# PracticalNo 01.

a. <u>Problem:</u> - Create a simple calculator application using servlet.

**Source Code:-**
**Index.html:**

```html
<html>
<body>
<form action="calculator" method="post">
        First number :<input type="text" name="t1" >
<select name="s">
<option value="+">+</option>
<option value="-">-</option>
<option value="*">*</option>
<option value="/">/</option>
<option value="%">% </option>
</select>
        Second number <input type="text" name="t2" ><br>
<input type="submit" value="submit ">
</form>
</body>
</html>
```

**Calculator.java:**
```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class calculator extends HttpServlet {
 public void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException
{
     response.setContentType("text/html");
     PrintWriter out = response.getWriter();
int a1 = Integer.parseInt(request.getParameter("t1"));
     int a2 = Integer.parseInt(request.getParameter("t2"));
```
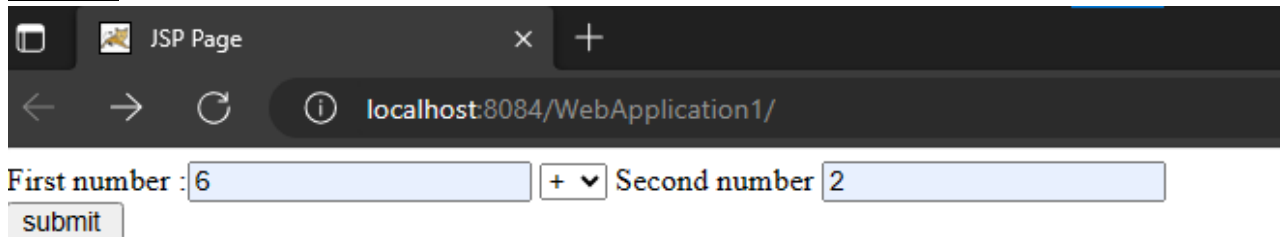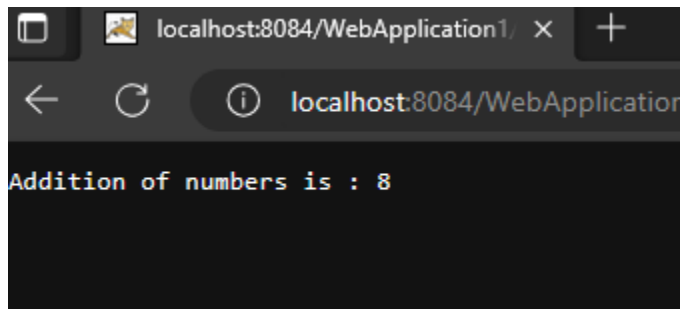
```
        String op = request.getParameter("s");
 if (op.equals("+")) {
        out.println("Addition of numbers is : " + (a1 + a2));
    }
    if (op.equals("-")) {
        out.println("Substraction of numbers is : " + (a1 - a2));
    }
    if (op.equals("*")) {
        out.println("Multiplication of numbers is : " + (a1 * a2));
    }
    if (op.equals("/")) {
        out.println("Division of numbers is : " + (a1 / a2));
    }
    if (op.equals("%")) {
        out.println("Reminder of numbers is : " + (a1 % a2));
    }
   }
}
```

**Output:**

# **Practical No 01.**

**b.** <u>Problem:</u>- Create a servlet for a login page. If the username and password are correct then itsays message "Hello <username>" else amessage "loginfailed"

**Source Code:-**
**Index.html:**

```
<html>
<head>
<title>TODO supply a title</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<form action="H_serv" method="post">
        username:<input type="text" name="uname"/><br>
        password:<input type="password" name="pass"/><br>
<input type="submit" value="login"/>
</form>
</body>
</html>
```

**H_serv.java:**
```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class Login extends HttpServlet
{
  protected void doPost(HttpServletRequest request, HttpServletResponse  response)
        throws ServletException, IOException
  {
     response.setContentType("text/html;charset=UTF-8");
    PrintWriter out = response.getWriter();
    try
     {
       String name="sanjay";
       String p1="1234";
        String s=request.getParameter("uname");
       String p= request.getParameter("pass");
out.println("<!DOCTYPE html>");
```

```
    out.println("<html>");
    out.println("<head>");
    out.println("<title>Servlet Login</title>");
    out.println("</head>");
    out.println("<body>");
      if(name.equals(s))
        {
          if(p1.equals(p))
          {
            out.println("hello "+ s );
          }
        }
      else
          out.println("login failed");
out.println("</body>");
      out.println("</html>");
    }
  catch(Exception e){}
 }
}
```

**Output:**
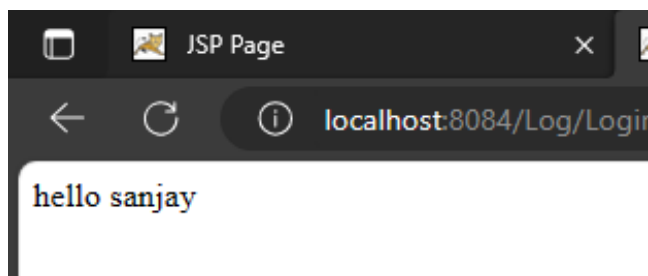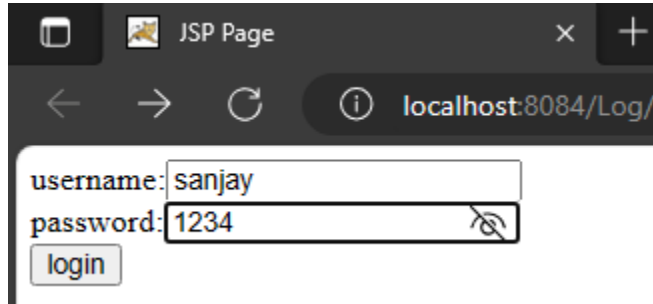
# Practical No 01.

**C.** Problem:- Create a registration servlet in Java using JDBC. Accept the
details such asUsername, Password, Email, and Country from the
user using HTML Form and storethe registration details in the
database.

