GUJARAT TECHNOLOGICAL UNIVERSITY
Mahatma Gandhi Institute Of Technical Education & Research Center, Navsari

COMPUTER ENGINEERING DEPARTMENT

GTU

B.E.3RD YEAR 6TH SEM

Subject Name: Advanced Java Programming **Subject Code: 3160707**

INDEX

Sr. No.	AIM	DATE	SIGN
1	Write a JAVA program that implements a simple Client / Server application. The client sends data to a server. Server receives the data, users it to produce a result and then sends the result back to client. The client displays the result on the console. For example the data send from the client is two numbers and the result produce by the server is addition of those two numbers.		
2	Write a JAVA program that implements a simple Client / Server application. The data send from the client is a number and the result produce by the server is even number or odd number		
3	Write a JAVA program that implements TCP/UDP chat application.		
4	Write a program that takes host name and output its IP Address.		
5	Write a Servlet that takes first name and last name from user & generate login id such that first three characters are from first name & last three characters are from the last name.		
6	Implements a Servlet which counts the number of Hits. (i.e. Hit-counter)		
7	Write a HTML page which inputs the below mentioned fields and invoke the java Servlet program which enters the fields in access Database. 1. EMP_ID, 2. EMP_NAME, 3. DEPT, 4.CITY.		
8	Write a HTML page which inputs the below mentioned fields and invoke the java Servlet program which enters the fields in access Database using prepared statement. 1. ENROLMENT, 2.STUDENT_NAME, 3. BRANCH, 4. YEAR.		
9	Write a HTML page that will ask user to login. When user submits this HTML pages, invoke a JSP on Server, which will make query in database to check whether username or password are correct or not. If the user is valid, create one Session for this user & provide one link in JSP1, that if click will execute JSP2 on server. In JSP2 print the content of session that was created in JSP1.		
10	To Study and implement JSF. (JAVA Server Faces)		
11	Create a web service using Netbeans IDE.		
12	To Study and implement Hibernate.		
13	Open Ended Problem: For Example: Develop an application of Online Pizza Shop through which user can make search of place by different area like shop name, area name, rating wise, etc. Make assumptions in application design. (Develop using JSP / Servlet)		

PRACTICAL-1

AIM: Write a java program that implements a simple client-server application. The client send a data to server, Server receives data and produce a result back to client. The client display result on the console. For Example, the data send from the client is two numbers and the result produce by server is addition of those two number.

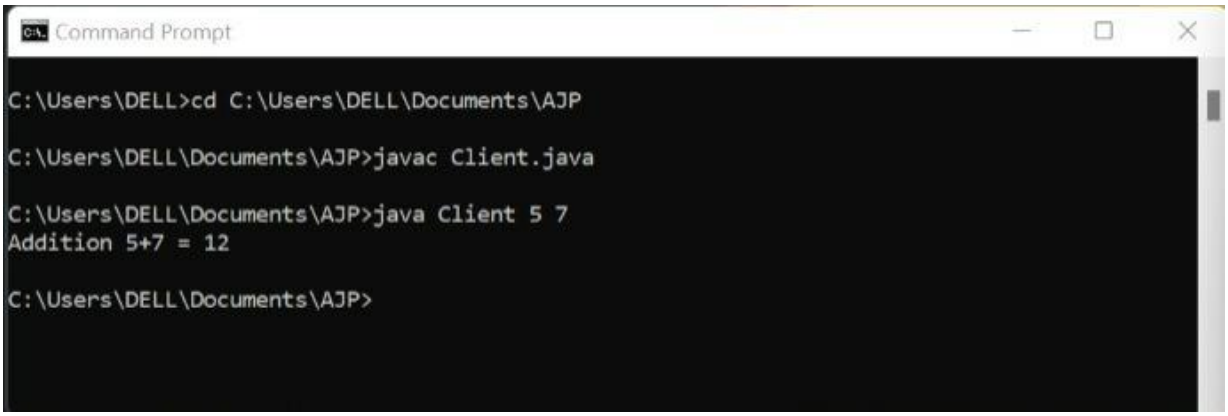
PROGRAM:

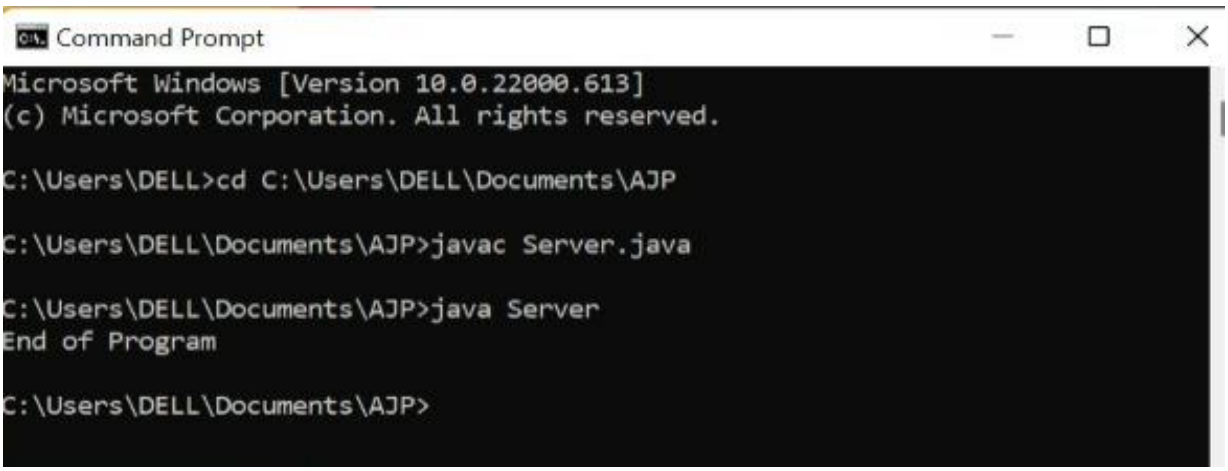
Client.java

```
import java.io.*;
import java.net.*;
public class Client
{
	public static void main(String r[]) throws Exception
	{
		int a,b,sum;
		Socket s = new Socket("localhost",80);
		DataInputStream i = new DataInputStream(s.getInputStream());
		DataOutputStream o = new DataOutputStream(s.getOutputStream());
		a= Integer.parseInt(r[0]);
		b=Integer.parseInt(r[1]);
		o.write(a);
		o.write(b);
		sum=i.read();
		System.out.println("Addition " +a+"+"+b+" = "+sum);
		i.close();
		o.close();
		s.close();
	}
}
```

Server.java

```
import java.io.*;
import java.net.*;
public class Server
{
	public static void main(String r[]) throws Exception
	{
		ServerSocket s1 = new ServerSocket(80);
		Socket s = s1.accept();
		DataInputStream i = new DataInputStream(s.getInputStream());
		DataOutputStream o = new DataOutputStream(s.getOutputStream());
		int a= i.read();
		int b= i.read();
		int sum=a+b;
		o.write(sum);
		System.out.println("Endof Program");
		i.close();
		o.close();
		s1.close();
	}
}
```





PRACTICAL – 2

AIM: Write a java program that implements a simple client-server application. The data send from a client is a number and the result produce by the server is whether the number is even or odd.

PROGRAM:

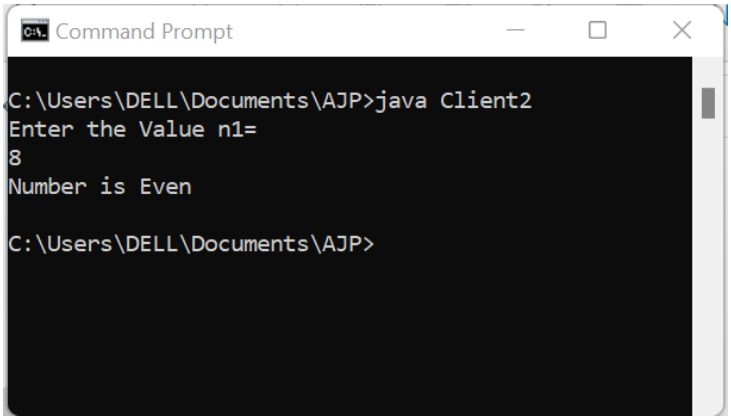
Client.java

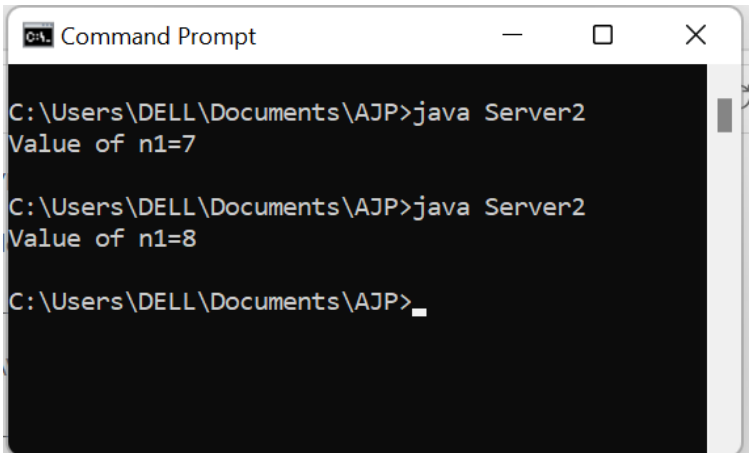
```
import java.io.*;
import java.net.*;
public class Client
{
	public static void main(String r[]) throws Exception
	{
		int a,b,sum;
		Socket s = new Socket("localhost",80);
		BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
		DataInputStream i = new DataInputStream(s.getInputStream());
		DataOutputStream o = new DataOutputStream(s.getOutputStream());
		int n1;
		System.out.println("Enter the Value n1=");
		n1=Integer.parseInt(br.readLine());
		o.write(n1);
		System.out.println(i.readUTF());
		i.close();
		o.close();
		s.close();
	}
}
```

Server.java

```
import java.io.*;
import java.net.*;
public class Server
{
	public static void main(String r[]) throws Exception
	{
		ServerSocket s1 = new ServerSocket(80);
		Socket s = s1.accept();
```

```
                DataInputStream i = new DataInputStream(s.getInputStream());
                DataOutputStream o = new DataOutputStream(s.getOutputStream());
                int n1=i.read();
                System.out.println("Value of n1="+n1);
                if(n1%2==0)
                {
                        o.writeUTF("Number is Even");
                }
                else
                {
                        o.writeUTF("Number is Odd");
                }


                i.close();
                o.close();
                s1.close();
        }
}
```





PRACTICAL – 3

AIM: Write a java program that implements a TCP/UDP chat application.

