JSS ACADEMY OF TECHNICAL EDUCATION

WEB TECHNOLOGY LAB FILE (KCS 652)

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Batch-Section	A1-CS1

Department of Computer Science and Engineering

JSS ACADEMY OF TECHNICAL EDUCATION

C-20/1, SECTOR-62, NOIDA

VISION OF THE INSTITUTE

JSS Academy of Technical Education Noida aims to become an Institution of excellence in imparting quality Outcome Based Education that empowers the young generation with Knowledge, Skills,Research,Aptitude and Ethical values to solve Contemporary Challenging Problems.

MISSION OF THE INSTITUTE

- Develop a platform for achieving globally acceptable level of intellectual acumenand technologicalcompetence.
- Create an inspiring ambience that raises the motivation level for conductingquality research.
- Provide an environment for acquiring ethical values and positiveattitude.

VISION OF THE DEPARTMENT

To spark the imagination of the Computer Science Engineers with values, skills and creativity to solve the real world problems.

MISSION OF THE DEPARTMENT

- To inculcate creative thinking and problem solving skills through effectiveteaching, learning andresearch.
- To empower professionals with core competency in the field of Computer Scienceand Engineering.
- To foster independent and life long learning with ethical and socialresponsibilities.

PROGRAM EDUCATIONAL OUTCOMES (PEOs)

PEO1: To empower students with effective computational and problem solving skills.

PEO2: To enable students with core skills for employment and entrepreneurship.

PEO3: To imbibe students with ethical values and leadership qualities.

PEO4: To foster students with research oriented ability which helps them in analyzing and solving real life problems and motivate them for pursuing higher studies.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complexengineering problems reaching substantiatedconclusionsusingfirstprinciples of mathematics, natural sciences, and engineeringsciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, andthecultural,societal, and environmentalconsiderations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide validconclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of thelimitations.

PO6: The engineer and society: Apply reasoning informedby the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineeringpractice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainabledevelopment.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of theengineeringpractice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, andin multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clearinstructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one’s own work, as a member and leader in a team, to manage projects and in multidisciplinaryenvironments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technologicalchange.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: An ability to apply foundation of Computer Science and Engineering, algorithmic principles and theory in designing and modeling computation based systems.

PSO2: The ability to demonstrate software development skills.

COURSE OUTCOMES (COs)

Bloom's taxonomy

C310.1	Design a static web page using HTML	K2, K3
C310.2	Develop Java programs for window/web-based applications.	K2, K3
C310.3	Design dynamic web pages using jabva script and XML	K3, K4
C310.4	Design dynamic web page using server side programming.	K3, K4
C310.5	Design server side applications using JDBC, ODBC and section-tracking API.	K3, K4

CO-PO-PSO MAPPING

	PO 1	PO 2	PO 3	PO 4	PO5	PO 6	PO7	PO 8	PO9	PO10	PO11	PO12	PSO1	PSO2
C310.1	2	2	3	1	3	1	1	1	2	2	3	2	2	2
C310.2	2	2	2	1	3	1	1	1	2	2	3	2	2	2
C310.3	2	2	3	1	3	1	1	1	2	2	3	2	2	3
C310.4	2	2	3	1	3	1	1	1	2	2	3	2	2	3
C310.5	2	2	3	1	3	1	1	1	2	2	3	2	2	3

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Experiment No.	Experiment Name	Date of Conduction	Date of Submission	Faculty Signature
1.	Write HTML/Java scripts to display your CV in navigator	27-4-2021	27-4-2021	
2.	Write an HTML program to design an entry form of student details	4-5-2021	4-5-2021	
3.	Write programs using Java script for Web Page to display browsers information	11-5-2021	11-5-2021	
4.	Write a Java applet to display the Application Program screen i.e. calculator and other.	18-5-2021	18-5-2021	
5.	Writing program in XML for creation of DTD, which specifies set of rules	25-5-2021	25-5-2021	
6.	Program to illustrate JDBC connectivity and maintaining database by sending queries.	1-6-2021	1-6-2021	
7.	Install APACHE TOMCAT web server . Access the static web pages for login id, using this server	8-6-2021	8-6-2021	
8.	Create a Cookie and add four user id's and passwords to this Cookie.	15-6-2021	15-6-2021	
9.	Write a java program/servlet/JSP to connect database and extract data from the tables and display them.	22-6-2021	22-6-2021	
10.	Write a JSP which insert the details of the 3 or 4 users who register with the web site by using registration form.	29-6-2021	29-6-2021	

11.	Design and implement a simple shopping cart example with session tracking API.	6-7-2021	6-7-2021	
12.	MultiThreading in Java	13-7-2021	13-7-2021	
13.	Event Handling in java	20-7-2021	13-7-2021	

EXPERIMENT NO.-01

Aim: Write HTML/Java scripts to display your CV in navigator.