**Source Code:-**
**Index.html:**

```
<html>
<head>
<title>TODO supply a title</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
    Registration Form <br/><br/>
<form action="Registration" method="post">
    userid:<input type="text" name="t1">
    passwd:<input type="password" name="t2">
    fname:<input type="text" name="t3">
    lname:<input type="text" name="t4">
    email:<input type="text" name="t5">
<input type="submit" value="Register">
</form>>
</body>
</html>
```

Registration**.java:**
```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.sql.*;
import javax.sql.*;

public class Registration extends HttpServlet {

  protected void doPost(HttpServletRequest request, HttpServletResponse response)
      throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    String id=request.getParameter("t1");
```

```
        String p=request.getParameter("t2");
        String fn=request.getParameter("t3");
        String ln=request.getParameter("t4");
        String em=request.getParameter("t5");
        PrintWriter out = response.getWriter();
        try
        {
            Class.forName("com.mysql.jdbc.Driver");
            Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/Reg","root","123");
            PreparedStatement ps=con.prepareStatement("insert into user values(?,?,?,?,?)");
            ps.setString(1,id);
            ps.setString(2,p);
            ps.setString(3,fn);
            ps.setString(4,ln);
            ps.setString(5,em);
            ps.executeUpdate();
            out.println("<html>");
            out.println("<body>");
            out.println("Registration is successful !!!");
            out.println("</body>");
            out.println("</html>");
        }
        catch(Exception e)
        {
            out.println("<html>");
            out.println("<body>");
            out.println("Your Registration is unsuccessful:"+e);
            out.println("</body>");
            out.println("</html>");
        }
    }
}
```
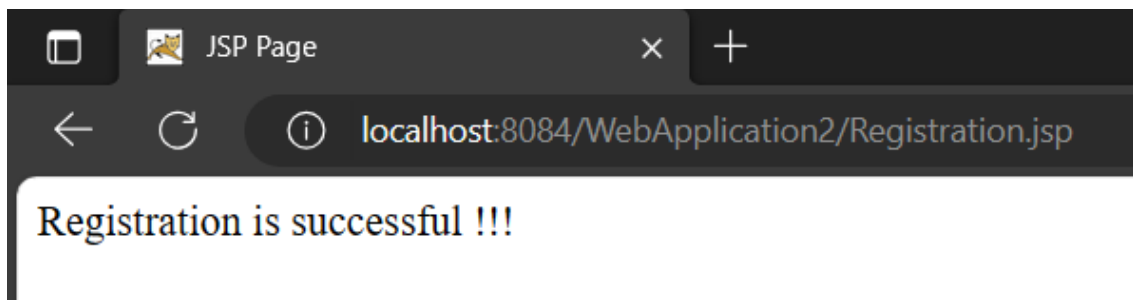
**Output:**

Registration Form

userid: 50
passwd: •••
fname: sanju
lname: chau
email: sc2171        Register

---

JSP Page        × +

← C ⓘ localhost:8084/WebApplication2/Registration.jsp

Registration is successful !!!

# **Practical No 02.**

**a.** Problem:- Using Request Dispatcher Interface create a Servlet which will validate the password entered by the user, if the user has entered "Servlet" as password, then he will beforwarded to Welcome Servlet else the user will stay on the index.html page and an error message will be displayed.

**Source Code:-**
**Index.html**

```
<html>

<head>
<title>TODO supply a title</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<form method="post" action="Login">
        Enter User Name: <input type="text" name="uname"/>
        Enter Password:<input type="password" name="pass"/>
<input type="submit" value="Login"/>
</form>
</body>
</html>
```

**Login.java:**

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.RequestDispatcher;
public class Login extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    String p=request.getParameter("pass");
    String p1="Servlet";
    try (PrintWriter out = response.getWriter()) {
      if(p.equals(p1))
      {
        RequestDispatcher rd=request.getRequestDispatcher("Welcome");
        rd.forward(request, response);
      }
```

```
        else
        {
        RequestDispatcher rd=request.getRequestDispatcher("Error");
        rd.forward(request, response);
        }
        }
    }
}
```

## Welcome.java

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class Welcome extends HttpServlet {
 protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    try (PrintWriter out = response.getWriter()) {
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet Welcome</title>");
        out.println("</head>");
        out.println("<body>");
        out.println("<h1>Welcome " + request.getParameter("uname")+ "</h1>");
        out.println("</body>");
        out.println("</html>");
    }
  }
}
```
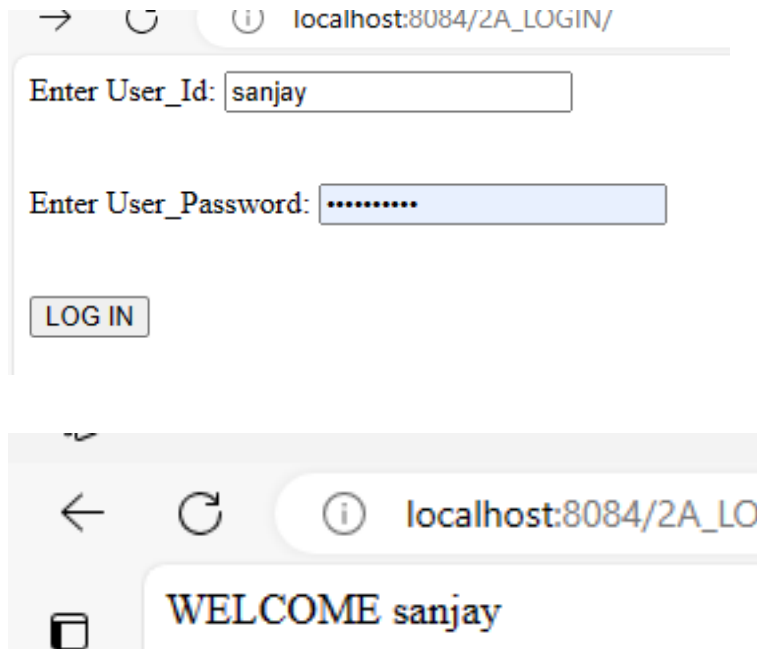
## Error.java:

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

```java
public class Error extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    try (PrintWriter out = response.getWriter()) {
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet Error</title>");
        out.println("</head>");
        out.println("<body>");
        out.println("<h1> Invalid password" + "</h1>");
        out.println("<form action='index.html'>");
        out.println("<input type='submit' value='Go Back'/>");
        out.println("</form>");
        out.println("</body>");
        out.println("</html>");
    }
  }
}
```

**Output:**

# **Practical No 02.**

**b.** Problem:- Create a servlet that uses Cookies to store the number of times a user has visited servlet.
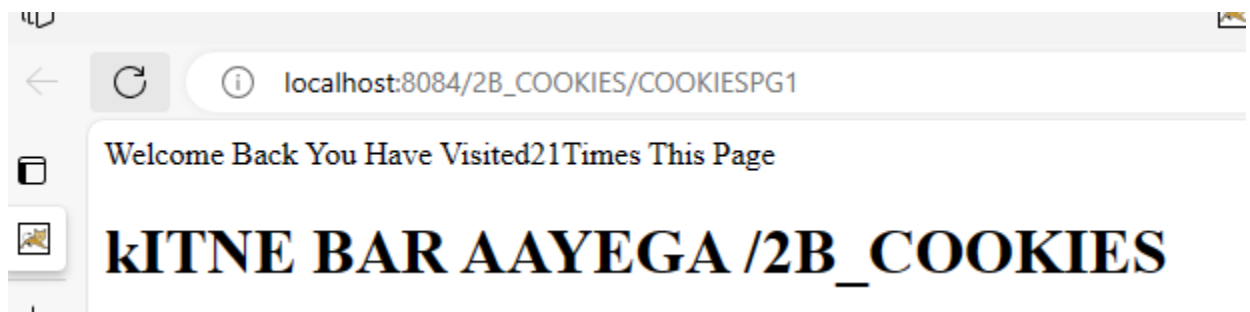**Source Code:-**
**Index.jsp:**