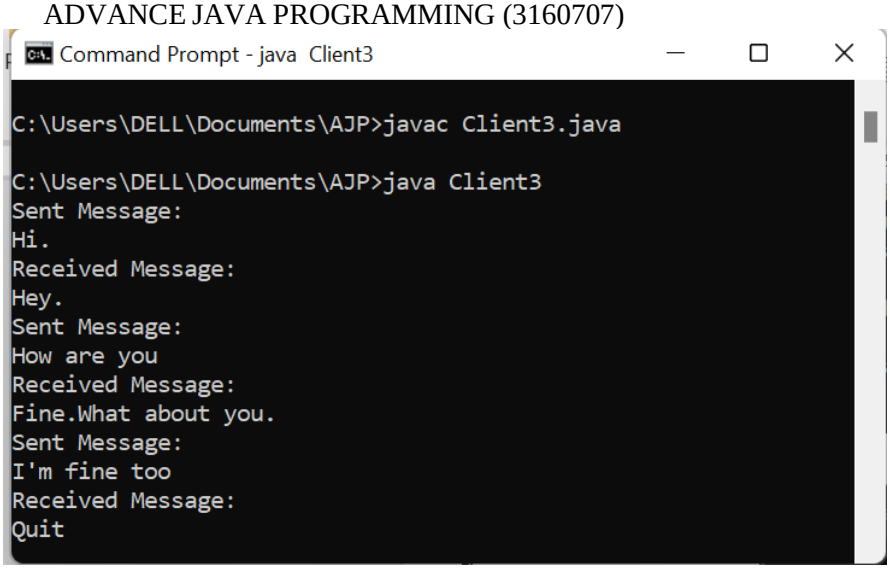
PROGRAM:

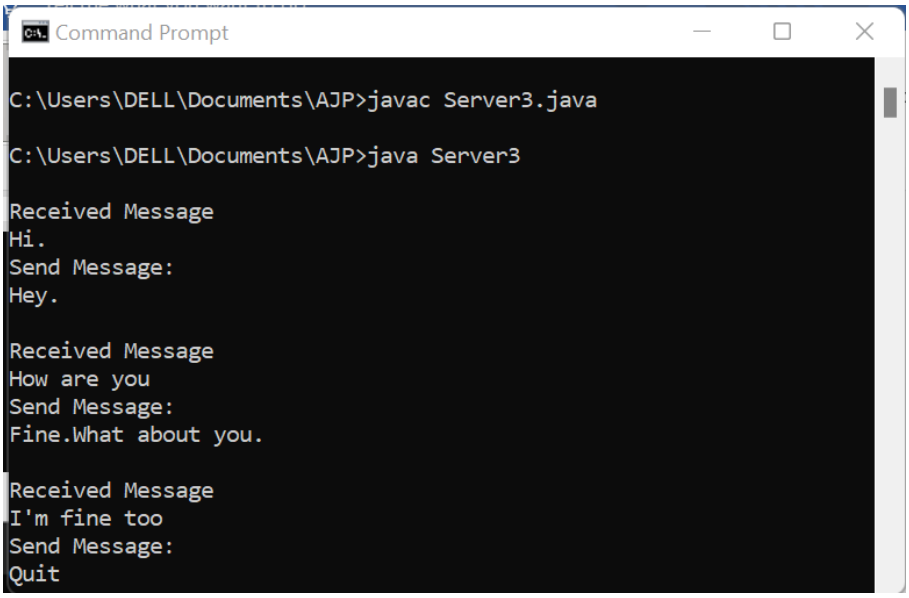
Client.java

```
import java.io.*;
import java.net.*;
public class Client
{
	public static void main(String r[]) throws Exception
	{
		Socket s = new Socket("localhost",80);
		BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
		DataInputStream i = new DataInputStream(s.getInputStream());
		DataOutputStream o = new DataOutputStream(s.getOutputStream());
		String p;
		do
		{
			System.out.println("Sent Message:");
			p=br.readLine();
			o.writeUTF(p);
			if(p.equalsIgnoreCase("Quit"))
			{
				break;
			}
			System.out.println("Received Message:");
			System.out.println(i.readUTF());
		}while(true);
		i.close();
		o.close();
		s.close();
	}
}
```

Server.java

```
import java.io.*;
import java.net.*;
public class Server
{
	public static void main(String r[]) throws Exception
	{
		ServerSocket s1 = new ServerSocket(80);
		Socket s = s1.accept();
		BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
		DataInputStream i = new DataInputStream(s.getInputStream());
		DataOutputStream o = new DataOutputStream(s.getOutputStream());
		String q;
		do
		{
			System.out.println("\nReceived   Message");
			System.out.println(i.readUTF());
			System.out.println("Send Message:");
			q=br.readLine();
			o.writeUTF(q);
			if(q.equalsIgnoreCase("Quit"))
			{
				break;
			}
		}while(true);
		i.close();
		o.close();
		s1.close();
	}
}
```


Command Prompt - java Client3
C:\Users\DELL\Documents\AJP>javac Client3.java
C:\Users\DELL\Documents\AJP>java Client3
Sent Message:
Hi.
Received Message:
Hey.
Sent Message:
How are you
Received Message:
Fine.What about you.
Sent Message:
I'm fine too
Received Message:
Quit

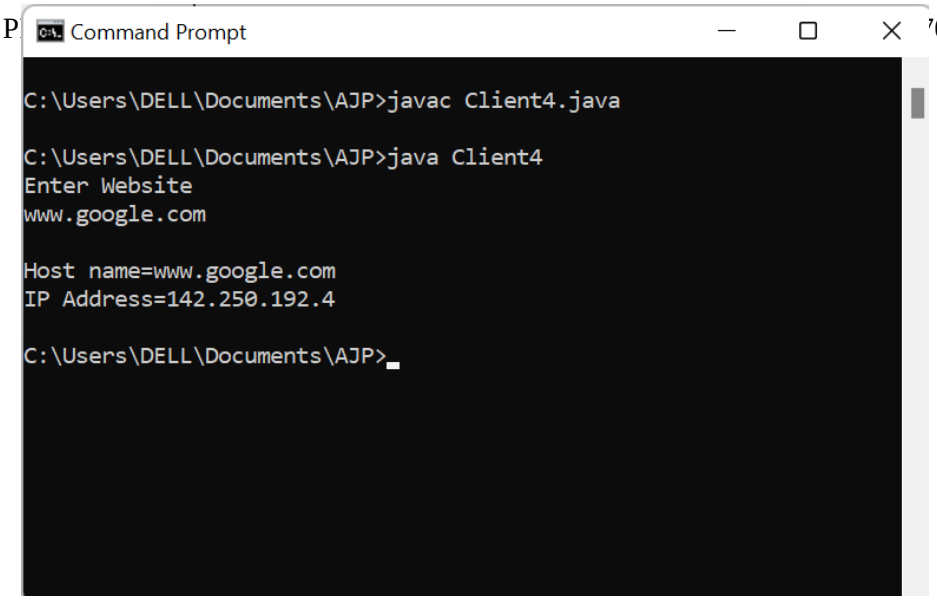

Command Prompt
C:\Users\DELL\Documents\AJP>javac Server3.java
C:\Users\DELL\Documents\AJP>java Server3
Received Message
Hi.
Send Message:
Hey.
Received Message
How are you
Send Message:
Fine.What about you.
Received Message
I'm fine too
Send Message:
Quit

PRACTICAL-4

AIM: Write a java program that takes host name and outputs it's IP address.

PROGRAM:

```
import java.io.*;
importjava.net.*;
class Client
{
	public static void main(String r[])
	{
		try
		{
			BufferedReader br = new BufferedReader(new InputStreamReader
			(System.in));
			System.out.println("Enter Website");
			String p = br.readLine();
			InetAddress ip = InetAddress.getByName(p);
			System.out.println("\nHost name=" + ip.getHostName());
			System.out.println("IP Address=" + ip.getHostAddress());
		}


		catch(Exception e)
		{
			System.out.println("Error="+e);
		}
	}
}
```


Command Prompt
C:\Users\DELL\Documents\AJP>javac Client4.java
C:\Users\DELL\Documents\AJP>java Client4
Enter Website
www.google.com
Host name=www.google.com
IP Address=142.250.192.4
C:\Users\DELL\Documents\AJP>

PRACTICAL-5

AIM: Write a servlet that takes first name and last name from user and generate login Id such that 3 characters are from first name and 3 characters are from last name.

PROGRAM:

index.html

```
<html>
  <head>
    <title>Practical 5</title>
    <meta charset="UTF-8">
    <metaname="viewport"    content="width=device-width">
  </head>
  <body>
  <center><h1>REGISTRATION    FORM</h1>
    <form action="id" method="post">
      <table cellpadding="7px" cellspacing="7px">
        <tr align="left">
          <th>Enter First Name:</th>
          <td><input type="text" name="fname"/></td>
        </tr>
        <tr align="left">
          <th>Enter Last Name:</th>
          <td><input type="text" name="lname"/></td>
        </tr>
        <tr align="center">
          <td colspan="2"><input type="submit" value="SUBMIT"/></td>
        </tr>
      </table>
    </form>
  </center>
  </body>
</html>
```