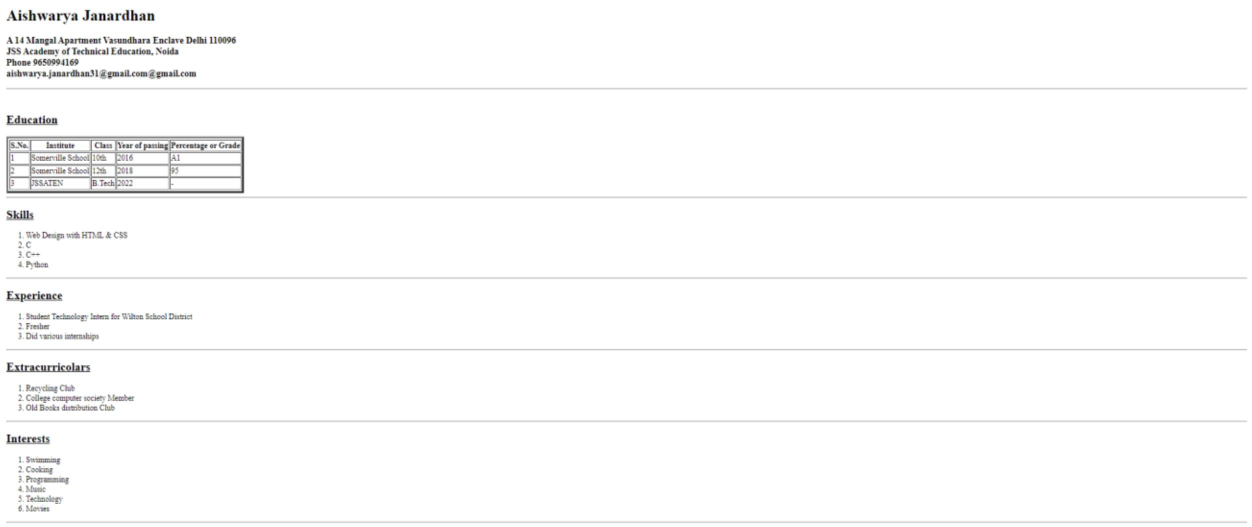
Input:

```
<!DOCTYPE html>
<html>
<head><title>Bio-Data</title>
</head>
<body>
<h1>Aishwarya Janardhan </h1>
<h3> A 14 Mangal Apartment Vasundhara Enclave Delhi 110096<br>JSS Academy of Technical Education, Noida<br>Phone 9650994169 <br> aishwarya.janardhan31@gmail.com@gmail.com</h3>
<hr/>
<br>
<h2><b><u>Education</u></b></h2>
<table border=5px>
<tr>
<th>S.No.</th>
<th>Institute</th>
<th>Class</th>
<th>Year of passing</th>
<th>Percentage or Grade </th>
</tr>
<tr>
<td>1</td>
<td>Somerville School </td>
```

```
<td>10th</td>
<td>2016</td>
<td> A1 </td>
</tr>
<tr>
<td>2</td>
<td>Somerville School </td>
<td>12th</td>
<td>2018</td>
<td>95</td>
</tr>
<tr>
<td>3</td>
<td>JSSATEN</td>
<td>B.Tech</td>
<td>2022</td>
<td>-</td>
</tr>
</table>
<hr>
<h2><b><u>Skills</u></b></h2>
<ol type="1">
<li>Web Design with HTML & CSS</li>
<li>C</li>
<li>C++</li>
<li>Python</li>
</ol>
```

```
<hr>
<h2><b><u>Experience</u></b></h2>
<ol type="1">
<li>Student Technology Intern for Wilton School District</li>
<li>Fresher</li>
<li>Did various internships</li>
</ol>
<hr>
<h2><b><u>Extracurricolars</u></b></h2>
<ol type="1">
<li>Recycling Club</li>
<li>College computer society Member</li>
<li>Old Books distribution Club</li>
</ol>
<hr>
<h2><b><u>Interests</u></b></h2>
<ol type="1">
<li>Swimming</li>
<li>Cooking</li>
<li>Programming</li>
<li>Music</li>
<li>Technology</li>
<li>Movies</li>
</ol>
<hr>
</body>
</html>
```

Output:



Aishwarya Janardhan

A 14 Mangal Apartment Vasundhara Enclave Delhi 110096
JSS Academy of Technical Education, Noida
Phone 9650994169
aishwarya.janardhan31@gmail.com@gmail.com

Education

S.No.	Institute	Class	Year of passing	Percentage or Grade
1	Somerville School	10th	2016	A1
2	Somerville School	12th	2018	95
3	JSSATEN	B.Tech	2022	-

Skills

1. Web Design with HTML & CSS
2. C
3. C++
4. Python

Experience

1. Student Technology Intern for Wilton School District
2. Fresher
3. Did various internships

Extracurricolars

1. Recycling Club
2. College computer society Member
3. Old Books distribution Club

Interests

1. Swimming
2. Cooking
3. Programming
4. Music
5. Technology
6. Movies

EXPERIMENT NO.-02

Aim: Write an HTML program to design an entry form of student details.

Source Code:

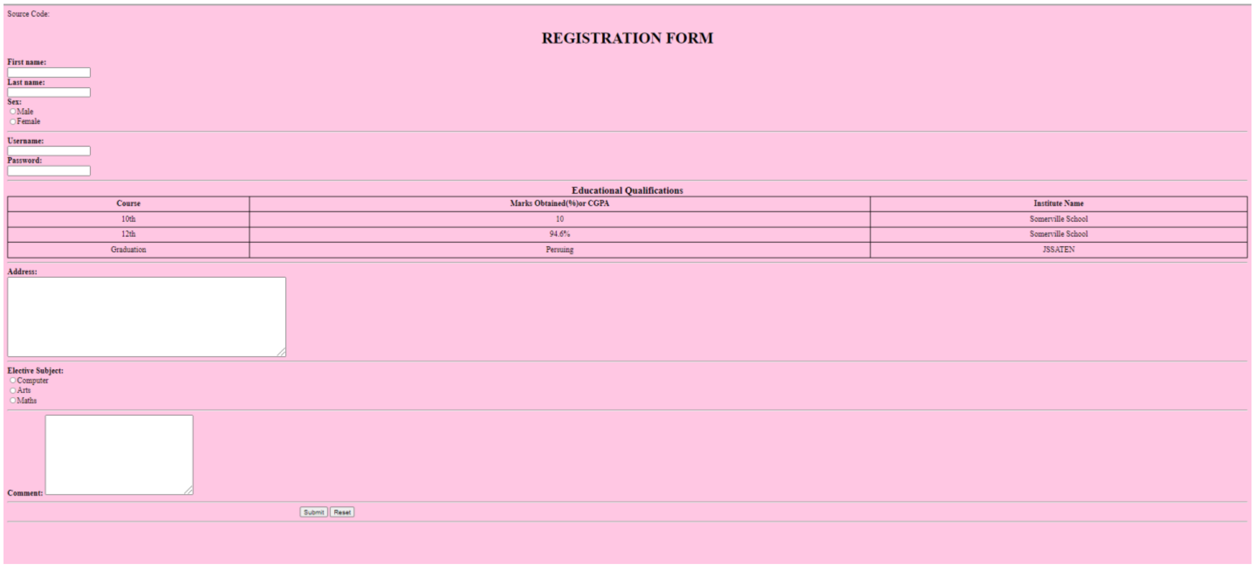
```
<!DOCTYPE html>
<html>
<head>
<title>registartion form</title>
<style>
table, th, td {
 border: 1px solid black;
 border-collapse: collapse;
}
th, td {
 padding: 5px;
 text-align: center;
</style>
</head>
<body style="background-color:#ffc7e3;">
<h1 style="text-align: center">REGISTRATION FORM</h1>
<form>
<strong>First name:</strong><br>
<input type="text" name="firstname">
<br>
<strong>Last name:</strong><br>
<input type="text" name="lastname">
```

```
<br>
<strong>Sex:</strong><br>
<input type="radio" name="male">Male<br>
<input type="radio" name="female">Female
<hr>
<strong>Username:</strong><br>
<input type="text" name="username">
<br>
<strong>Password:</strong><br>
<input type="Password" name="password">
<br>
<hr>
<table style="width:100%">
<caption style="font-size: 20px;"><strong>Educational Qualifications</strong></caption>
<tr>
<th>Course</th>
<th>Marks Obtained(%)or CGPA</th>
<th>Institute Name</th>
</tr>
<tr>
<td>10th</td>
<td>10</td>
<td>Somerville School </td>
</tr>
<tr>
<td>12th</td>
```

```
<td>94.6%</td>
<td>DAV Public School, Sahibabad</td>
</tr>
<tr>
<td>Graduation</td>
<td>Persuing</td>
<td>JSSATEN</td>
</tr>
</table>
<hr>
<strong>Address:</strong><br>
<textarea name="address" rows="10" cols="80"></textarea>
<br>
<hr>
<strong>Elective Subject:</strong><br>
<input type="radio" name="subject" value="Computer">Computer<br>
<input type="radio" name="subject" value="Arts">Arts<br>
<input type="radio" name="subject" value="Maths">Maths<br>
<hr>
<strong>Comment:</strong>
<textarea name="comment" rows="10" cols="40"></textarea>
<hr>
<button type="button" onclick="alert('Your form is submitted')" style="margin-left:
600px">Submit</button>
<input type="reset" name="reset">
<br>
```

```
<hr>
</form>
</body>
</html>
```