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Refresh" content="0;URL=CookieTest">
</head>
<body>
</body>
</html>
```

CookieTest.java

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.Cookie;
public class CookieTest extends HttpServlet {
private int counter;
protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    PrintWriter out = response.getWriter();
    try {
    out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet CookieTest</title>");
        out.println("</head>");
        out.println("<body>");
        boolean n_v=true;
        Cookie[] c=request.getCookies();
        if(c!=null)
        {
          for(Cookie tc:c)
          {
            if(tc.getName().equals("old")&&tc.getValue().equals("1"))
            {
             n_v=false;
```

```java
            break;
            }
          }
        }
       if(n_v)
       {
          Cookie fc1=new Cookie("old","1");
          fc1.setMaxAge(360);
          response.addCookie(fc1);
          Cookie cc =new Cookie("cnt","1");
          cc.setMaxAge(360);
          response.addCookie(cc);
          out.println("This is First Time you are visiting this page ");
       }
       else
       {
          out.println("Welcome Back  ");
          if(c!=null)
          {
          Cookie tc=null;
          for(Cookie c1:c)
          {
             if(c1.getName().equals("cnt"))
             {
                tc=c1;
                counter=Integer.parseInt(c1.getValue());
                break;
             }
          }
          counter++;
          tc.setValue(Integer.toString(counter));
          tc.setMaxAge(360);
          response.addCookie(tc);
          out.println("you have visited "+counter+"times this page");
          }
        }
      out.println("</body>");
       out.println("</html>");
    }
  }
}
```

**OUTPUT:**

localhost:8084/2B_COOKIES/COOKIESPG1

Welcome Back You Have Visited19Times This Page

# kITNE BAR AAYEGA /2B_COOKIES

localhost:8084/2B_COOKIES/COOKIESPG1

Welcome Back You Have Visited21Times This Page

# kITNE BAR AAYEGA /2B_COOKIES

## **Practical No 02.**

**C.** Problem:- Create a servlet demonstrating the use of session creation and destruction.Also checkwhether the user has visited this page first time or has visited earlier also usingsessions.

**Source Code:-**

index.jsp:

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>

<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Refresh" content="0; URL=SCalculationVisitServlet">
</head>
<body>
</body>
</html>
```

SCalculationVisitServlet.java:

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;

public class SCalculationVisitServlet extends HttpServlet {
 int Counter=0;
   protected void doGet(HttpServletRequest request, HttpServletResponse response)
     throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
PrintWriter out = response.getWriter();
     try {
       out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet SCalculationVisitServlet</title>");
        out.println("</head>");
        out.println("<body>");
       synchronized(this) {
          HttpSession mySession = request.getSession(true);
          out.println("<b>SESSION ID:</b> " + mySession.getId());
          out.println("<br><br>You visited this page " + (++Counter));
          out.println((Counter == 1) ? "time " : " times ");
          if ((Counter % 5) == 0)
```
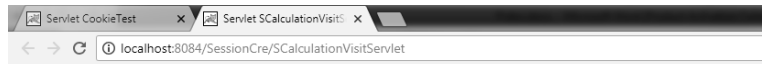
```
            mySession.invalidate();
        }
        out.println("</body>");
        out.println("</html>");
      }
    }
}
```

## OUTPUT:
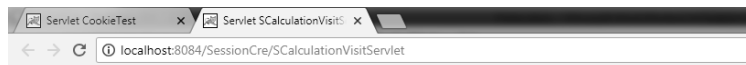


**SESSION ID:** B77C832C67730D35E54AA20806171E9D

You visited this page 1 time



**SESSION ID:** FC50C08449D982CE427E65D2AA76DDF6

You visited this page 6 times

# Practical No 03.

a. <u>Problem:</u> Create a Servlet application to upload and download a file.

**Source Code:-**
index.jsp:

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<body>
<h1>File Upload Application</h1>
<form action="File_Up" enctype="multipart/form-data" method="POST">
        File: <input type="file" name="file" id="file"/><br/><br/>
        Destination: <input type="text" value="" name="destination" /><br/><br/>
<input type="submit" value="Upload File" name="upload" id="upload"/>
</form>
</body>
</html>
```

File_Up.java:

```java
import java.io.*;
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.annotation.MultipartConfig;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.Part;
@MultipartConfig
public class File_Up extends HttpServlet{
protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
final String path = request.getParameter("destination");
    final Part filePart = request.getPart("file");
    final String fileName = retrieveFileName(filePart);
    OutputStream out = null;
    InputStream filecontent = null;
    final PrintWriter writer = response.getWriter();
    try {
      out = new FileOutputStream(new File(path + File.separator + fileName));
      filecontent = filePart.getInputStream();
```