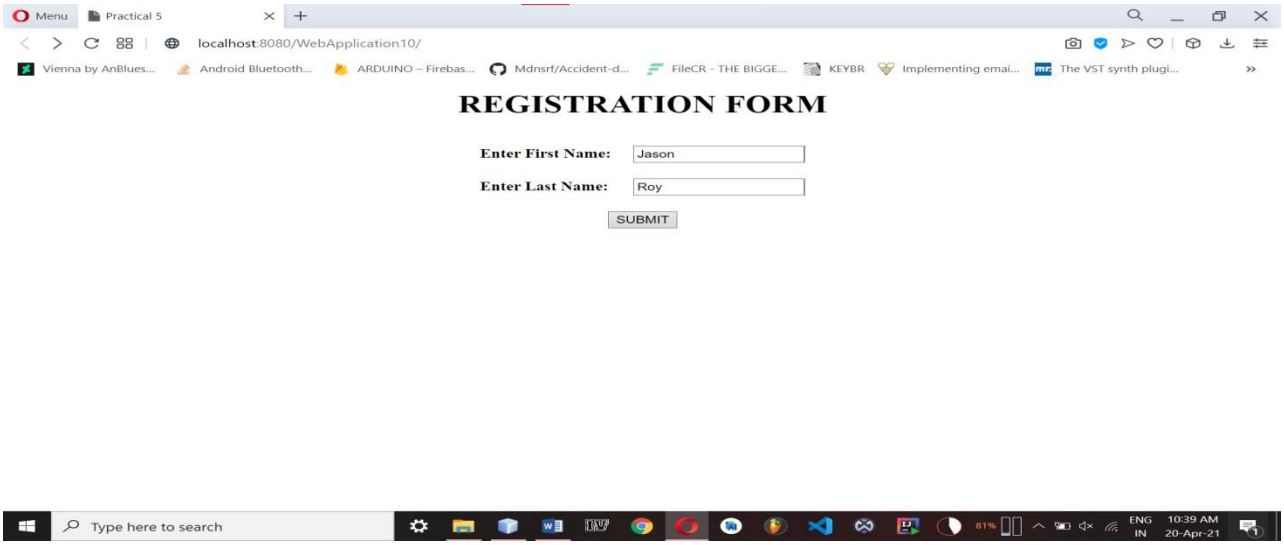
id.html

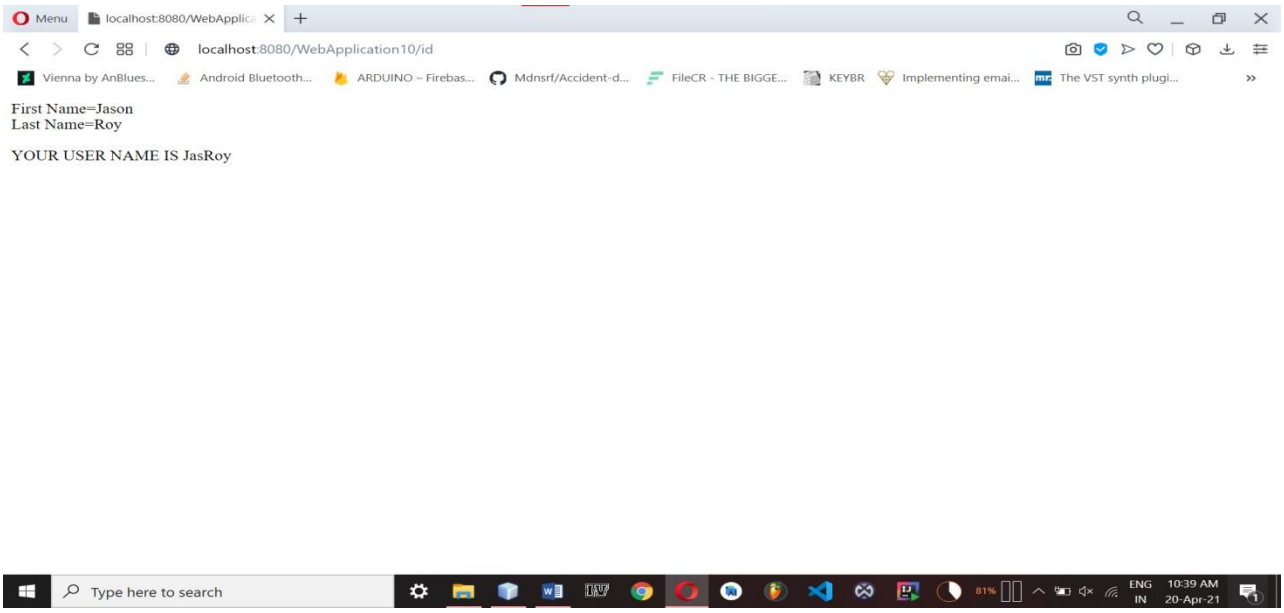
```
importjava.io.IOException;
importjava.io.PrintWriter;
importjavax.servlet.ServletException;
importjavax.servlet.http.HttpServlet;
import   javax.servlet.http.HttpServletRequest;
import   javax.servlet.http.HttpServletResponse;
public class id extends HttpServlet
{
   @Override
   protected void doPost(HttpServletRequest request, HttpServletResponse response)
   throws ServletException, IOException
  {
      response.setContentType("text/html");
      PrintWriter o = response.getWriter();
      String p = request.getParameter("fname");
      String q = request.getParameter("lname");
      o.print("First Name="+p);
      o.print("<br/>");
      o.print("LastName="+q);
      o.print("<br/>");
      String r = p.substring(0,3);
      int s= q.length();
      Stringt=q.substring(s-3,s);
      String a= r.concat(t);
      o.print("<br/>");
      o.print("YOUR USER NAME IS "+a);
     }
}
```

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-appversion="3.1" xmlns="http://xmlns.jcp.org/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee      http://xmlns.jcp.org/xml/ns/javaee/web-
app_3_1.xsd">
   <servlet>
      <servlet-name>id</servlet-name>
      <servlet-class>id</servlet-class>
   </servlet>
```

```
    <servlet-mapping>
      <servlet-name>id</servlet-name>
      <url-pattern>/id</url-pattern>
    </servlet-mapping>
    <session-config>
      <session-timeout>
        30
      </session-timeout>
    </session-config>
</web-app>
```





PRACTICAL-6

AIM: Implement a Servlet which counts the no. of Hits (i.e. Hit Counter)

PROGRAM:

index.html

```
<html>
   <head>
      <title>PRACTICAL 6</title>

   </head>
   <body>
      <form action="HitCounter" method="get">
         <input type="submit" value="GET HIT COUNT"/>
      </form>
      </body>
</html>
```

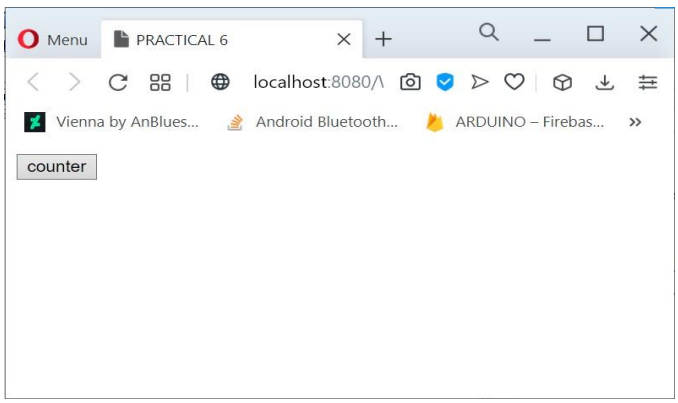
HitCounter.java

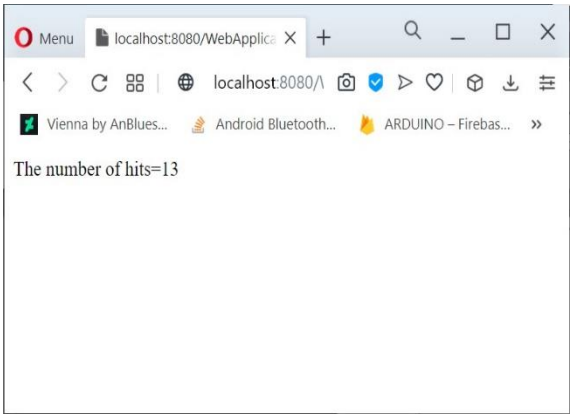
```
importjava.io.IOException;
importjava.io.PrintWriter;
importjavax.servlet.ServletException;
importjavax.servlet.http.HttpServlet;
import   javax.servlet.http.HttpServletRequest;
import   javax.servlet.http.HttpServletResponse;
importjavax.servlet.http.HttpSession;
public class HitCounter extends HttpServlet ;
{
   @Override
   protected void doGet(HttpServletRequest request, HttpServletResponse response)
         throws ServletException, IOException
   {
      response.setContentType("text/html");
      PrintWriter pw= response.getWriter();
      HttpSessionhs=request.getSession();
      Integer counter = new Integer (0);
      Counter=(Integer)hs.getAttribute("counter");
      if(counter==null)
      {
         Counter = new Integer (1);
      }
```

```
      else
        {
           Counter = new Integer (1 + counter.intValue());
        }

        pw.println("The number of hits="+counter);
       hs.setAttribute("counter", counter);
    }
}
```

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-appversion="3.1" xmlns="http://xmlns.jcp.org/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee      http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd">
   <servlet>
      <servlet-name>HitCounter</servlet-name>
      <servlet-class>HitCounter</servlet-class>
   </servlet>
   <servlet-mapping>
      <servlet-name>HitCounter</servlet-name>
      <url-pattern>/HitCounter</url-pattern>
   </servlet-mapping>
   <session-config>
      <session-timeout>
         30
      </session-timeout>
   </session-config>
</web-app>
```





PRACTICAL-7

AIM: Write HTML page which inputs the below mentioned fields and invoke the java servlet program which enters the fields in Access Database. 1.EMP_ID, 2.EMP_NAME, 3. DEPT, 4. CITY

PROGRAM:

index.html

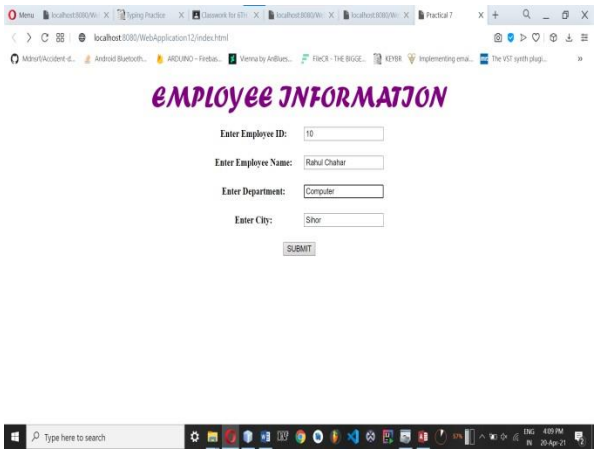
```
<html>
   <head>
      <title>Practical 7</title>
      <meta charset="UTF-8">
      <metaname="viewport"    content="width=device-width">
   </head>
   <body>
   <center><font face="Forte" size="10" color="purple">EMPLOYEE INFORMATION </font>
   </center>
   <form action="login" method="post">
      <table align="center" cellpadding="10px" cellspacing="5px">
         <tr>
            <th>Enter Employee ID:</th>
            <td><input type="number" name="id"/></td>
         </tr>
         <tr>
            <th>Enter Employee Name:</th>
            <td><input type="text" name="name"/></td>
         </tr>

         <tr >
            <th>Enter Department:</th>
            <td><input type="text" name="dept"/></td>
         </tr>
         <tr >
            <th>Enter City:</th>
            <td><input type="text" name="city"/></td>
         </tr>
         <tr align="center">
            <td colspan="2"><input type="submit" value="SUBMIT"/></td>
         </tr>
      </table>
   </form>
   </body>
</html>
```