Output:



Source Code:

REGISTRATION FORM

First name:

Last name:

Sex:

○Male

○Female

Username:

Password:

Educational Qualifications

Course	Marks Obtained(%)or CGPA	Institute Name
10th	10	Somerville School
12th	94.6%	Somerville School
Graduation	Persuing	JSSATEN

Address:

Elective Subject:

○Computer

○Arts

○Maths

Comment:

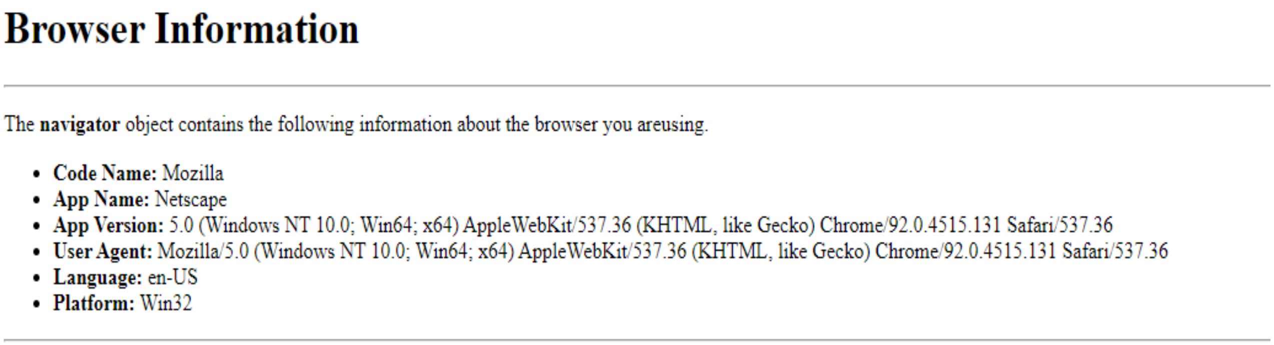
Experiment-03

Aim: Write programs using Java script for Web Page to display browsers information.

Source Code:

```
<html>
<head>
<title>
Browser Information
</title>
</head>
<body>
<h1>Browser Information</h1>
<hr>
<p> The <b>navigator</b> object contains the following information about the browser you
areusing. </p>
<ul>
<script LANGUAGE="JavaScript" type="text/javascript">
 document.write("<li><b>Code Name:</b> " +navigator.appCodeName);
document.write("<li><b>App Name:</b> " + navigator.appName);
document.write("<li><b>AppVersion:</b> " + navigator.appVersion);
document.write("<li><b>User Agent:</b> " + navigator.userAgent);
document.write("<li><b>Language:</b> " + navigator.language);
document.write("<li><b>Platform:</b> " + navigator.platform);
</script>
</ul>
<hr>
</body>
</html>
```

Output:



Browser Information

The **navigator** object contains the following information about the browser you areusing.

- **Code Name:** Mozilla
- **App Name:** Netscape
- **App Version:** 5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/92.0.4515.131 Safari/537.36
- **User Agent:** Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/92.0.4515.131 Safari/537.36
- **Language:** en-US
- **Platform:** Win32

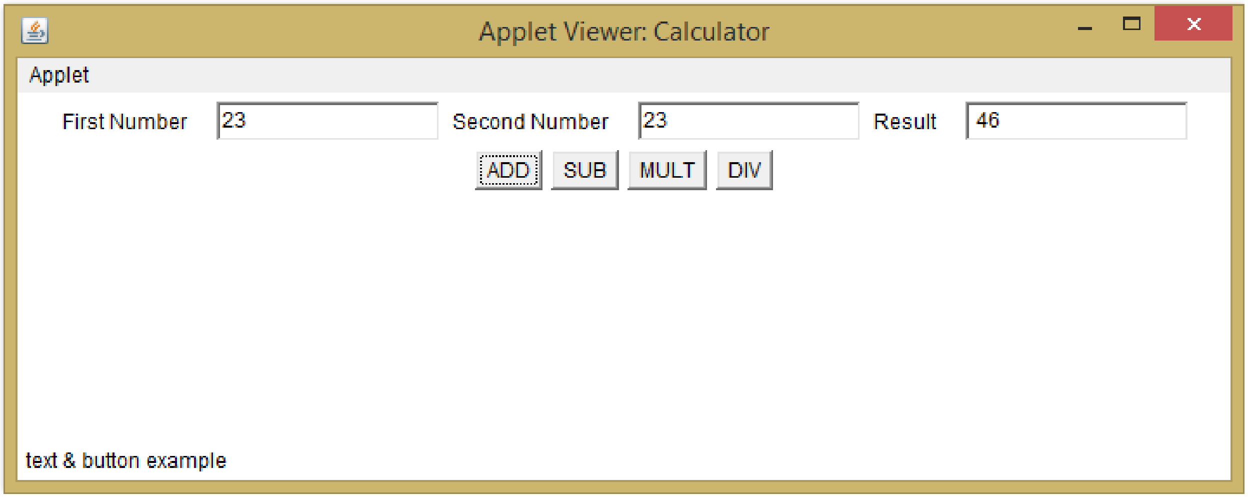
Experiment-04

Aim: Write a Java applet to display the Application Program screen i.e. calculator and other.