```java
        int read = 0;
        final byte[] bytes = new byte[1024];
        while ((read = filecontent.read(bytes)) != -1)
        {
           out.write(bytes, 0, read);
        }
        response.sendRedirect("Succ_Fileupload");
        writer.println("<html>");
        writer.println("<head>");
        writer.println("<title>Servlet File_Up</title>");
        writer.println("</head>");
        writer.println("<body>");
        writer.println("<h1>Servlet File_Up at " + request.getContextPath() + "</h1>");
        writer.println("</body>");
        writer.println("</html>");
     }
   catch(Exception e)
   {
   writer.println("Error "+e);
   }
   finally {
      if (out != null)
         out.close();
      if (filecontent != null)
         filecontent.close();
      if (writer != null)
         writer.close();
    }
 }
   private String retrieveFileName(final Part part) {
      for (String content : part.getHeader("content-disposition").split(";")) {
         if (content.trim().startsWith("filename")) {
            return content.substring(content.indexOf('=') + 1).trim().replace("\"", "");
         }
       }
      return null;
    }
}
```

Succ_Fileupload.java
```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

```
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    PrintWriter out = response.getWriter();
    try {
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet Succ_Fileupload</title>");
        out.println("</head>");
        out.println("<body>");
        out.println("<h1>File Uploaded Successfully</h1>");
        out.println("<a href='index.jsp'>Click here to upload more files</a>");
        out.println("</body>");
        out.println("</html>");
    } finally {
        out.close();
    }
  }
}
```
OUTPUT:
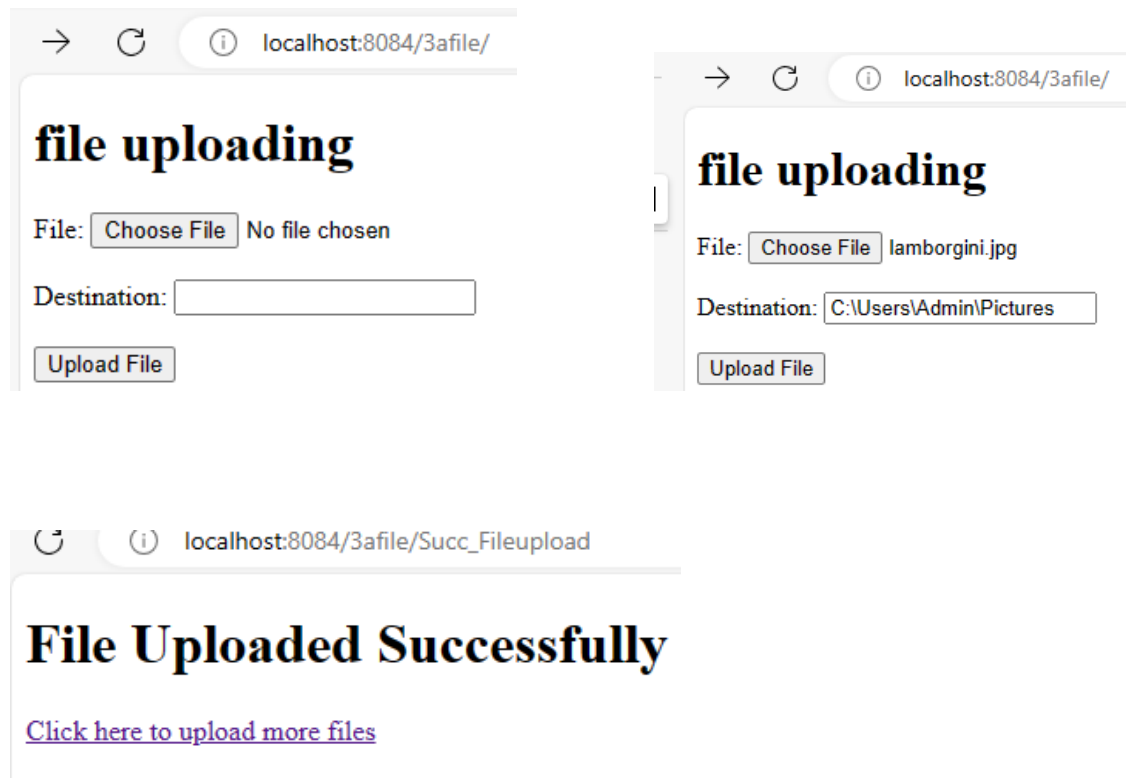
## **Practical No 03.**

**b.** Problem: Develop Simple Servlet Question Answer Application using Database.
**Source Code:-**
index.html:

```html
<html>
<head>
<title>Online Exam</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<h1>To Start Exam Click on the Start Button</h1><br>
<form action="Ques_Dis" method="post">
<input type="submit" value="Start"/>
</form>
</body>
</html>
```

Ques_Dis.java:
```java
import java.io.IOException;

import java.io.PrintWriter;

import java.sql.Connection;
import java.sql.DriverManager;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.sql.*;
import javax.sql.*;
public class Ques_Dis extends HttpServlet {
 protected void doPost(HttpServletRequest request, HttpServletResponse response)
   throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      PrintWriter out = response.getWriter();
      try {

         Class.forName("com.mysql.jdbc.Driver");

Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/Exam","root","123");

         Statement  smt=con.createStatement();
```
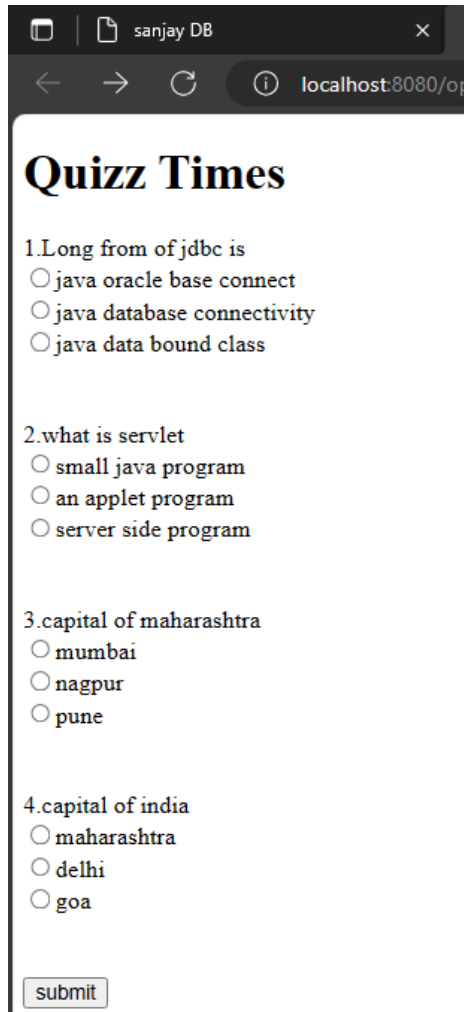
```java
        ResultSet rs=smt.executeQuery("select qus,op1,op2,op3 from Q_Paper");
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet Ques_Dis</title>");
        out.println("</head>");
        out.println("<body>");
        out.println("<form action='Ans_C' method='post'>");
        int i=1;
        while(rs.next())
        {
         out.println(i+"."+rs.getString(1)+"<br>");
         String v=rs.getString(2);
        out.println("<input type='radio' name=\"q"+i+"\"
value=\""+v+"\">"+v+"</input>"+"<br>");
           v=rs.getString(3);
        out.println("<input type='radio' name=\"q"+i+"\"
value=\""+v+"\">"+v+"</input>"+"<br>");
           v=rs.getString(4);
        out.println("<input type='radio' name=\"q"+i+"\"
value=\""+v+"\">"+v+"</input>"+"<br>");
             i++;
 }
        out.println("<input type='submit' value='submit'/>");
        out.println("</form>");
        out.println("</body>");
        out.println("</html>");
     }
     catch(Exception e)
     {
      out.println("Error   "+e);
     }
   }
}
```