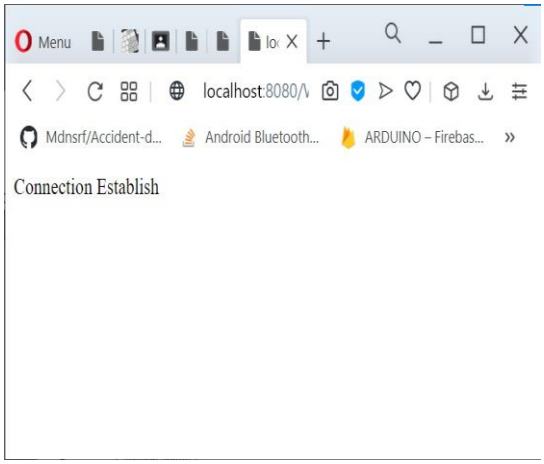
login.java

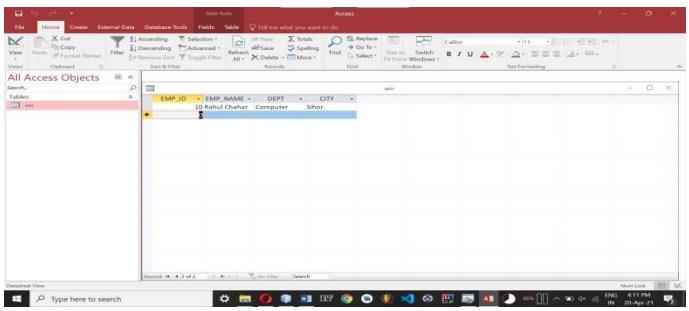
```
importjava.io.IOException;
importjava.io.PrintWriter;
importjavax.servlet.ServletException;
importjavax.servlet.http.HttpServlet;
import   javax.servlet.http.HttpServletRequest;
import   javax.servlet.http.HttpServletResponse;
import java.sql.*;
public class login extends HttpServlet
{
   @Override
   protected void doPost(HttpServletRequest request, HttpServletResponse response)
   throws ServletException, IOException
   {
      response.setContentType("text/html");
      PrintWriter o =response.getWriter();

      try
      {
         Stringp=request.getParameter("id");
         String   q=request.getParameter("name");
         Stringr=request.getParameter("dept");
         String  s=request.getParameter("city");
         Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
         Connectioncn=DriverManager.getConnection("jdbc:odbc:db11");
         o.println("Connection Establish");
         Statement st = cn.createStatement();
         st.executeUpdate("Insert into em values('"+p+"','"+q+"','"+r+"','"+s+"')");
         cn.close();
      }
      catch(Exception e)
      {
         o.println("Error=" + e);
      }
   }
}
```

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-appversion="3.1" xmlns="http://xmlns.jcp.org/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd">
  <servlet>
    <servlet-name>stinfo</servlet-name>
    <servlet-class>stinfo</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>stinfo</servlet-name>
    <url-pattern>/stinfo</url-pattern>
  </servlet-mapping>
  <session-config>
    <session-timeout>
      30
    </session-timeout>
  </session-config>
</web-app>
```







PRACTICAL-8

AIM: Write HTML page which inputs the below mentioned fields and invoke the java servlet program which enters the fields in Access Database using Prepared Statement. 1.ENROLLMENT, 2. STUDENT_NAME, 3. BRANCH , 4. YEAR

PROGRAM:

index.html

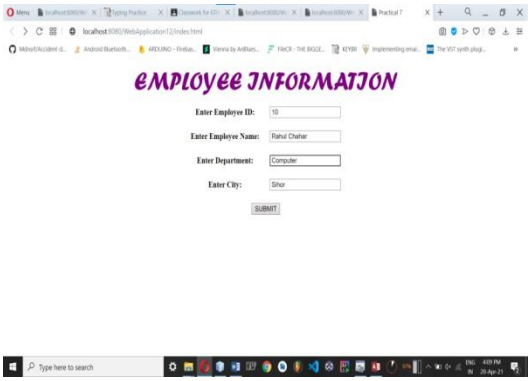
```
<html>
  <head>
    <title>Practical 5</title>
    <meta charset="UTF-8">
    <metaname="viewport"    content="width=device-width">
  </head>
  <body>
  <center><font face="Forte" size="10" color="purple">STUDENT
       INFORMATION</font></center>
  <form action="stinfo" method="post">
    <table align="center" cellpadding="10px" cellspacing="5px">
      <tr>
        <th>Enter Enrollment Number:</th>
        <td><input type="number" name="en"/></td>
      </tr>
      <tr>
        <th>Enter Name:</th>
        <td><input type="text" name="name"/></td>
      </tr>
      <tr >
        <th>Enter Branch:</th>
        <td><input type="text" name="branch"/></td>
      </tr>
      <tr >
        <th>Enter Year:</th>
        <td><input type="number" name="name"/></td>
      </tr>
      <tr align="center">
        <td colspan="2"><input type="submit" value="SUBMIT"/></td>
      </tr>
    </table>
  </form>
  </body>
</html>
```

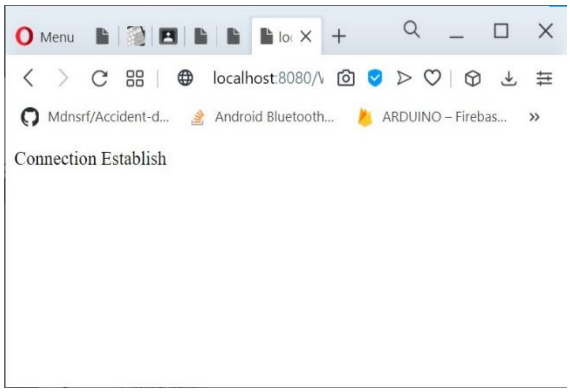
stinfo.java

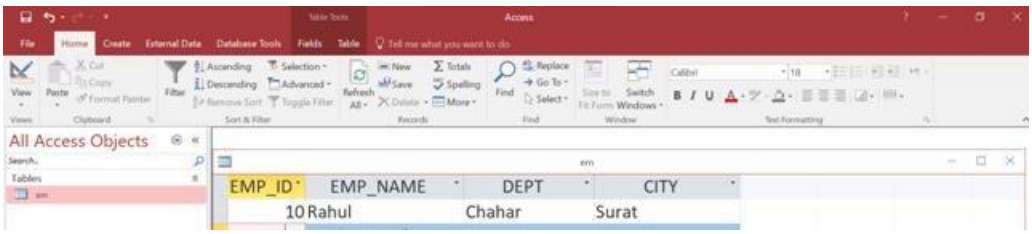
```
importjava.io.IOException;
importjava.io.PrintWriter;
importjavax.servlet.ServletException;
importjavax.servlet.http.HttpServlet;
import   javax.servlet.http.HttpServletRequest;
import   javax.servlet.http.HttpServletResponse;
import java.sql.*;
public class stinfo extends HttpServlet
{
  @Override
   protected void doPost(HttpServletRequest request, HttpServletResponse response)
         throws ServletException, IOException
   {
      response.setContentType("text/html");
      PrintWriter o = response.getWriter();
      try
      {
         String p = request.getParameter("en");
         String q = request.getParameter("name");
         String r = request.getParameter("branch");
         String s = request.getParameter("year");
         Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
         Connectioncn=DriverManager.getConnection("jdbc:odbc:ddd");
         o.print("Connection Establish");
         PreparedStatement st = cn.prepareStatement("insert into student values(?,?,?,?)");
         st.setString(1, p);
         st.setString(2, q);
         st.setString(3, r);
         st.setString(4, s);
         st.executeUpdate();
         cn.close();
      }
      catch(Exception e)
      {
         o.print("Error="+e);
      }
   }
}
```

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-appversion="3.1" xmlns="http://xmlns.jcp.org/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee      http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd">
   <servlet>
      <servlet-name>stinfo</servlet-name>
      <servlet-class>stinfo</servlet-class>
   </servlet>
   <servlet-mapping>
      <servlet-name>stinfo</servlet-name>
      <url-pattern>/stinfo</url-pattern>
   </servlet-mapping>
   <session-config>
      <session-timeout>
         30
      </session-timeout>
   </session-config>
</web-app>
```







PRACTICAL –9

Aim: Write a HTML page that will ask user to login. When user submits this HTML pages, invoke a JSP on Server, which will make query in database to check whether username or password are correct or not. If the user is valid, create one Session for this user & provide one link in JSP1, that if click will execute JSP2 on server. In JSP2 print the content of session that was created in JSP1.

PROGRAM:

index.html

```
<html>
	<head>
		<title>Practical9</title>
		<meta charset="UTF-8">
		<metaname="viewport"    content="width=device-width">
	</head>
	<body>
	<form action="login.jsp" method="get">
		User Name:<input type="text" name="user"/>
		Password:<inputtype="password" name="pw"/>
		<input type="submit" value="submit"/>
	</form>
	</body>
</html>
```

login.jsp

```
<%@page import ="java.io.PrintWriter"%>

<%@pagelanguage="java" import="java.sql.*;"%>
<%@pagecontentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
	<head>
	<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
		<title>JSP Page</title>
	</head>
	<body>
```

```
        <%
                PrintWriter  pw=response.getWriter();
                String uname = request.getParameter("user");
                String passw = request.getParameter("pw");
try
{
        Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
        Connectioncon=DriverManager.getConnection("jdbc:odbc:DATABASE1","","");
        Statement st = con.createStatement();
        String QRY="SELECT * FROM tb1 WHERE username='" + uname + "' AND
        password='" + passw + "'";
        ResultSet rs = st.executeQuery(QRY);
        while (rs.next()) {
        HttpSession hs = request.getSession(true);
        hs.setAttribute("username", uname);
        }
}


catch(Exception e)
{
        pw.println(e);
}
%>
<jsp:forward page="jsp1.jsp" />
</body>
</html>
```