Source:

```
import java.awt.*;
import java.awt.event.*;
import java.applet.*;
/*  <applet code="Calculator" width="700" height="200">
  </applet>*/
public class Calculator extends Applet implements ActionListener {
    String msg = "";
    TextField t1, t2, t3;
    Button b1, b2, b3, b4;
    Label l1, l2, l3;
    public void init() {
        l1 = new Label("First Number");
        add(l1);
        t1 = new TextField(15);
        add(t1);
        l2 = new Label("Second Number");
        add(l2);
        t2 = new TextField(15);
        add(t2);
        l3 = new Label("Result");
        add(l3);
        t3 = new TextField(15);
        add(t3);
        b1 = new Button("ADD");
        add(b1);
        b1.addActionListener(this);
    b2 = new Button("SUB");
    add(b2);
    b2.addActionListener(this);
    b3 = new Button("MULT");
    add(b3);
    b3.addActionListener(this);
    b4 = new Button("DIV");
    add(b4);
    b4.addActionListener(this);
}
public void actionPerformed(ActionEvent e) {
    if (e.getSource() == b1) {
        int x = Integer.parseInt(t1.getText());
        int y = Integer.parseInt(t2.getText());
        int sum = x + y;
        t3.setText(" " + sum);
    }
    if (e.getSource() == b2) {
        int x = Integer.parseInt(t1.getText());
        int y = Integer.parseInt(t2.getText());
        int sub = x - y;
        t3.setText(" " + sub);
    }
    if (e.getSource() == b3) {
        int x = Integer.parseInt(t1.getText());
        int y = Integer.parseInt(t2.getText());
        int mul = x * y;
        t3.setText(" " + mul);
    }
    if (e.getSource() == b4) {
            int x = Integer.parseInt(t1.getText());
            int y = Integer.parseInt(t2.getText());
            int div = x / y;
            t3.setText(" " + div);
        }
        showStatus(" text & button example");
        repaint();
    }
}
```

Output:



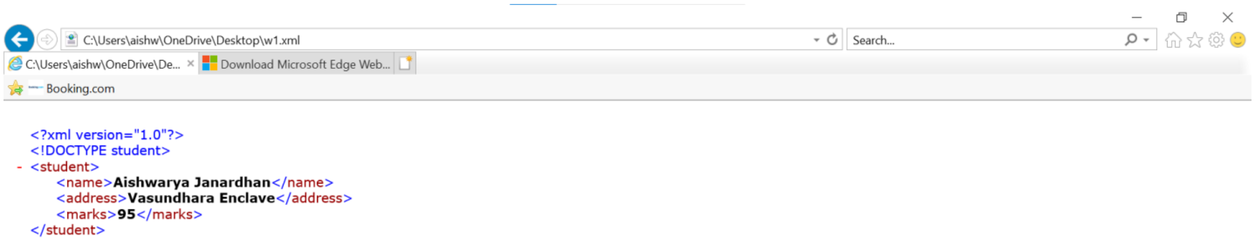
Experiment-05

Aim: Writing program in XML for creation of DTD, which specifies set of rules.

Source Code:

```
<?xml version="1.0"?>

<!DOCTYPE student[

<!ELEMENT student (name,address,std,marks)>

<!ELEMENT name (#PCDATA)>

<!ELEMENT address (#PCDATA)>

<!ELEMENT std (#PCDATA)>

<!ELEMENT marks (#PCDATA)>]>

<student>

<name>Riddhi Gupta</name>

<address>Ghaziabad</address>

<marks>95</marks>

</student>
```

Output:


C:\Users\aishw\OneDrive\Desktop\w1.xml
Search...
C:\Users\aishw\OneDrive\De... ×
Download Microsoft Edge Web...
Booking.com

```
  <?xml version="1.0"?>
  <!DOCTYPE student>
- <student>
      <name>Aishwarya Janardhan</name>
      <address>Vasundhara Enclave</address>
      <marks>95</marks>
  </student>
```

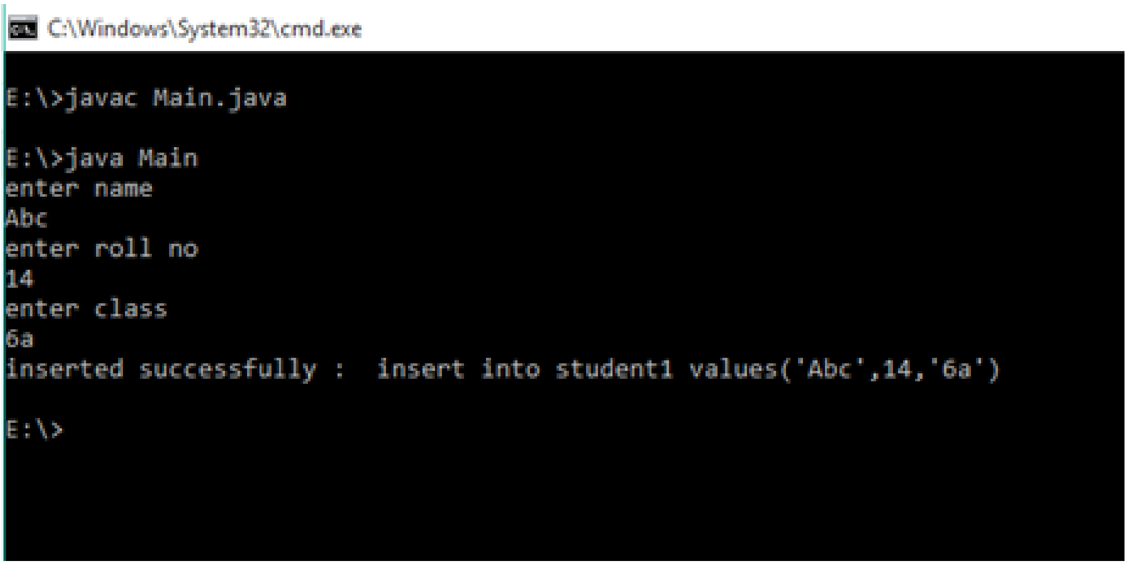
Experiment-06

Aim: Program to illustrate JDBC connectivity and maintaining database by sending queries.

Source Code:

```
Import java.sql.*;
Import java.util.*;
class Main
{
public static void main(String a[])
{
//Creating the connection
String url = "jdbc:oracle:thin:@localhost:1521:xe";
String user = "system";
String pass = "12345";
//Entering the data
Scanner k = new Scanner(System.in);
System.out.println("enter name");
String name = k.next();
System.out.println("enter roll no");
int roll = k.nextInt();
System.out.println("enter class");
String cls = k.next();

String sql = "insert into student1 values('"+name+"',"+roll+",'"+cls+"')";

Connection con=null;

try
{
DriverManager.registerDriver(new oracle.jdbc.OracleDriver());
//Reference to connection interface
con = DriverManager.getConnection(url,user,pass);
Statement st = con.createStatement();
int m = st.executeUpdate(sql);
if (m == 1)
System.out.println("inserted successfully : "+sql);
else
System.out.println("insertion failed");
con.close();
}
catch(Exception ex)
{
System.err.println(ex);
}
}
}
```

Output :



```
E:\>javac Main.java

E:\>java Main
enter name
Abc
enter roll no
14
enter class
6a
inserted successfully :  insert into student1 values('Abc',14,'6a')

E:\>
```

Experiment-07

Aim: Install APACHE TOMCAT web server . Access the static web pages for login id, using this server.