Ans_C.java:
```java
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

```java
public class Ans_C extends HttpServlet {
    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        int corr=0,incorr=0;
        try {
            Class.forName("com.mysql.jdbc.Driver");
            Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/Exam","root","123");
            Statement  smt=con.createStatement();
            ResultSet rs1=smt.executeQuery("select ans from Q_Paper");
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet Ans_C</title>");
            out.println("</head>");
            out.println("<body>");
            int j=1;
            while(rs1.next())
            {
                String s=request.getParameter("q"+j);
                if(rs1.getString(1).equals(s))
                {
                    corr++;
                }
                else
                {
                    incorr++;
                }
                j++;
            }

            out.println("<h2>Correct Answers=  "+corr+"Incorrect Answers= "+incorr);
            out.println("</body>");
            out.println("</html>");
        }
        catch(Exception e)
        {
            out.println("Error  "+e);
        }
    }
}
```

**.**
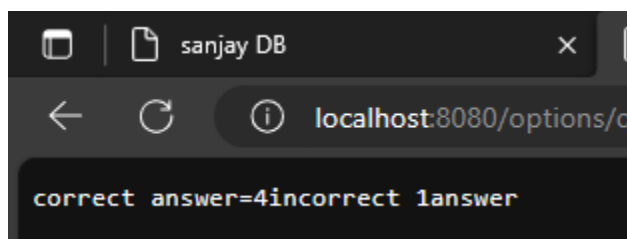
## Practical No  04.

a.    Problem: Develop a simple JSP application to display values obtained from the use of intrinsic objects of various types.

**Source Code:-**

index.html:

```html
<html>
<head>
<title>TODO supply a title</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<form action="HelloJsp.jsp" method="post">
        How may times:<input type="text" name="no_time"/><br>
<input type="submit" value="submit"/>
</form>
</body>
</html>
```
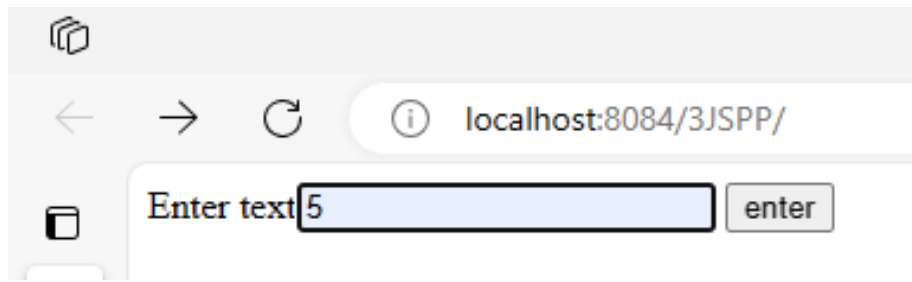
HelloJsp.jsp

```jsp
<%@page contentType="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>
<%
    int no=Integer.parseInt(request.getParameter("no_time"));
    for(int i=0;i<no;i++)
    { %>

<h2> hello </h2>
<% }
    %>
</body>
</html>
```

OUTPUT:

Enter text 5    enter

**Sanjay**

**Sanjay**

**Sanjay**

**Sanjay**

**Sanjay**

# Practical No 04.

b.      Problem: Develop a simple JSP application to pass values from one page to another with validations.

**Source Code:-**

index.html:
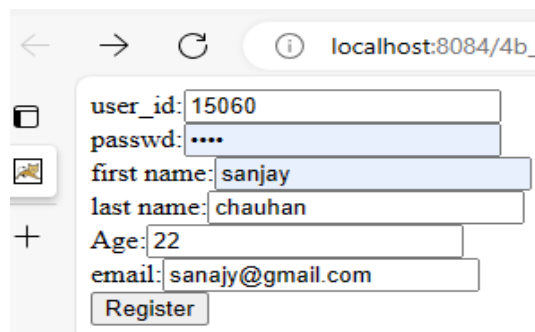
```html
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Registration  Page</title>
</head>
<body>
     Registration Form <br/><br/>
<form action="Data_Val.jsp" method="post">
        userid:<input type="text" name="t1"><br>
        passwd:<input type="password" name="t2"><br>
        first name:<input type="text" name="t3"><br>
        last name:<input type="text" name="t4"><br>
        Age:<input type="text" name="t5"/><br>
        email:<input type="text" name="t6"><br>
<input type="submit" value="Register">
</form>
</body>
</html>
```

Data_Val.jsp:

```jsp
<%@page  language="java" contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<%! int ageInt;
  int f;
%>
<%
String id=request.getParameter("t1");
    String p=request.getParameter("t2");
    String fn=request.getParameter("t3");
    String ln=request.getParameter("t4");
    String age=request.getParameter("t5");
    String em=request.getParameter("t6");
    f=1;
    if(fn.isEmpty()||id.isEmpty()||p.isEmpty()||ln.isEmpty()||age.isEmpty()||em.isEmpty())
    {
        out.println("<font color='red'>Please fill all the fields</font><br>");
```

```
        f=0;
     }
    try
    {
        ageInt=Integer.parseInt(age.trim());
    }
    catch( NumberFormatException e)
    {
        out.println("<font color='red'> Age must be in numbers</font><br>" );
        f=0;
    }
   if(ageInt<=18 || ageInt>=60)
   {
       out.println("<font color='red'>Age must be between 18 to 60</font><br>");
        f=0;
   }
   if(f==1)
   {
  out.println("Name="+fn+" "+ln);
  out.println("Age= "+ageInt);
  out.println("Email="+em);
   }
%>
```

OUTPUT:
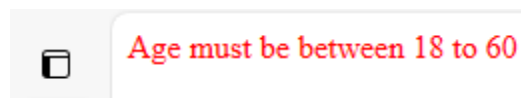


Name=sanjay chauhan
Age= 22
Email=sanajy@gmail.com

## **Practical No 04.**

c.    <u>Problem:</u>Create a registration and login JSP application to register and authenticate the userbased on username and password using JDBC..

 **Source Code:-**

   <u>index.jsp:</u>

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page language="java" %>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Login/Registration</title>
</head>
<body>
<p align="right"><%@include file="RegLink.html" %></p>
<form action="Login.jsp" method="post">
        user_id=<input type="text" name="t1" /><br/>
        Password=<input type="password" name="t2" /><br/>
<input type="submit" value="Login" />
</form>
</body>
</html>
```

<u>Login.jsp:</u>
```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page language="java" import="java.sql.*,javax.sql.*"%>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Login Page</title>
</head>
<body>
<%
        String userid=request.getParameter("t1");
        String passwd=request.getParameter("t2");
        try
        {
        Class.forName("com.mysql.jdbc.Driver");
        Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/Reg","root","123");
        PreparedStatement ps=con.prepareStatement("select * from user where userid=? and
passwd=?");
        ps.setString(1,userid);
        ps.setString(2,passwd);
```

```
        ResultSet rs=ps.executeQuery();
         if(rs.next())
         {
         response.sendRedirect("Welcome.html");
         }
         else
         {
         out.println("Could not login please check your data");
      %>
<br><a href="index.jsp">Go back </a>
<% }
         }
         catch(Exception e)
         {
         out.println("Error"+e);
         }
         %>
</body>
</html>
```