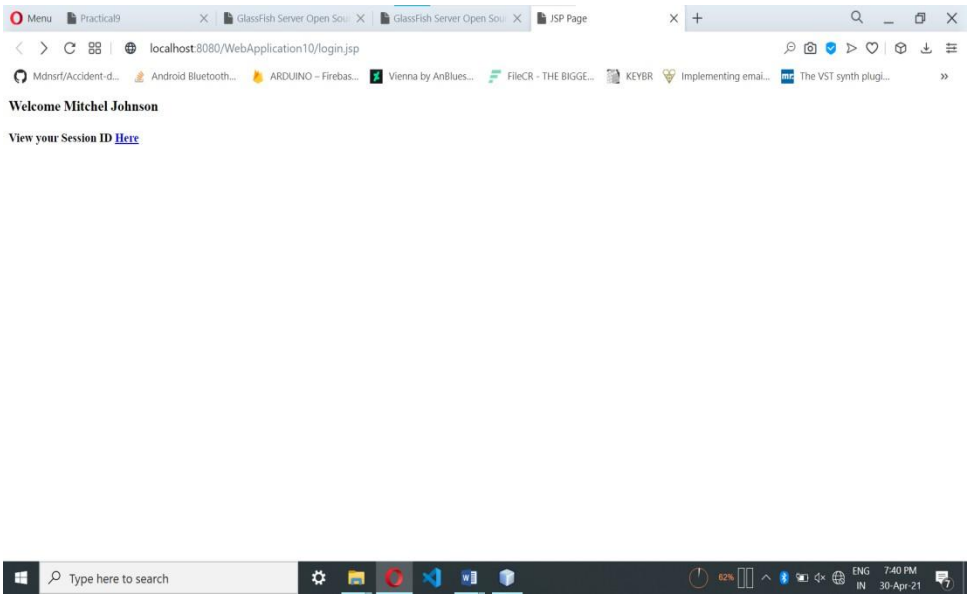
jsp1.jsp

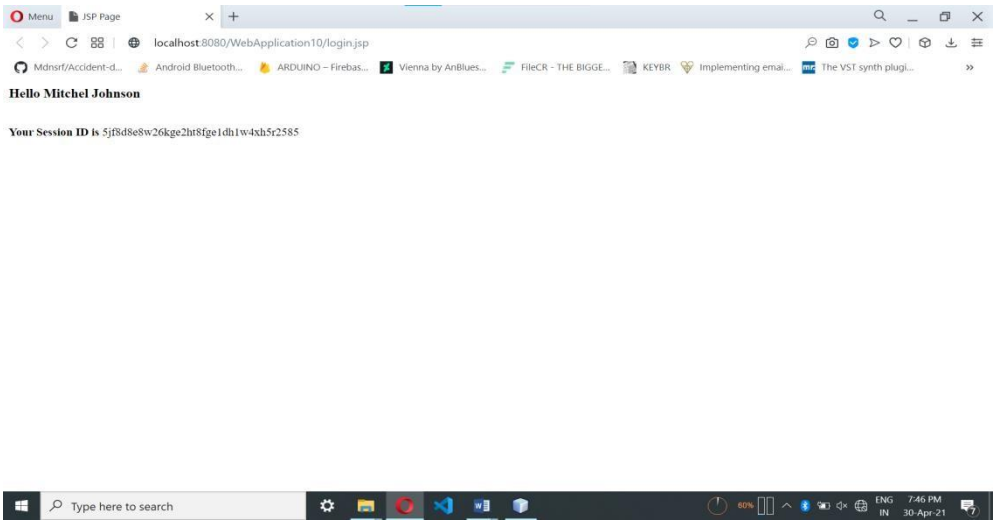
```
<%@page import ="java.io.PrintWriter"%>
<%@pagecontentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
        <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
        </head>
        <body>
        <%
                HttpSession hs = request.getSession();
                PrintWriter  pw=response.getWriter();
                pw.println("<h3>Welcome"+hs.getAttribute("uname")+"<h3>");
```

```
            pw.println("<h4>View your Session ID <a href=\"jsp2.jsp\">Here</a></h1>");
        %>
        </body>
</html>
```

jsp2.jsp

```
<%@page import ="java.io.PrintWriter"%>

<%@pagecontentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
        <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
        </head>
        <body>
        <%
                HttpSession hs = request.getSession();
                PrintWriter  pw=response.getWriter();
                pw.println("<h3>Hello " + hs.getAttribute("uname") + "</h3>");
                pw.println("<br /><b>Your Session ID is </b>" + hs.getId() + "<br>");
        %>
        </body>
</html>
```


Menu
Practical9
GlassFish Server Open Sou
GlassFish Server Open Sou
JSP Page
localhost:8080/WebApplication10/login.jsp
Mdnsrf/Accident-d...
Android Bluetooth...
ARDUINO – Firebas...
Vienna by AnBlues...
FileCR - THE BIGGE...
KEYBR
Implementing emai...
The VST synth plugi...
Welcome Mitchel Johnson
View your Session ID Here
Type here to search
62%
ENG
IN
7:40 PM
30-Apr-21


Menu
JSP Page
localhost:8080/WebApplication10/login.jsp
Mdnsrf/Accident-d...
Android Bluetooth...
ARDUINO – Firebas...
Vienna by AnBlues...
FileCR - THE BIGGE...
KEYBR
Implementing emai...
The VST synth plugi...
Hello Mitchel Johnson
Your Session ID is 5jf8d8e8w26kge2ht8fge1dh1w4xh5r2585
Type here to search
60%
ENG
IN
7:46 PM
30-Apr-21

PRACTICAL –10

Aim: To Study and implement JSF. (JAVA Server Faces)

PROGRAM:

index.xhtml

```
<html    xmlns="http://www.w3.org/1999/xhtml"
    xmlns:h="http://xmlns.jcp.org/jsf/html">
<h:head>
<title>JSFDemo</title>
</h:head>
<h:body>
<h:form id="form">
<h:outputLabel>FirstName : </h:outputLabel>
<h:inputText id="fname" value="#{user.fname}" required="true"/><br/><br/>
<h:outputLabel>LastName : </h:outputLabel>
<h:inputText id="lname" value="#{user.lname}" required="true"/><br/><br/>
<h:commandButtonvalue="Submit" action="Response.xhtml"/>
</h:form>
</h:body>
</html>
```

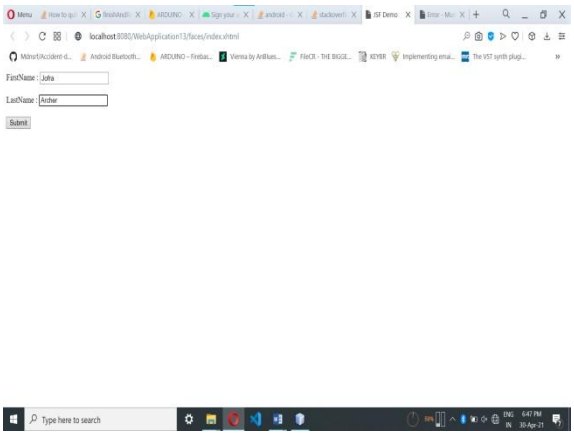
Response.xhtml

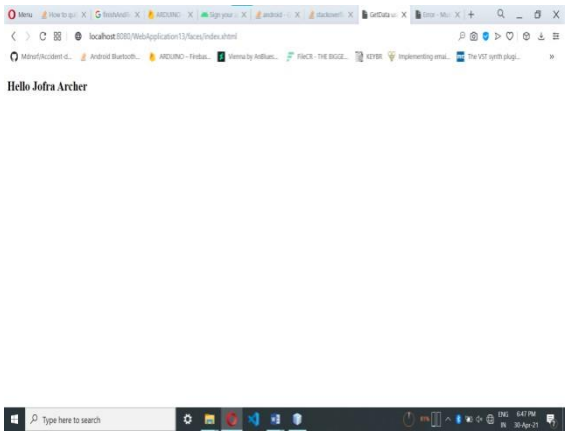
```
<html    xmlns="http://www.w3.org/1999/xhtml"
    xmlns:h="http://xmlns.jcp.org/jsf/html">
<head>
<title>GetData using Java Bean</title>
<metaname="viewport" content="width=device-width"/>
</head>
<h:body>
<h2><h:outputTextvalue="Hello#{user.fname} #{user.lname}"></h:outputText></h2>
</h:body>
</html>
```

user.java

```
import java.beans.*;
importjava.io.Serializable;
importjavax.faces.bean.ManagedBean;
import   javax.faces.bean.RequestScoped;
```

```
@ManagedBean
@RequestScoped
public class user implements Serializable
{
  Stringfname;
  String lname;
   public String getFname()
{
      return fname;
   }
   public void setFname(String fname)
{
this.fname = fname;
   }
   public String getLname()
{
      return lname;
   }
   public void setLname(String lname)
{
this.lname = lname;
   }
}
```





PRACTICAL –11

Aim: Create a web service using Netbeans IDE.

PROGRAM:

webservice1:

Web.xml:

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app    xmlns="http://xmlns.jcp.org/xml/ns/javaee"
            xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
            xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd"
            version="3.1">
   <session-config>
      <session-timeout>
         30
      </session-timeout>
   </session-config>
</web-app>
```

MyWebService.java:

```
package pack1;
import  javax.jws.WebService;
import javax.jws.WebMethod;
importjavax.jws.WebParam;
@WebService(serviceName = "MyWebService")
public class MyWebService {
   @WebMethod(operationName = "show")
   public String show(@WebParam(name = "name") String name) {
      //TODO write your implementation code here:
      return "hello"+name;
   }
}
```

Webservice1-client:

Client.jsp:

```
<%@pagecontentType="text/html" pageEncoding="UTF-8"%>
   <!DOCTYPE html>
   <html>
```

```
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
  <title>JSP Page</title>
</head>
<body>
  <h1>Hello World!</h1>
<%-- start web service invocation --%><hr/>
<%
try
{
      pack1.MyWebService_Service service = new pack1.MyWebService_Service();
      pack1.MyWebService port = service.getMyWebServicePort();
      java.lang.String name = "roseindia";
      java.lang.String result = port.show(name);
      out.println("Result = "+result);
}
catch (Exception ex){}
%>
<hr/>
</body>
</html>
```

MyWebService.wsdl:

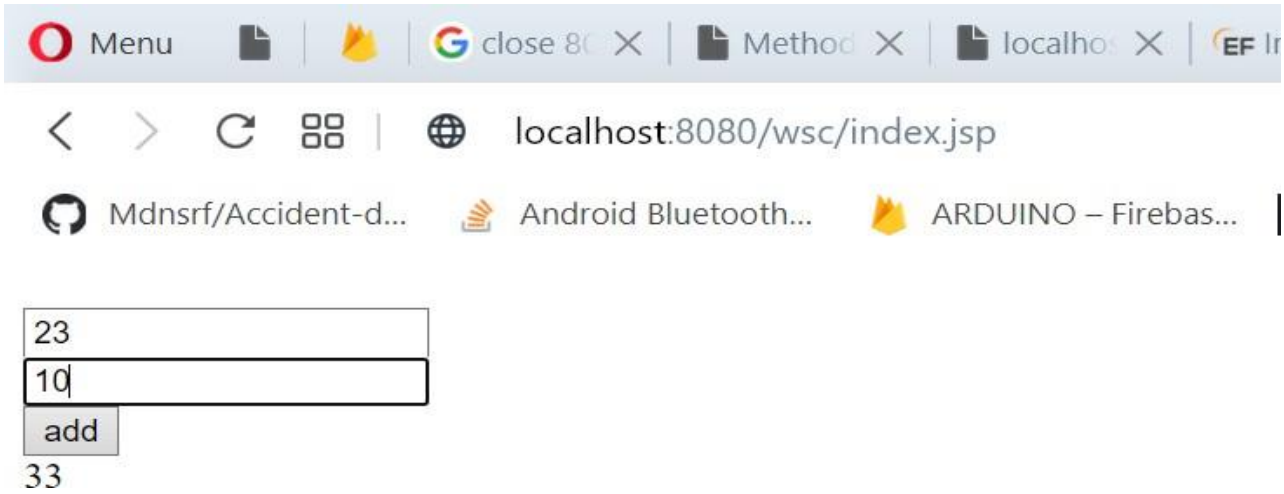
```
<?xml version='1.0' encoding='UTF-8'?><!-- Published by JAX-WS RI at http://jax-ws.dev.java.net. RI's version is Metro/2.3 (tags/2.3-7528; 2013-04-29T19:34:10+0000) JAXWS-RI/2.2.8 JAXWS/2.2 svn-revision#unknown. --><!-- Generated by JAX-WS RI at http://jax-ws.dev.java.net. RI's version is Metro/2.3 (tags/2.3-7528; 2013-04-29T19:34:10+0000) JAXWS-RI/2.2.8 JAXWS/2.2 svn-revision#unknown. --><definitions xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd" xmlns:wsp="http://www.w3.org/ns/ws-policy" xmlns:wsp1_2="http://schemas.xmlsoap.org/ws/2004/09/policy" xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:tns="http://pack1/" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://schemas.xmlsoap.org/wsdl/" targetNamespace="http://pack1/" name="MyWebService">
<types>
<xsd:schema>
<xsd:import namespace="http://pack1/" schemaLocation="http://localhost:8080/webservice1/MyWebService?xsd=1"/>
```