Source Code:

Client-side HTML Login Validation Form:
File Name: SignIn.html

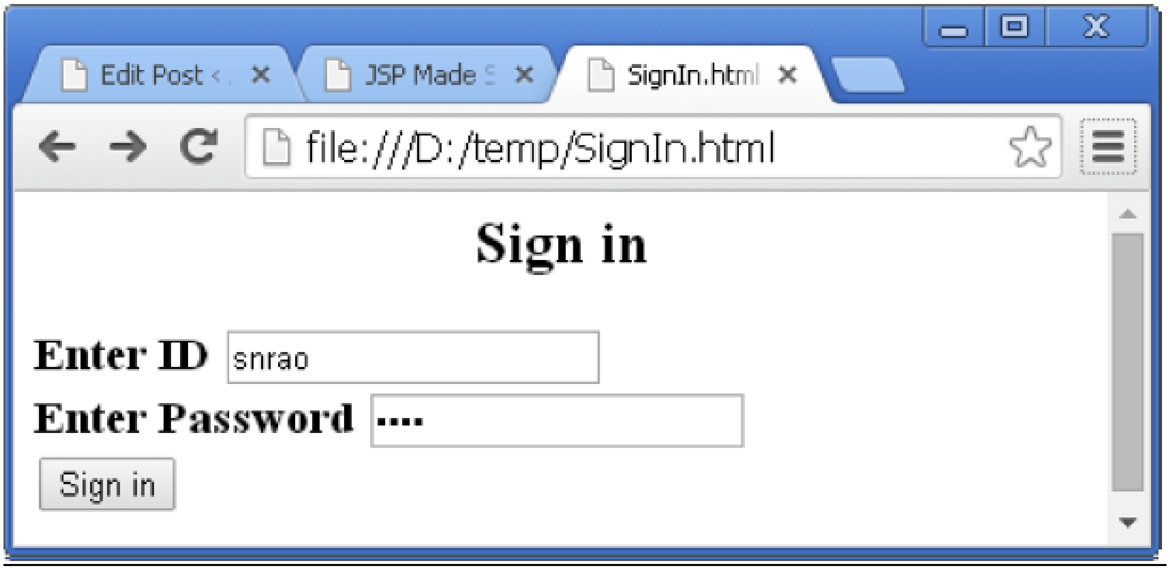
```
<body>
<h2 align="center">Sign in</h2>
<form method="get" action="http://localhost:8888/india/Login.jsp">
<h3>
Enter ID <input type="text" name="t1"><br>
Enter Password <input type="password" name="t2"><br>
<input type="submit" value="Sign in">
</h3>
</body>
```

Following is the server-side JSP file that includes a Scriptlet to understand what and how to code Scriptlet.
File Name: Login.jsp

```
<body>
<h2 align="center">Log in Validation </h2>
<%
String str1=request.getParameter("t1");
String str2=request.getParameter("t2");
if(str1.equalsIgnoreCase("snrao") && str2.equals("java"))
{
out.println("<h3>Your Login is Successful</h3>");
}
else
{
out.println("<h3>Sorry, your Login is Failed</h3>");
}
%>
</body>
```

Output:

Screenshot of HTML file SignIn.html when values are entered.



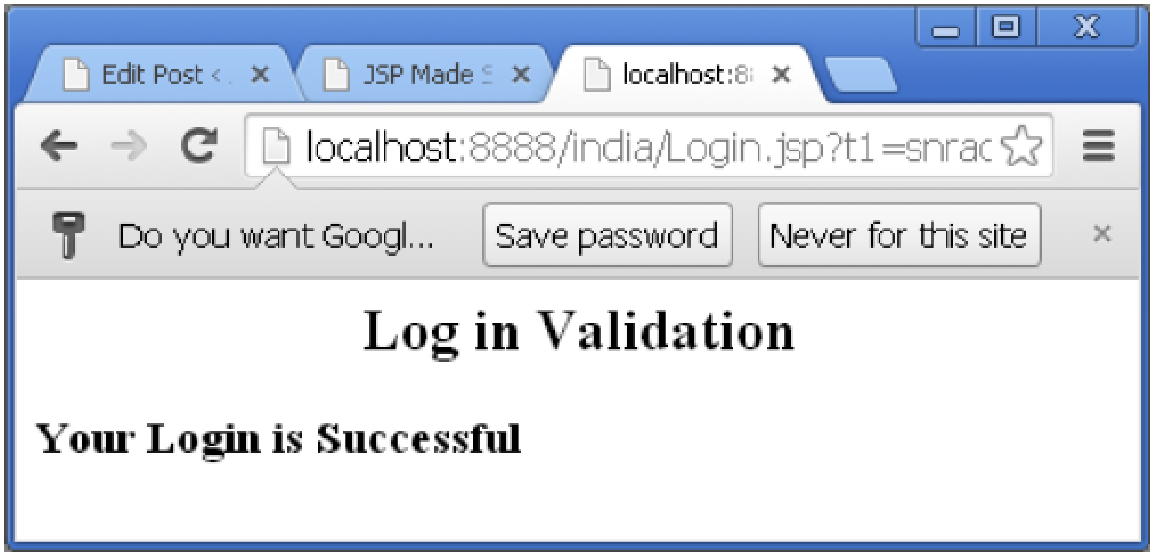
file:///D:/temp/SignIn.html

Sign in

Enter ID snrao

Enter Password ••••

Screenshot of response when correct values are entered.



