo "You will be redirected to cse in 3 seconds...";
    }
    ?>

</body>
</html>
```

Output:





Result:

Thus the PHP program to store the form data into database has been created and executed successfully.

Ex.No:10 **Implementation of Web Services**

Date:

Aim:

To Write a web service for finding what people think by asking 500 people‘s opinion for any consumer product.

Algorithm:

1.Write the html code and add the required fields.

2.Then in HTML form, add a necessary css styling.

3.Then the validation form will validate the input get from the user.

4.This will help to find the feedback of customers product.

5.Save the file and run the program in a web browser.

6.Display Results.

Program:

Index.html:

```
<!DOCTYPE HTML>
<html lang="en">
    <head>
        <title>5 Star Rating</title>

        <script src="http://code.jquery.com/jquery-
latest.js"></script>
        <script>
            $(document).ready(function() {
                $('.rate_widget').each(function(i) {
                    var widget = this;
                    var out_data = {
                        widget_id: $(widget).attr('id'),
                        fetch: 1
                    };
                    $.post(
                            'ratings.php',
                            out_data,
                            function(INFO) {
                                $(widget).data('fsr', INFO);
                                set_votes(widget);
                            },
                            'json'
                            );
```

```
                });
                $('.ratings_stars').hover(
                        function() {

$(this).prevAll().andSelf().addClass('ratings_over');

$(this).nextAll().removeClass('ratings_vote');
                                },
                                function() {

$(this).prevAll().andSelf().removeClass('ratings_over');

set_votes($(this).parent());
                                        }
                                );
                                $('.ratings_stars').bind('click',
function() {
                                    var star = this;
                                    var widget = $(this).parent();

                                    var clicked_data = {
                                        clicked_on:
$(star).attr('class'),
                                        widget_id:
$(star).parent().attr('id')
                                    };
                                    $.post(
                                            'ratings.php',
                                            clicked_data,
                                            function(INFO) {
                                                widget.data('fsr',
INFO);
                                                set_votes(widget);
                                            },
                                            'json'
                                            );
                                });
                            });
                    function set_votes(widget) {
                        var avg = $(widget).data('fsr').whole_avg;
                        var votes =
$(widget).data('fsr').number_votes;
                        var exact = $(widget).data('fsr').dec_avg;
```

```
                        window.console && console.log('and now in
set_votes, it thinks the fsr is ' +
$(widget).data('fsr').number_votes);