```
</xsd:schema>
</types>
<message name="show">
<part name="parameters" element="tns:show"/>
</message>
<messagename="showResponse">
<partname="parameters" element="tns:showResponse"/>
</message>
<portTypename="MyWebService">
<operation name="show">
<input wsam:Action="http://pack1/MyWebService/showRequest" message="tns:show"/>
<output wsam:Action="http://pack1/MyWebService/showResponse"
message="tns:showResponse"/>
</operation>
</portType>
<binding name="MyWebServicePortBinding" type="tns:MyWebService">
<soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"/>
<operation name="show">
<soap:operationsoapAction=""/>
<input>
<soap:bodyuse="literal"/>
</input>
<output>
<soap:bodyuse="literal"/>
</output>
</operation>
</binding>
<servicename="MyWebService">
<port name="MyWebServicePort" binding="tns:MyWebServicePortBinding">
<soap:address location="http://localhost:8080/webservice1/MyWebService"/>
</port>
</service>
</definitions>
```

MyWebService.xsd_1.xsd:

```
<?xml version='1.0' encoding='UTF-8'?><!-- Published by JAX-WS RI at http://jax-ws.dev.java.net. RI's version is Metro/2.3 (tags/2.3-7528; 2013-04-29T19:34:10+0000) JAXWS-RI/2.2.8 JAXWS/2.2 svn-revision#unknown. --><xs:schema xmlns:tns="http://pack1/"xmlns:xs="http://www.w3.org/2001/XMLSchema" version="1.0" targetNamespace="http://pack1/">
```

```
        <xs:element name="show" type="tns:show"/>
        <xs:elementname="showResponse" type="tns:showResponse"/>
        <xs:complexTypename="show">
        <xs:sequence>
        <xs:element name="name" type="xs:string" minOccurs="0"/>
        </xs:sequence>
        </xs:complexType>
        <xs:complexType   name="showResponse">
        <xs:sequence>
        <xs:element name="return" type="xs:string" minOccurs="0"/>
        </xs:sequence>
        </xs:complexType>
</xs:schema>
```



PRACTICAL –12

Aim: To study and implement Hibernate.

PROGRAM:

index.xhtml

```
<?xml version='1.0' encoding='UTF-8' ?>
<!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"
    xmlns:h="http://xmlns.jcp.org/jsf/html">
  <h:head>
    <title>Facelet Title</title>
  </h:head>
  <h:body>
    Hello from Facelets
  </h:body>
</html>
```

HibernateUtil.java

```
package Aks;
import org.hibernate.HibernateException;
import org.hibernate.cfg.AnnotationConfiguration;
importorg.hibernate.SessionFactory;
public class HibernateUtil {
private static final SessionFactory sessionFactory;
    static {
     try {
       sessionFactory=newAnnotationConfiguration().configure().buildSessionFactory();
     }
    catch (HibernateException ex)
    {System.err.println("Initial SessionFactory creation failed." + ex);
        throw new ExceptionInInitializerError(ex);
     }
  }
  public static SessionFactory getSessionFactory() {
    return sessionFactory;
  }
}
```

Members.java

```
package Aks;
public class Members {
    private int id;
    private String name;
    public Members(String name){
        this.name=name;
    }
   public int getId() {
        return id;
    }
 public void setId(int id) {
        this.id = id;
    }
 public String getName() {
        return name;
    }
public void setName(String name) {
        this.name = name;
    }
}
```

Members.hbm.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE hibernate-mapping PUBLIC "-//Hibernate/Hibernate Mapping DTD 3.0//EN" "http://hibernate.sourceforge.net/hibernate-mapping-3.0.dtd">
<hibernate-mapping>
  <class name="Aks.Members" catalog="user" table="members">
    <id name="id" type="java.lang.Integer" column="id">
        <generatorclass="identity"/>
    </id>
    <property name="name" type="string" column="name"/>
  </class>
</hibernate-mapping>
```

Data.java

```
package Aks;
import  javax.faces.bean.ManagedBean;
import javax.faces.bean.SessionScoped;
importorg.hibernate.Session;
@ManagedBean
@SessionScoped
public class Data {
    private Members m;
    private HibernateUtil helper;
   private Session session;
   public void addMember()
    {
       m=new Members("john");
       session=helper.getSessionFactory().openSession();
       session.beginTransaction();
       session.save(m);
       session.getTransaction().commit();
       session.close();
    }
}
```

Hibernate.cfg.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE hibernate-configuration PUBLIC "-//Hibernate/Hibernate Configuration DTD 3.0//EN"
"http://hibernate.sourceforge.net/hibernate-configuration-3.0.dtd">
<hibernate-configuration>
  <session-factory>
    <property      name="hibernate.dialect">org.hibernate.dialect.MySQLDialect</property>
    <property      name="hibernate.connection.driver_class">com.mysql.jdbc.Driver</property>
    <property      name="hibernate.connection.url">jdbc:mysql://localhost/user</property>
    <propertyname="hibernate.connection.username">root</property>
    <mapping resource="Aks/Members.hbm.xml"/>
  </session-factory>
</hibernate-configuration>
```

PRACTICAL:13

Aim: Open Ended Problem.(EXAMPLE)

Index.html:

```
<html>
<head>
   <link rel="stylesheet" type="text/css" href="style.css">
   </head>
   <bodybackground="a2.jpg">
      <header>
      <div class="main">
      </div>
      <div class="title">
         <h1 id="a1" style="color: aqua">Book my Hotel</h1>
         </div>
         <div class="title1">
            <h3>Welcome to the Book My Hotel.Your dream hotel can be<center> here...</center>
</h3>
      </div>
      <div class="button">
         <a href="Reg.html" class="btn" class="active1">Registration</a>
         <a href="Log.html" class="btn" class="active1">Login</a>
      </div>
      </header>
   </body>
</html>
```

Reg.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">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
```

```
<title>Registration Form</title>
</head>
<body background="a2.jpg" style="background-size: cover ">

<center>
   <div style="position: absolute;top:10%;left:37%">
<form action="regservlet" method="post">
   <h1 style="color:aqua;font-size: 55px"><u>Book My Hotel</u></h1>
   <center><h2 style="color:crimson;font-size: 35px"><b><u>Registration Form
</u></b></h2></center>
<table   style="color:black;font-size:20px">
   <tr><td><b>User Name:</b></td><td><input type="text" name="a"/></td></tr>
   <tr><td><b>Email Id:</b></td><td><input type="text" name="b"/></td></tr>
   <tr><td><b>Password:</b></td><td><input    type="Password"   name="c"/></td></tr>
   <tr><td><b>Age:</b></td><td><inputtype="text" name="d"/></td></tr>
<tr><td></td><td><input type="submit" value="SIGN UP"></td></tr>
</table>
</form>
   </div>
</center>
</body>
</html>
```

Log.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">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
<title>Log In</title>
</head>
<body background="a2.jpg" style="background-size: cover ">
<center>
```

```
<div style="position: absolute;top:10%;left:37%">
 <h1 style="color:aqua;font-size: 55px"><u>Book My Hotel</u></h1>
<h2 style="color:magenta;font-size:35px "><u>Log In </u></h1>
<form action="logservlet" method="post">
<table    style="font-size:20px;color:black">
   <tr>
      <td><b>User Name:</b></td>
      <td><input type="text" name="j"/></td>

   </tr>
   <tr></tr>
   <tr>
      <td><b>Password:</b></td>
      <td><input type="Password" name="k"/></td>
   </tr>
   <tr>
      <td></td>
      <td><input type="submit" value="Login"></td>
   </tr>
   </table>
</form>
</div>
</center>
</body>
</html>
```

Wel.html:

```
<html>
<head>
   <link rel="stylesheet" type="text/css" href="style.css">
```

```
    </head>
    <body>
        <header>
        <div class="main">

        <ul>
            <li class="active"><a href="#"> Home</a></li>
            <li><a href="gallary.html"> Gallary</a></li>
            <li><a href="#"> Book hotel</a></li>
            <li><ahref="#">Help</a></li>
            </ul>
        </div>
        <div class="title">
            <h1 id="a1" onmouseover="fun1()" onmouseout="fun2()">Book my Hotel</h1>
            </div>
            <div class="title1">
                <h3>Welcome to the Book My Hotel.Your dream hotel can be<center> here...</center>
</h3>
        </div>
        <div class="button">
            <a href="#" class="btn" class="active1">More info</a>
        </div>
        </header>
    </body>
</html>
```

Gallery.html:

```
<html>
<head>
    <link rel="stylesheet" type="text/css" href="style1.css">
    </head>
<body>
```

```
<header>
<div class="main">
<div class="logo">
<h1 style="position:absolute;left:100px;top:20px;color:white;font-size:60;">Book My Hotel</h1>
</div>
<div class="ul1">
<ul>
<li><a href="#"> Home</a></li>
<li class="active"><a href="#">Gallery</a></li>
<li><a href="#">Book Hotel</a></li>
<li><ahref="#">Help</a></li>
</ul>
</div>
<div class="title">
<img src="tajmum.jpg" height="180px" width="280px"><br/>
<a href="Statueofunity.in">TAJ Hotel</a><b class="dk">,Mumbai<b><br/>
</div>
<div class="title1">
<img src="tajpalace.jpg" height="180" width="280"><br/>
<a href="Statueofunity.in">Taj Palace</a><b class="dk">,New Delhi</b><br/>
</div>
<div class="title2">
<img src="udaivilas.jpg" height="180" width="280"><br/>
<a href="Statueofunity.in">Udaivilas</a><bclass="dk">,udaipur</b><br/>
</div>
<div class="title3">
<img src="radissonguwahati.jpg" height="180" width="280"><br/>
<a href="Statueofunity.in">Radisson</a><bclass="dk">,Guwahati</b><br/>
</div>
<div class="title4">
<img src="oberoi.jpg" height="180" width="280"><br/>
```