Welcome.html:
```
<html>
<body>
     Login Successful !!!!!!!!!!
</body>
</html>
```

RegLink.html:
```
<html>
<head>
<title>TODO supply a title</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
     Click <a href="RegForm.jsp"> here for Registration</a>
</body>
</html>
```

RegForm.jsp:
```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>REgistration Page</title>
</head>
<body>
     Registration Form <br/><br/>
```

```
<form action="Registration.jsp" method="post">
        userid:<input type="text" name="t1"><br>
        passwd:<input type="password" name="t2"><br>
        first name:<input type="text" name="t3"><br>
        last name:<input type="text" name="t4"><br>
        email:<input type="text" name="t5"><br>
<input type="submit" value="Register">
</form>
</body>
</html>
```
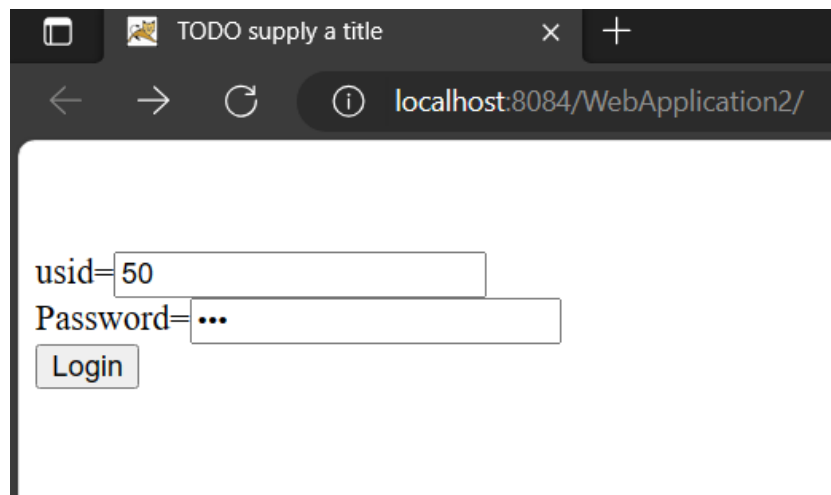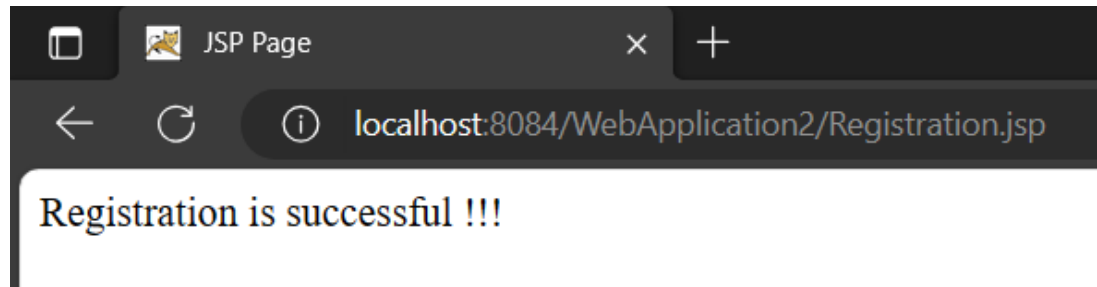
Registration.jsp:

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page language="java" import="java.sql.*,javax.sql.*"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title></title>
</head>
<body>
<%
    String id=request.getParameter("t1");
    String p=request.getParameter("t2");
    String fn=request.getParameter("t3");
    String ln=request.getParameter("t4");
    String em=request.getParameter("t5");
    try
      {
      Class.forName("com.mysql.jdbc.Driver");
      Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/Reg","root","123");
      PreparedStatement ps=con.prepareStatement("insert into user values(?,?,?,?,?)");
      ps.setString(1,id);
      ps.setString(2,p);
      ps.setString(3,fn);
      ps.setString(4,ln);
      ps.setString(5,em);
      ps.executeUpdate();
      out.println("<html>");
      out.println("<body>");
      out.println("Registration is successful !!!");
      out.println("</body>");
      out.println("</html>");
    }
    catch(Exception e)
      {
```

```
   out.println("<html>");
  out.println("<body>");
     out.println("Your Registration is unsuccessful:"+e);
     out.println("</body>");
  out.println("</html>");
     }
    %>
</body>
</html>
```

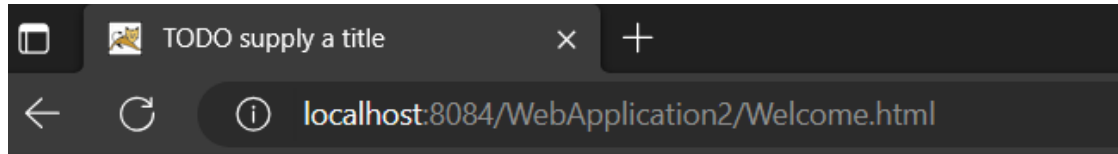OUTPUT:

Registration Form

userid: 50
passwd: •••
fname: sanju
lname: chau
email: sc2171    Register



Registration is successful !!!



usid= 50
Password= •••
Login

TODO supply a title

localhost:8084/WebApplication2/Welcome.html

Welcome "SANJAY"

```
mysql> select * from user;
+--------+-------+---------+-------+----------+
| id     | p     | fn      | ln    | em       |
+--------+-------+---------+-------+----------+
|      4 | 7890  | Mittal  | Shah  | mito     |
|     50 |  123  | sanju   | chau  | sc2171   |
+--------+-------+---------+-------+----------+
2 rows in set (0.00 sec)

mysql>
```

## **Practical No  05.**

a.    Problem:Create an html page with fields, userid,Password,First
                name,LastName etc. Now  on submit this  data to a JSP page
        which will update the user  table of database with matching  userid.

**Source Code:-**
index.html:

```html
<html>
<head>
<title></title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<h2> Login For Data Editing Details </h2>
<form action="Login.jsp" method="post">
        user_id=<input type="text" name="t1" /><br/>
        Password=<input type="password" name="t2" /><br/>
<input type="submit" value="Login" />
</form>
</body>
</html>
```

Login.jsp:

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page language="java" import="java.sql.*,javax.sql.*"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Login Page</title>
</head>
<body>
<%
        String userid=request.getParameter("t1");
        String passwd=request.getParameter("t2");
        try
{
        Class.forName("com.mysql.jdbc.Driver");
        Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/Reg","root","123");
        PreparedStatement ps=con.prepareStatement("select * from user where userid=? and
passwd=?");
        ps.setString(1,userid);
        ps.setString(2,passwd);
        ResultSet rs=ps.executeQuery();
```

```
        if(rs.next())
        {
          RequestDispatcher rd=request.getRequestDispatcher("EditRegister.jsp");
          rd.forward(request, response);
         //response.sendRedirect("EditRegister.jsp");
        }
        else
        {
          out.println("Error in login pls go back to Login again"+"<br>");
          %>
<a href="index.html">Go back </a>

<% }
  }
     catch(Exception e)
     {
      out.println("Error"+ e);
     }
      %>
</body>
</html>
```
EditRegister.jsp:
```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page language="java" import="java.sql.*,javax.sql.*"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Edit Registration  Page</title>
</head>
<body>
<%
     String userid=request.getParameter("t1");
     try
      {
      Class.forName("com.mysql.jdbc.Driver");
      Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/Reg","root","123");
     PreparedStatement ps=con.prepareStatement("select * from user where userid=?");
     ps.setString(1,userid);
     ResultSet rs=ps.executeQuery();
     if(rs.next())
     { %>
<h2> EDIT REGISTRATION DETAILS </h2>
<form action="Update.jsp" method="post">
       User_ID = <input type="text" name="te1" value="<%=rs.getString(1)%>"/><br>
```
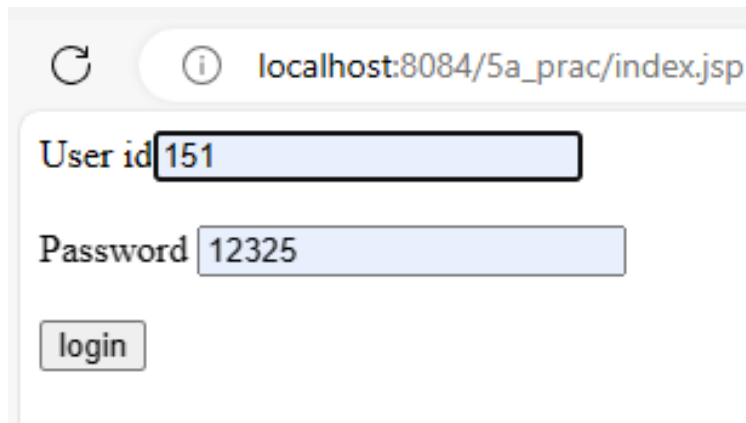
```
        Password=<input type="text" name="te2" value="<%=rs.getString(2)%>"/><br>
        First Name=<input type="text" name="te3" value="<%=rs.getString(3)%>"/><br>
        Last Name= <input type="text" name="te4" value="<%=rs.getString(4)%>"/><br>
        Email=<input type="text" name="te5" value="<%=rs.getString(5)%>"/><br>
<input type="submit" value="Update"/>
</form>
<%  }
        }
      catch(Exception e)
      {
        out.println("Error"+ e);
      }
    %>
</body>
</html>
```
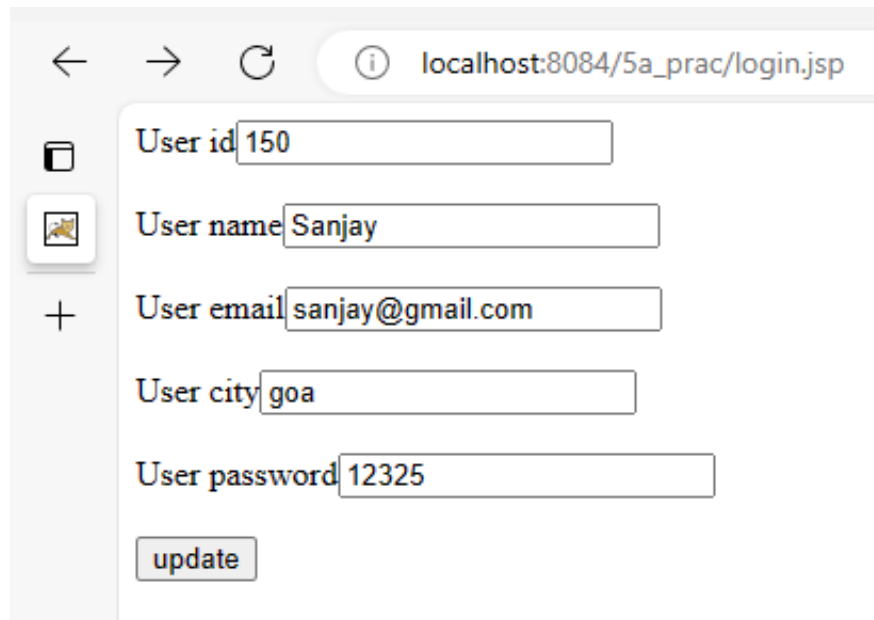
Update.jsp:

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page language="java" import="java.sql.*,javax.sql.*"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Updation Done</title>
</head>
<body>
</body>
</html>
```

OUTPUT:

modification successful

## **Practical No 05.**

**b.** Problem:Create a JSP page to demonstrate the use of Expression language.

**c.  Source Code:-**

index.jsp:

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%
 application.setAttribute("user", "Sonali Saraf");
 session.setAttribute("country","India");
%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>JSP Expression language Example</title>
</head>
<body>
<form action="Display.jsp" method="post">
        User First Name=<input type="text" name="fname"/><br>
        User Last Name= <input type="text" name="lname"/><br>
<input type="submit" value="Check EL Example"/><br>
</form>
</body>
</html>
```

Display.jsp:
```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%
 pageContext.setAttribute("colour","pink");
%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>JSP Display Page</title>
</head>
<body bgcolor="${pageScope.colour}">
<b> WelCome ${param.fname} ${param.lname}</b><br>
     Below are accessing Application object:
<p>
        Author Name:<b> ${applicationScope.user}</b>
</p>
    Below are session object:
<p>
```

    Country is:\<b\> ${sessionScope.country}\</b\>
\</p\>
  Below are some basic comparisons Using EL:
\<p\>
    Is 2 less than 5?${2<5}\<br\>
    Does 8 equals 8?${8==8}\<br\>
    Is 10 greater than 4?${6 gt 4}\<br\>
\</p\>
  Now some Arithmatic Expression
\<p\>
    12 + 7 = ${12+7} \<br\>
\</p\>
\<em\> you appear to be using the following browser:
    ${header["user-agent"]}
\</body\>
\</html\>