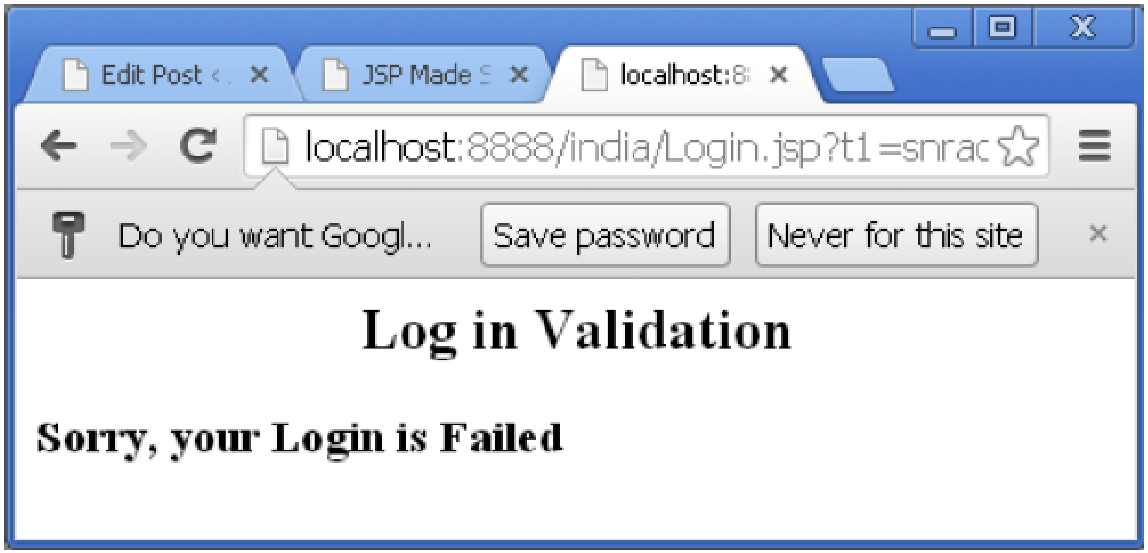
localhost:8888/india/Login.jsp?t1=snrac

Do you want Googl...

Log in Validation

Your Login is Successful

Screenshot of response when wrong values are entered.



Log in Validation

Sorry, your Login is Failed

Experiment-08

Aim: Create a Cookie and add four user id’s and passwords to this Cookie.

Source Code:

Index.html

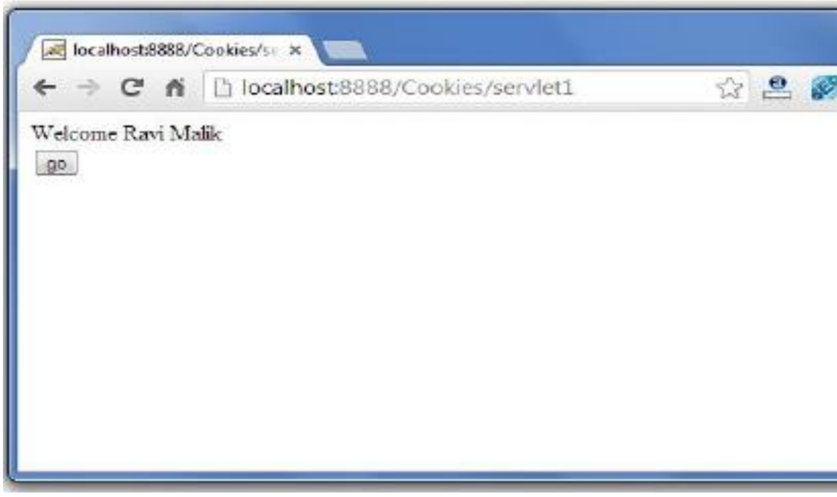
```
<form action="servlet1" method="post">
Name:<input type="text" name="userName"/><br/><input type="submit" value="go"/>

<input type="submit" value="go"/>

</form>
```

FirstServlet.java

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class FirstServlet extends HttpServlet {
public void doPost(HttpServletRequest request, HttpServletResponse response){
try{
response.setContentType("text/html");
PrintWriter out = response.getWriter();
String n=request.getParameter("userName");
out.print("Welcome "+n);
Cookie ck=new Cookie("uname",n);//creating cookie object
response.addCookie(ck);//adding cookie in the response
//creating submit button
out.print("<form action='servlet2'>");
out.print("<input type='submit' value='go'>");
out.print("</form>");
out.close();
}catch(Exception e){System.out.println(e);}
}
}
```

SecondServlet.java

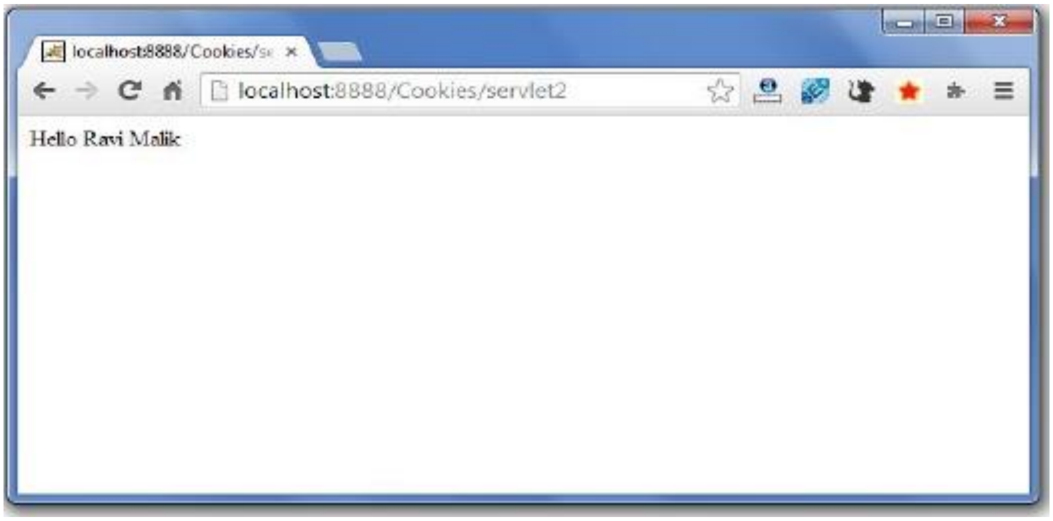
```
import java.io.*;
import javax.servlet.*;

import javax.servlet.http.*;

public class SecondServlet extends HttpServlet {
public void doPost(HttpServletRequest request, HttpServletResponse response){
try{
response.setContentType("text/html");
PrintWriter out = response.getWriter();
Cookie ck[]=request.getCookies();
out.print("Hello "+ck[0].getValue());
out.close();
}catch(Exception e){System.out.println(e);}
}
```



Welcome Ravi Malik

```
<servlet>
<servlet-name>s1</servlet-name>
<servlet-class>FirstServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>s1</servlet-name>
<url-pattern>/servlet1</url-pattern>
</servlet-mapping>
<servlet>
<servlet-name>s2</servlet-name>
<servlet-class>SecondServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>s2</servlet-name>
<url-pattern>/servlet2</url-pattern>
</servlet-mapping>