```
<a href="Statueofunity.in">Oberoi</a><bclass="dk">,New-delhi</b><br/>
</div>
<div class="title5">
<img src="hotel-Claridges-New-Delhi.jpg" height="180" width="280"><br/>
<a href="Statueofunity.in">Hotel Claridges</a><b class="dk">,New-Delhi</b><br/>
</div>
      </header>
   </body>
</html>
```

Regservlet.java:

```
import java.io.IOException;
import java.io.PrintWriter;
importjava.sql.DriverManager;
importjavax.servlet.ServletException;
importjavax.servlet.http.HttpServlet;
import    javax.servlet.http.HttpServletRequest;
import    javax.servlet.http.HttpServletResponse;
import java.sql.*;
importjavax.servlet.RequestDispatcher;
public class regservlet extends HttpServlet {
   Connection cn;
 Statement st;
protected void doPost(HttpServletRequest request, HttpServletResponse response)
          throws ServletException, IOException {
             response.setContentType("text/html");
              PrintWriterout=response.getWriter();
              Stringname=request.getParameter("a");
              Stringid=request.getParameter("b");
              Stringpass=request.getParameter("c");
              Stringage=request.getParameter("d");
       try{
```

```
        Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
        cn=DriverManager.getConnection("JDBC:ODBC:patel1","","");
        st=cn.createStatement();
        String s;
        s = "INSERT INTO Table1 VALUES('"+name+"','"+id+"','"+pass+"','"+age+"')";
        st.executeUpdate(s);
        RequestDispatcher    rd=request.getRequestDispatcher("Log.html");
        rd.forward(request,response);
        cn.close();
       }
       catch(Exception e)
       {
          System.out.println(e);
       }
    }
}
```

Logservlet.java:

```
import java.io.IOException;
import java.io.PrintWriter;
importjava.sql.DriverManager;
importjavax.servlet.ServletException;
importjavax.servlet.http.HttpServlet;
import    javax.servlet.http.HttpServletRequest;
import    javax.servlet.http.HttpServletResponse;
import java.sql.*;
importjavax.servlet.RequestDispatcher;
public class logservlet extends HttpServlet {
       Connection cn;
```

```
    Statement st;
protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html");
         PrintWriterout=response.getWriter();
         Stringname=request.getParameter("j");
         Stringpass=request.getParameter("k");

         try{
            Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
            cn=DriverManager.getConnection("JDBC:ODBC:patel1","","");
            st=cn.createStatement();
            ResultSet rs=st.executeQuery("Select * from Table1");
            while(rs.next())
            {
               String s1=rs.getString(1);
               String s2=rs.getString(3);
               if(name.equals(s1))
               {
                  if(pass.equals(s2))
                  {
                     RequestDispatcher    rd=request.getRequestDispatcher("wel.html");
                     rd.forward(request, response);
                  }
                }
               else
               {
                  RequestDispatcher    rd=request.getRequestDispatcher("Log.html");
                  rd.include(request, response);
               }
            }
```

```
            }
            catch(Exception e)
            {
               System.out.println(e);
            }
    }
}
```

Style.css:

```
*{
    margin:0;
    padding: 0;
    font-family: Century Gothic;
}
header{
    background-image:linear-gradient(rgba(0,0,0,0.5),rgba(0,0,0,0.5)),url("a2.jpg");
    height: 100vh;
    background-size: cover;
    background-position: center;
}
ul{
    float: right;
    list-style-type: none;
    margin-top: 25px;
}
ul li{
    display: inline-block;
}
ul li a{
    text-decoration: none;
    color:white;
    padding: 5px 20px;
```

```
    border: 1px solid white;
    transition: 0.5s ease;
}

ul li a:hover{

    background-color: blueviolet;
    color: white;
}

ul li.active a{

     background-color: blueviolet;
    color: white;
}

.logo img{
    float: left;
    width:150px;
    height: auto;
    margin-top: 25px;

}

.main{

    max-width: 1200px;
    margin: auto;
}

.title{

    position: absolute;
    top:45%;
    left: 50%;

    transform:translate(-50%,-50%);

}

.title h1{
    color:aqua;
    font-size: 55px;

}
.title1{

    position: absolute;
    top:55%;
    left:50%;
    transform:translate(-50%,-50%);

}

.title1 h3{
```

```
color:white; font-
size: 25px;
  }

  .button{
     position: absolute;
     top:65%;
     left:50%;
     transform:translate(-50%,-50%);
  }
  .btn{
     border: 1px solid white;
     color:white;
     background:blueviolet;
     text-decoration: none;
     padding: 5px 20px;
  }
  .btn:hover{
     background-color: orange;
     color: white;
  }
  button btn.active1.a{
       background-color: blueviolet;
```

```
    color: white;
}
```

Style1.css:

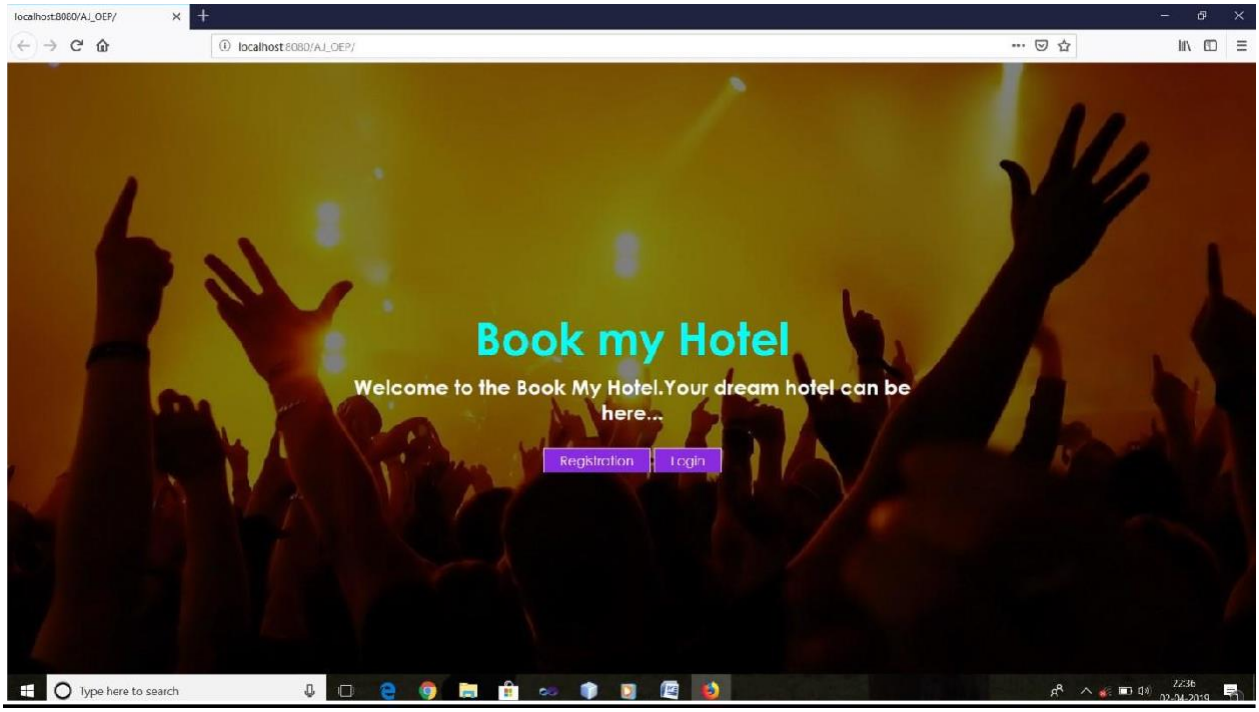
```
*{
    margin:0;
    padding: 0;
    font-family: Century Gothic;
}
header{
    background-image:linear-gradient(rgba(0,0,0,0.8),rgba(0,0,0,0.8)),url("a2.jpg");
    height: 100vh;
    background-size:cover;
    background-position: top;
}
.ul1{
    float: right;
    list-style-type: none;
    margin-top: 25px;
        margin-right:10px;
}
ul{
    float: right;
    list-style-type: none;
    margin-top: 25px;

}
ul li{
    display: inline-block;
}
ul li a{
    text-decoration: none;
```

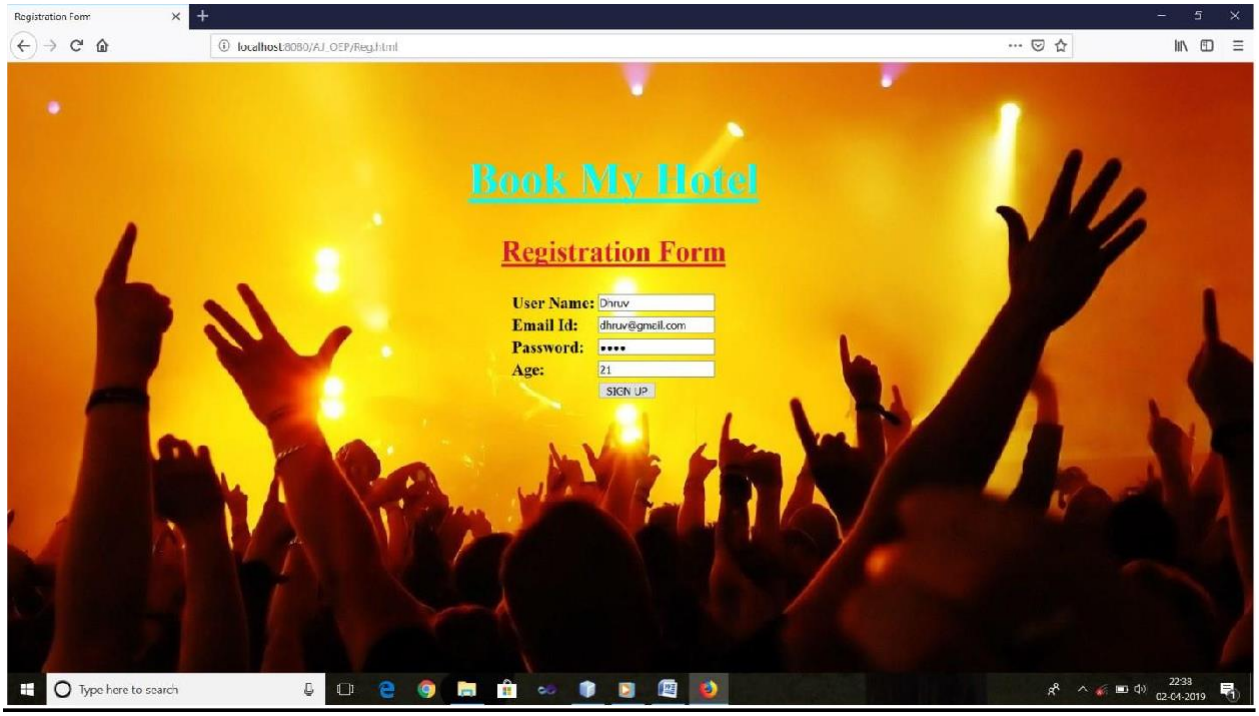
```
    color:white;
    padding: 5px 20px;
    border: 1px solid white;
    transition: 0.5s ease;
}
ul li a:hover{
    background-color: blueviolet;
    color: white;
}
ul li.active a{
     background-color: blueviolet;
    color: white;
}
.dk
{
        color:white;
}