                        $(widget).find('.star_' +
avg).prevAll().andSelf().addClass('ratings_vote');
                        $(widget).find('.star_' +
avg).nextAll().removeClass('ratings_vote');
                        $(widget).find('.total_votes').text(votes + '
votes recorded (' + exact + ' rating)');
                    }
        </script>
        <style>
            .rate_widget {
                border: 1px solid #CCC;
                overflow: visible;
                padding: 10px;
                position: relative;
                width: 180px;
                height: 32px;
            }
            .ratings_stars {
                background:url('star_empty.png') no-repeat;
                float: left;
                height: 28px;
                padding: 2px;
                width: 32px;
            }
            .ratings_vote {
                background: url('star_full.png') no-repeat;
            }
            .ratings_over {
                background: url('star_highlight.png') no-repeat;
            }
            .total_votes {
                background: #eaeaea;
                top: 58px;
                left: 0;
                padding: 5px;
                position: absolute;
            }
            .product_choice {
```

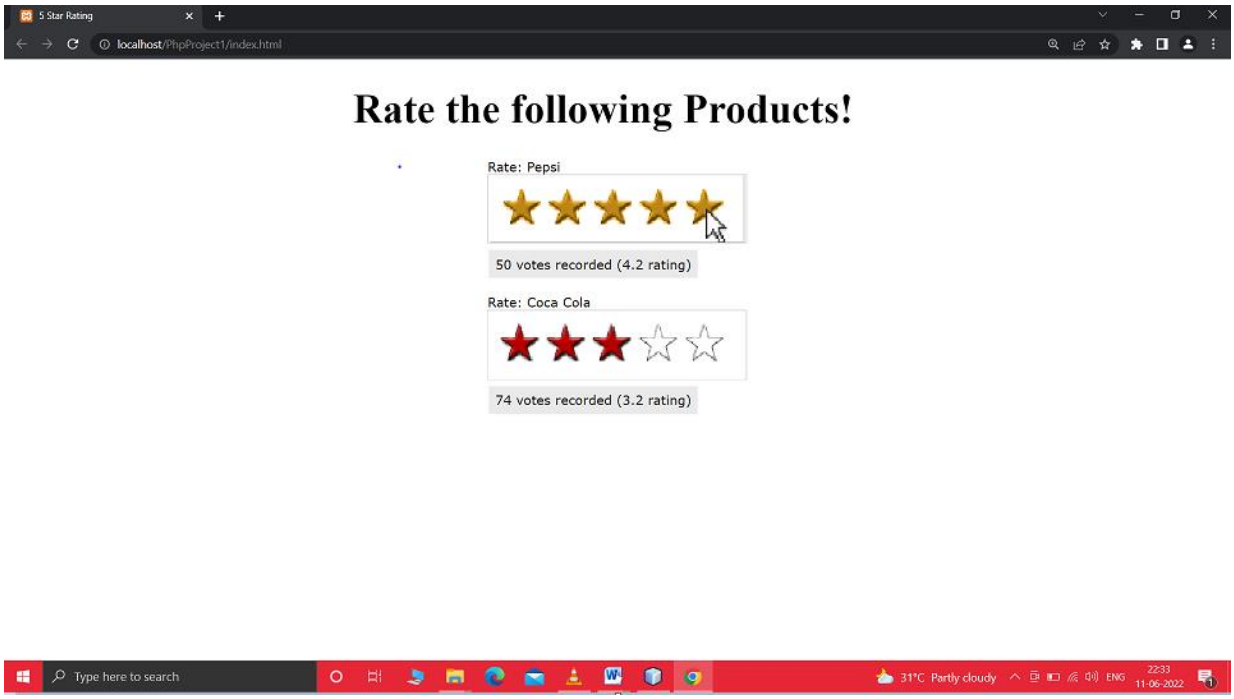
```
                font: 10px verdana, sans-serif;
                margin: 0 auto 40px auto;
                width: 180px;
            }
            h1 {
                text-align: center;
                width: 400px;
                margin: 20px auto;
            }
        </style>
    </head>
    <body>
        <h1> Rate the following Products! </h1>
        <div class='product_choice'>
            Rate: Pepsi
            <div id="r1" class="rate_widget">
                <div class="star_1 ratings_stars"></div>
                <div class="star_2 ratings_stars"></div>
                <div class="star_3 ratings_stars"></div>
                <div class="star_4 ratings_stars"></div>
                <div class="star_5 ratings_stars"></div>
                <div class="total_votes">vote data</div>
            </div>
        </div>
        <div class='product_choice'>
            Rate: Coca Cola
            <div id="r2" class="rate_widget">
                <div class="star_1 ratings_stars"></div>
                <div class="star_2 ratings_stars"></div>
                <div class="star_3 ratings_stars"></div>
                <div class="star_4 ratings_stars"></div>
                <div class="star_5 ratings_stars"></div>
                <div class="total_votes">vote data</div>
            </div>
        </div>
    </body>
</html>
```

Ratings.php:

```
<?php
$rating = new ratings($_POST['widget_id']);
isset($_POST['fetch']) ? $rating->get_ratings() : $rating->vote();
class ratings {
    var $data_file = './ratings.data.txt';
```

```
    private $widget_id;
    private $data = array();
    function __construct($wid) {
        $this->widget_id = $wid;
        $all = file_get_contents($this->data_file);
        if ($all) {
            $this->data = unserialize($all);
        }
    }
    public function get_ratings() {
        if ($this->data[$this->widget_id]) {
            echo json_encode($this->data[$this->widget_id]);
        } else {
            $data['widget_id'] = $this->widget_id;
            $data['number_votes'] = 0;
            $data['total_points'] = 0;
            $data['dec_avg'] = 0;
            $data['whole_avg'] = 0;
            echo json_encode($data);
        }
    }
    public function vote() {
        preg_match('/star_([1-5]{1})/', $_POST['clicked_on'],
$match);
        $vote = $match[1];
        $ID = $this->widget_id;
        if ($this->data[$ID]) {
            $this->data[$ID]['number_votes'] += 1;
            $this->data[$ID]['total_points'] += $vote;
        }
        else {
            $this->data[$ID]['number_votes'] = 1;
            $this->data[$ID]['total_points'] = $vote;
        }
        $this->data[$ID]['dec_avg'] = round( $this-
>data[$ID]['total_points'] / $this->data[$ID]['number_votes'], 1 );
        $this->data[$ID]['whole_avg'] = round($this-
>data[$ID]['dec_avg']);
        file_put_contents($this->data_file, serialize($this->data));
        $this->get_ratings();
    }
}
```

Output:



Result:

Thus a web services for finding what people think by asking 500 people's opinion for any consumer product has been executed successfully.