</web-app>
```

Output:



Hello Ravi Malik

Experiment-09

Aim: Write a java program/servlet/JSP to connect database and extract data from the tables and display them.

Source Code:

Retrieve.jsp

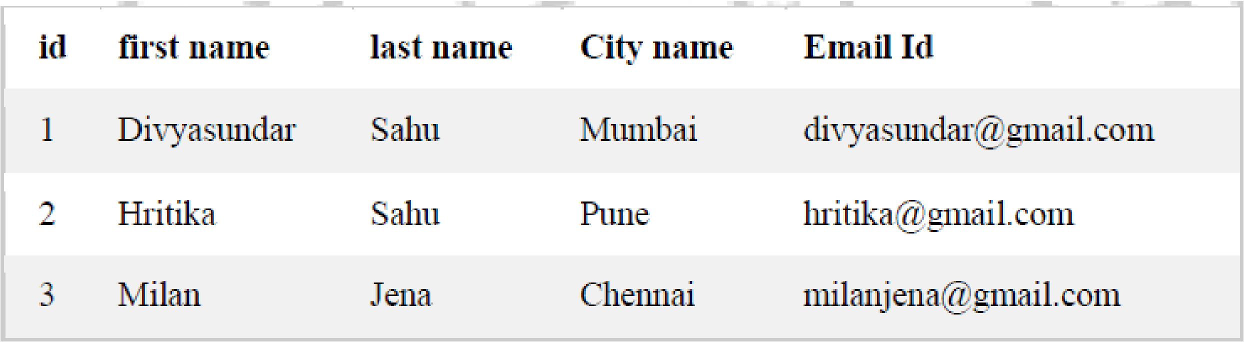
```
%@page import="java.sql.DriverManager"%
%@page import="java.sql.ResultSet"%
<%@page import="java.sql.Statement"%>
<%@page import="java.sql.Connection"%>
<% String id = request.getParameter("userid");
 String driver = "com.mysql.jdbc.Driver";
 String connectionUrl = "jdbc:mysql://localhost:3306/";
 String database = "test";
String userid = "root";
String password = "";
 try {
Class.forName(driver);
 }
 catch (ClassNotFoundException e)
{
e.printStackTrace();
}
 Connection connection = null;
Statement statement = null;
 ResultSet resultSet = null; %>
<!DOCTYPE html>
<html>
```

```
<body>
<h1>Retrieve data from database in jsp</h1>
<table border="1">
<tr>
<td>first name</td>
<td>last name</td>
<td>City name</td>
<td>Email</td>
</tr>
<% try{ connection = DriverManager.getConnection(connectionUrl+database, userid,
password); statement=connection.createStatement();
String sql ="select * from users";
resultSet =statement.executeQuery(sql);
 while(resultSet.next())
{
 %>
<tr>
<td><%=resultSet.getString("first_name") %></td>
<td><%=resultSet.getString("last_name") %></td>
<td><%=resultSet.getString("city_name") %></td>
<td><%=resultSet.getString("email") %></td>
</tr>
<%
 }
 connection.close();
 } catch (Exception e) {
```

```
 e.printStackTrace();
 }
 %>
</table>
</body>
</html>
```

Output:

After retrieve the data from the data base the table look like this.



id	first name	last name	City name	Email Id
1	Divyasundar	Sahu	Mumbai	divyasundar@gmail.com
2	Hritika	Sahu	Pune	hritika@gmail.com
3	Milan	Jena	Chennai	milanjena@gmail.com

Experiment-10

Aim: Write a JSP which insert the details of the 3 or 4 users who register with the web site by using registration form.

Source Code:

Register_1.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
<!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=ISO-8859-1">
<title>Guru Registration Form</title>
</head>
<body>
<h1>Guru Register Form</h1>
<form action="guru_register" method="post">
<table style="with: 50%">
<tr>
<td>First Name</td>
<td><input type="text" name="first_name" /></td>
</tr>
<tr>
<td>Last Name</td>
<td><input type="text" name="last_name" /></td>
</tr>
<tr>
<td>UserName</td>
<td><input type="text" name="username" /></td>

</tr>

<tr>
<td>Password</td>
<td><input type="password" name="password" /></td>
```

```
</tr>
<tr>
<td>Address</td>
<td><input type="text" name="address" /></td>
</tr>
<tr>
<td>Contact No</td>
<td><input type="text" name="contact" /></td>
</tr></table>
<input type="submit" value="Submit" /></form>
</body>
</html>
```

Guru_register.java

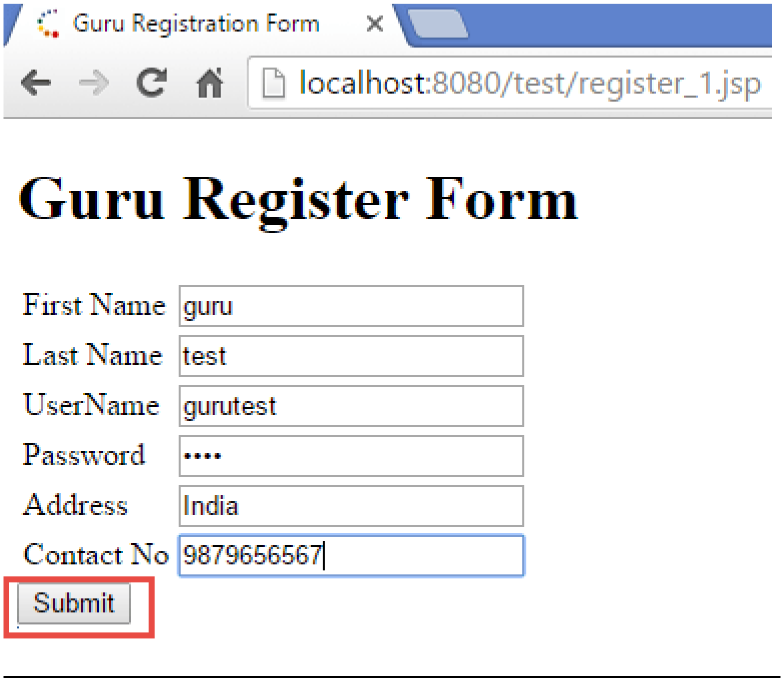
```
package demotest;
import java.io.IOException;
import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
/**
* Servlet implementation class guru_register
*/
public class guru_register extends HttpServlet {
private static final long serialVersionUID = 1L;
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
// TODO Auto-generated method stub
String first_name = request.getParameter("first_name");
String last_name = request.getParameter("last_name");
String username = request.getParameter("username");
String password = request.getParameter("password");
String address = request.getParameter("address");
String contact = request.getParameter("contact");
if(first_name.isEmpty() || last_name.isEmpty() || username.isEmpty() ||
password.isEmpty() || address.isEmpty() || contact.isEmpty())
{
```

```
RequestDispatcher req = request.getRequestDispatcher("register_1.jsp");
req.include(request, response);
}
else
{ RequestDispatcher req =request.getRequestDispatcher("register_2.jsp");

req.forward(request, response);
}
}
}
```