.logo  img{
    float: left;
    width:190px;
    height:130px;
    margin-top:25px;
        margin-left:-10px;
}
.main{
    max-width: 1200px;
    margin: auto;
}
.title{
    position: absolute;
    top:35%;
```

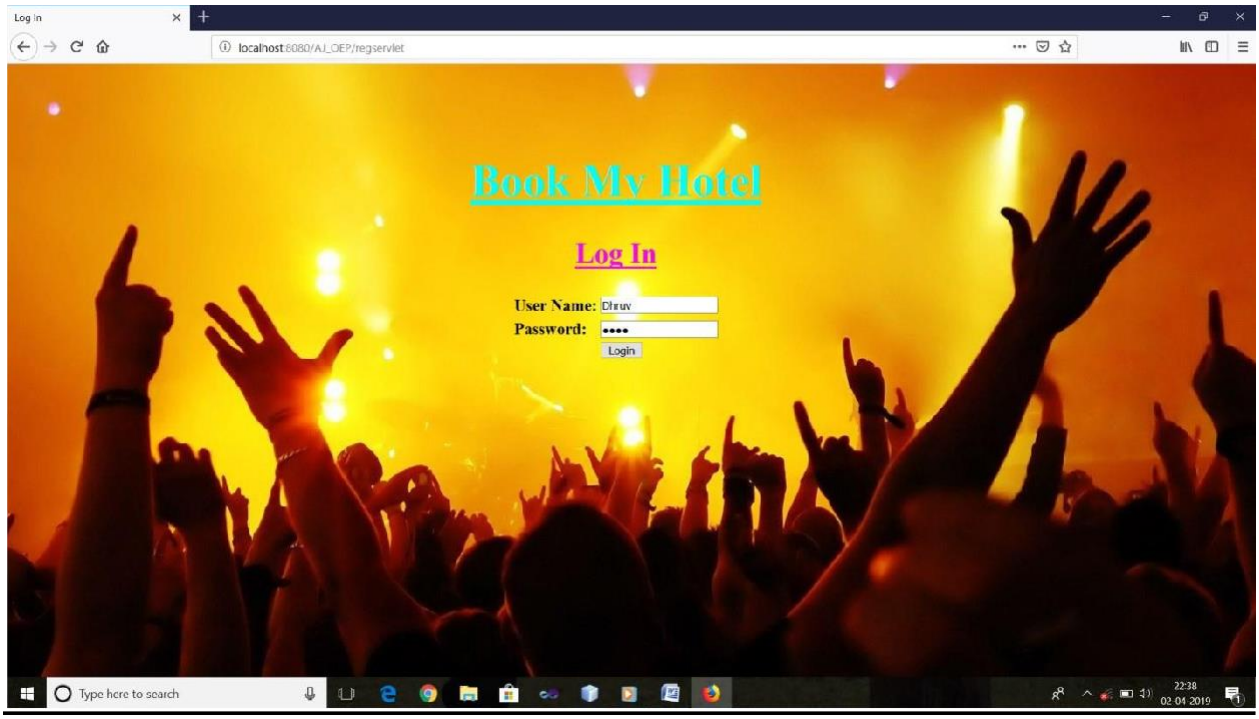
```
    left:20%;
    transform:translate(-50%,-50%);
}
.title1{
    position: absolute;
    top:75%;
    left:20%;
    transform:translate(-50%,-50%);
}
.title2{
    position: absolute;
    top:35%;
    right:18pt;
    transform:translate(-50%,-50%);
}
.title3{
 position: absolute;
    top:75%;
    right:18pt;
    transform:translate(-50%,-50%);
}
.title4{
 position: absolute;
    top:75%;
    right:31%;
    transform:translate(-50%,-50%);
}
.title5{
 position: absolute;
    top:35%;
    right:31%;
```

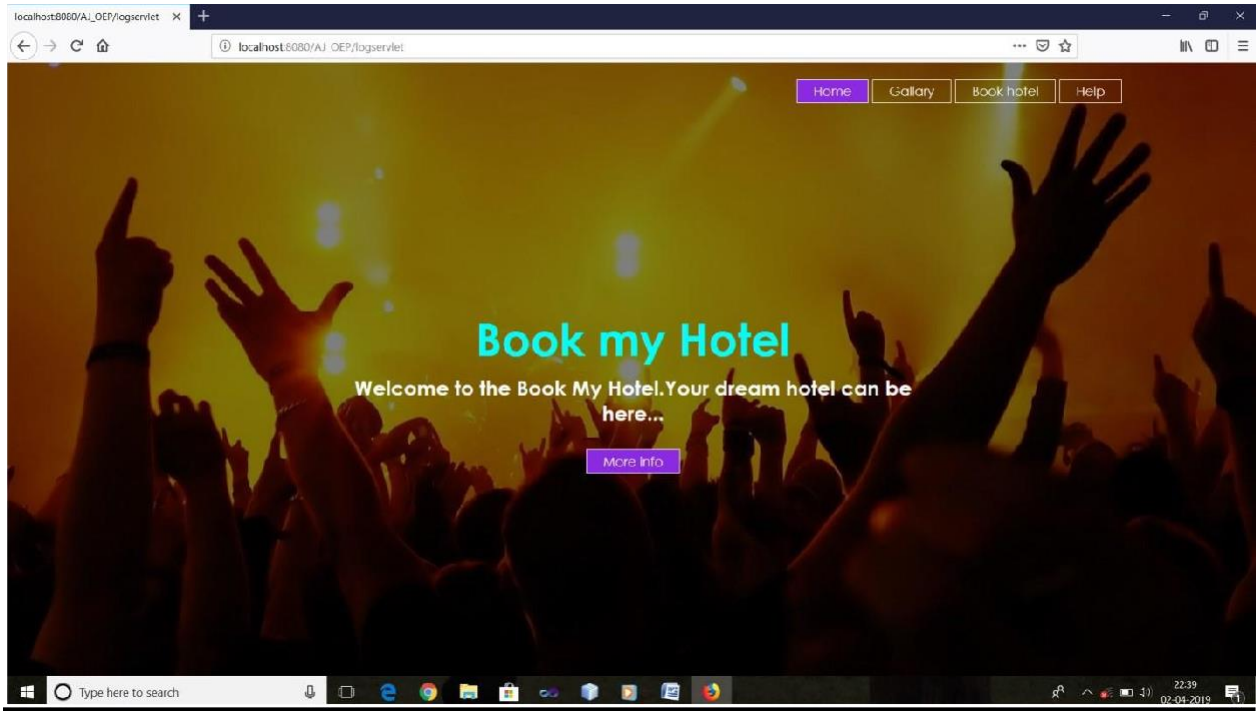
```
    transform:translate(-50%,-50%);
}
```

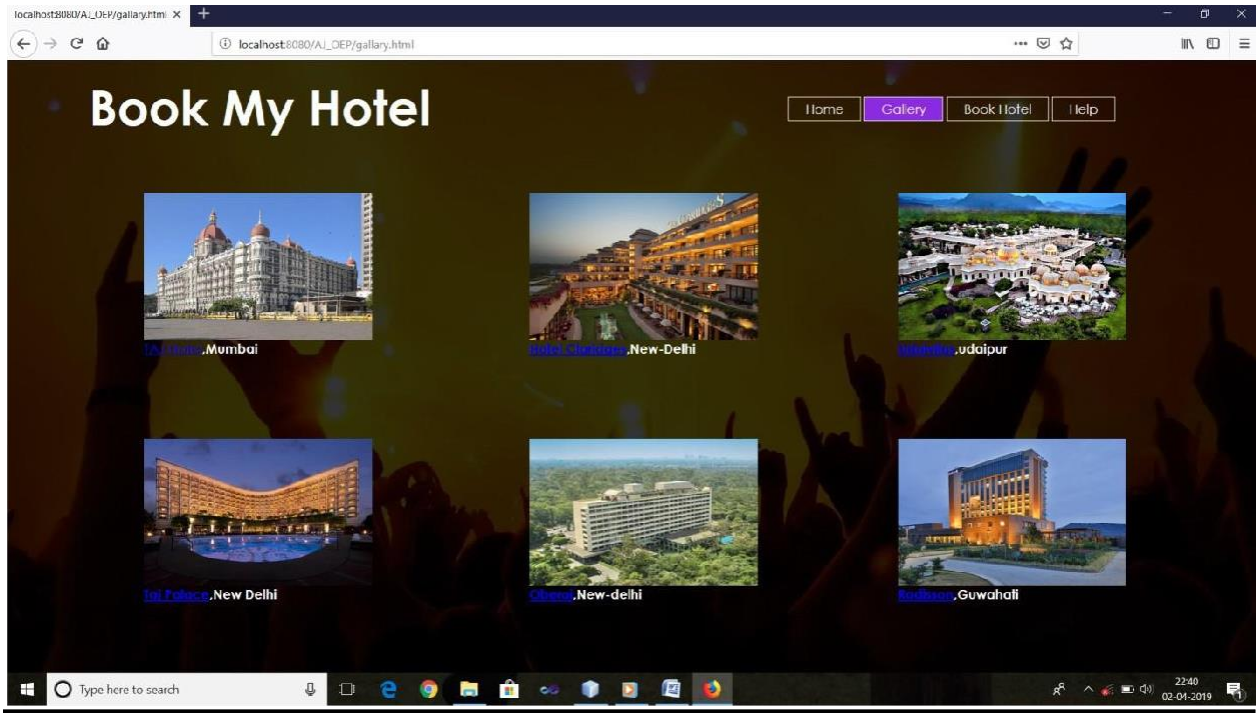
OUTPUT:




Registration Form
localhost:8080/AJ_OEP/RegJ.html
Book My Hotel
Registration Form
User Name: Dhruv
Email Id: dhruv@gmail.com
Password: ••••
Age: 21
SIGN UP
Type here to search
22:33
02-04-2019


Log In
localhost:8080/AJ_OEP/regservlet
Book My Hotel
Log In
User Name: Dhruv
Password: ••••
Login
Type here to search
22:38
02-04-2019


localhost:8080/AJ_OEP/logservlet
Home
Gallary
Book hotel
Help
Book my Hotel
Welcome to the Book My Hotel.Your dream hotel can be here...
More Info
Type here to search


localhost:8080/AJ_OEP/gallary.html
Book My Hotel
Home
Gallery
Book Hotel
Help
,Mumbai
,New-Delhi
,udaipur
,New Delhi
,New-delhi
,Guwahati
Type here to search