Register_2.jsp

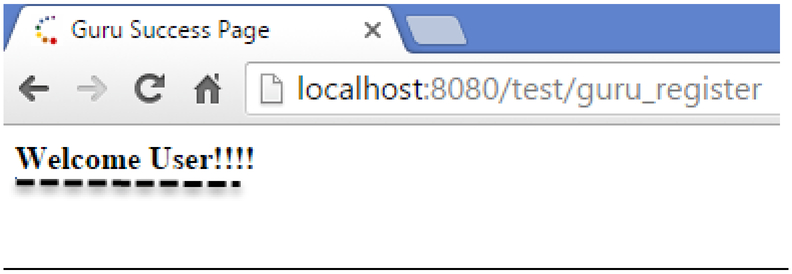
```
<html>
<head>
<title>Success Page</title>
</head>
<body>
<h5> --DataFlair-- </h5>
<a><b>Welcome User..</b></a>
</body>
</html>
```

Output:



Guru Register Form

First Name	guru
Last Name	test
UserName	gurutest
Password	••••
Address	India
Contact No	9879656567



Welcome User!!!!

EXPERIMENT NO.-11

Aim**:** Design and implement a simple shopping cart example with session tracking API.

Source Code:

INPUT:

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class ShoppingCartViewerSession extends HttpServlet {
public void doGet(HttpServletRequest req, HttpServletResponse res)
throws ServletException, IOException {
res.setContentType("text/html");
PrintWriter out = res.getWriter();
// Get the current session object, create one if necessary.
HttpSession session = req.getSession(true);
// Cart items are maintained in the session object.
String[] items = (String[])session.getValue("cart.items");
System.out.println("<HTML><HEAD><TITLE>SessionTracker</TITLE></HEAD>");
System.out.println("<BODY><H1>Session Tracking Demo</H1>");
// Print the current cart items.
System.out.println("You currently have the following items in your cart:<BR>");
if (items == null) {
System.out.println("<B>None</B>");
}
else {
System.out.println("<UL>");
for (int i = 0; i <items.length; i++) {
System.out.println("<LI>" + items[i]);
}
System.out.println("</UL>");
}
// Ask if they want to add more items or check out.
System.out.println("<FORM ACTION=\"/servlet/ShoppingCart\" METHOD=POST>");
System.out.println("Would you like to<BR>");
System.out.println("<INPUT TYPE=submit VALUE=\" Add More Items \">");
System.out.println("<INPUT TYPE=submit VALUE=\" Check Out \">");
System.out.println("</FORM>");
// Offer a help page. Encode it as necessary.
System.out.println("For help, click <A HREF=\"" +
res.encodeUrl("/servlet/Help?topic=ShoppingCartViewer") +
"\">here</A>");
System.out.println("</BODY></HTML>");
}
}
```

Output:

```
SessionTracker
Session Tracking Demo
currently have the following items in your cart:
APPLE
BANANA
MANGO
Would you like to Add More Items
Check Out
For help here
```

EXPERIMENT NO.-12

Aim: Write a program of MutiThreading in Java.

Source Code:

```
class MultithreadingDemo extends Thread
{
 public void run()
 {
 try
 {
 // Displaying the thread that is running
 System.out.println ("Thread " + Thread.currentThread().getId() + " is running");

 }
 catch (Exception e)
 {
 // Throwing an exception
 System.out.println ("Exception is caught");
 }
 }
}

// Main Class
public class Multithread
{
 public static void main(String[] args)
 {
```

```
 int n = 8; // Number of threads
 for (int i=0; i<8; i++)
 {
 MultithreadingDemo object = new MultithreadingDemo();
 object.start();
 }
 }
}
```

Output :

```
Thread 8 is running
Thread 9 is running
Thread 10 is running
Thread 11 is running
Thread 12 is running
Thread 13 is running
Thread 14 is running
Thread 15 is running
```

Thread creation by implementing the Runnable Interface

We create a new class which implements java.lang.Runnable interface and override run() method. Then we instantiate a Thread object and call start() method on this object.

```
// Java code for thread creation by implementing
// the Runnable Interface
class MultithreadingDemo implements Runnable
{
 public void run()
 {
 try
 {
 // Displaying the thread that is running
 System.out.println ("Thread " + Thread.currentThread().getId() + " is running");

 }
 catch (Exception e)
 {
// Throwing an exception
 System.out.println ("Exception is caught");
 }
 }
}

// Main Class
class Multithread
{
 public static void main(String[] args)
 {
 int n = 8; // Number of threads
 for (int i=0; i<8; i++)
 {
 Thread object = new Thread(new MultithreadingDemo());
 object.start();
 }
 }
```

```
}
```

Output :

```
Thread 8 is running
Thread 9 is running
Thread 10 is running
Thread 11 is running
Thread 12 is running
Thread 13 is running
Thread 14 is running
Thread 15 is running
```

EXPERIMENT NO.-13

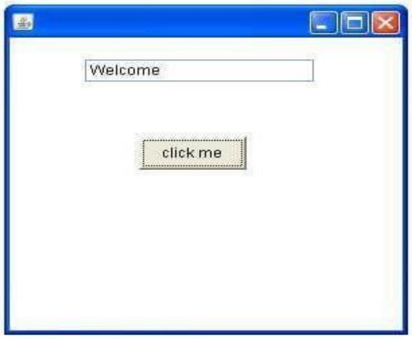
Aim: Write a program on Event Handling in Java

Source code

```
import java.awt.*;
import java.awt.event.*;
class AEvent extends Frame implements ActionListener{
TextField tf;
AEvent(){

//create components
tf=new TextField();
tf.setBounds(60,50,170,20);
Button b=new Button("click me");
b.setBounds(100,120,80,30);

//register listener
b.addActionListener(this);//passing current instance

//add components and set size, layout and visibility
add(b);add(tf);
setSize(300,300);
setLayout(null);
setVisible(true);
}
public void actionPerformed(ActionEvent e){
tf.setText("Welcome");
}
public static void main(String args[]){
new AEvent();
}
}
```

public void setBounds(int xaxis, int yaxis, int width, int height); have been used in the above example that sets the position of the component it may be button, textfield etc

Output:



Welcome