## OUTPUT:
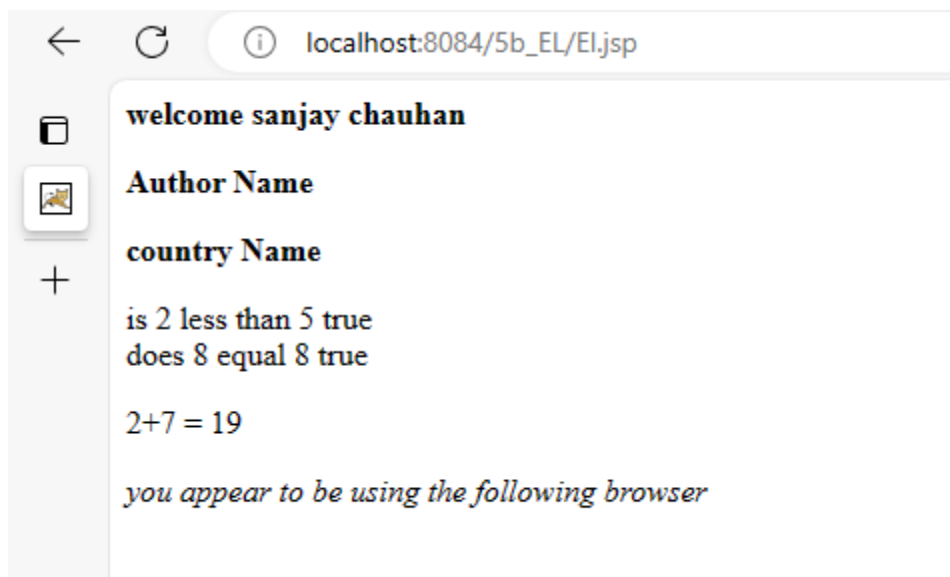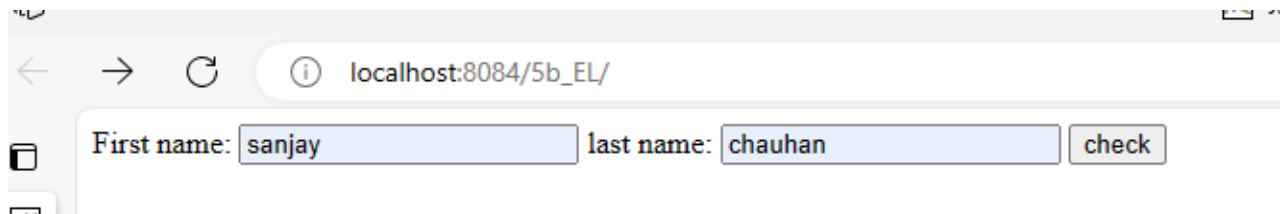
# Practical No  06.

**a.** **Problem:**Create a Currency Converter application using EJB.
**Source Code:-**

**index.html**:
```html
<html>
<head>
<title>Currency Convertor</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<form action="C_Client" method="post">
        Amount to be convered:<input type="text" name="amt"/><br>
        From :<select name="from">
<option value="dollar" >Dollar</option>
<option value="rs"> Rupees </option>
</select><br>
        To:<select name="to">
<option value="dollar">Dollar </option>
<option value="rs"> Rupees</option>
</select><br>
<input type="submit" value="Convert"/>
</form>
</body>
</html>
```
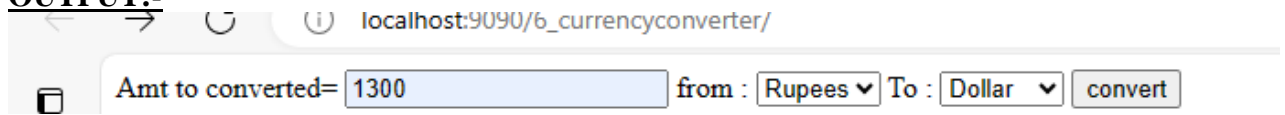
**c_convertor.java:-**
```java
package currency;
import javax.ejb.Stateless;
@Stateless
public class c_convertor
 {
public double convert(String Fr,String Tc,String a)
{
   double d=Double.parseDouble(a);
   if(Fr.equals(Tc))
   {
     return d;
   }
   if(Tc.equals("rs"))
   {
     return d*73.124;
   }
   if(Tc.equals("dollar"))
```

```
            {
                return d*0.01369;
            }
            return 0;
        }
    }
}
```

**C_Client.java:-**
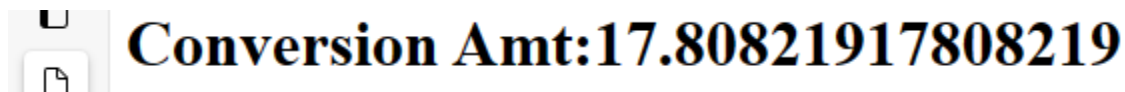
```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.ejb.*;
import currency.c_convertor;
public class C_Client extends HttpServlet {
    @EJB
    c_convertor cb;
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            String a=request.getParameter("amt");
            String f=request.getParameter("from");
            String t=request.getParameter("to");
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet C_Client</title>");
            out.println("</head>");
            out.println("<body>");
            out.println("<h1>After conversion Amount is: " + cb.convert(f, t, a) + "</h1>");
            out.println("</body>");
            out.println("</html>");
        }
    }
}
```

**OUTPUT:-**

localhost:9090/6_currencyconverter/

Amt to converted= 1300    from : Rupees ∨ To : Dollar ∨ convert

# Conversion Amt:17.80821917808219

---

# Practical No 06.

**b.** **Problem:Develop a Simple Room Reservation System Application Using EJB**.

**Source Code:-**

**index.html**:

```html
<html>
    <head>
    <title>Room Reservation data form </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    </head>
    <body>
    <h1>Welcome to Reservation Page.....!!!!!!!!!!!!!</h1>
    <form action="Reservation_c" method="post">
            First Name:<input type="text" name="fname"/><br/>
            Last Name:<input type="text" name="lname"/><br/>
            Start Date:<input type="date" name="sdate"/><br/>
            End Date:<input type="date" name="edate"/><br/>
<input type="Submit" value="Submit"/><br/>
    </form>
    </body>
    </html>
```

**RoomRes.java:-**

```java
    package Reservation;
    import javax.ejb.Stateless;
    import java.sql.*;
    import javax.sql.*;

    @Stateless
    public class RoomRes
     {
    public boolean canRes(String fname, String lname, String sdate, String edate)
    {
        try {
            boolean flag = true;
            Class.forName("com.mysql.jdbc.Driver");
            Connection con = (Connection)
    DriverManager.getConnection("jdbc:mysql://localhost:3306/Resv", "root", "123");
            PreparedStatement ps;
            ps = con.prepareStatement("select * from room where sdate=?");
            ps.setDate(1, Date.valueOf(sdate));
            ResultSet rs = ps.executeQuery();
            if (rs.next()) {
                flag = false;
```

```
            return flag;
        } else {
            PreparedStatement ps1 = con.prepareStatement("insert into room values(?,?,?,?)");
            ps1.setString(1, fname);
            ps1.setString(2, lname);
            ps1.setDate(3, Date.valueOf(sdate));
            ps1.setDate(4, Date.valueOf(edate));
            ps1.executeUpdate();
            flag = true;
            return flag;
        }
    } catch (Exception e) {
        return false;
    }
}
}
```
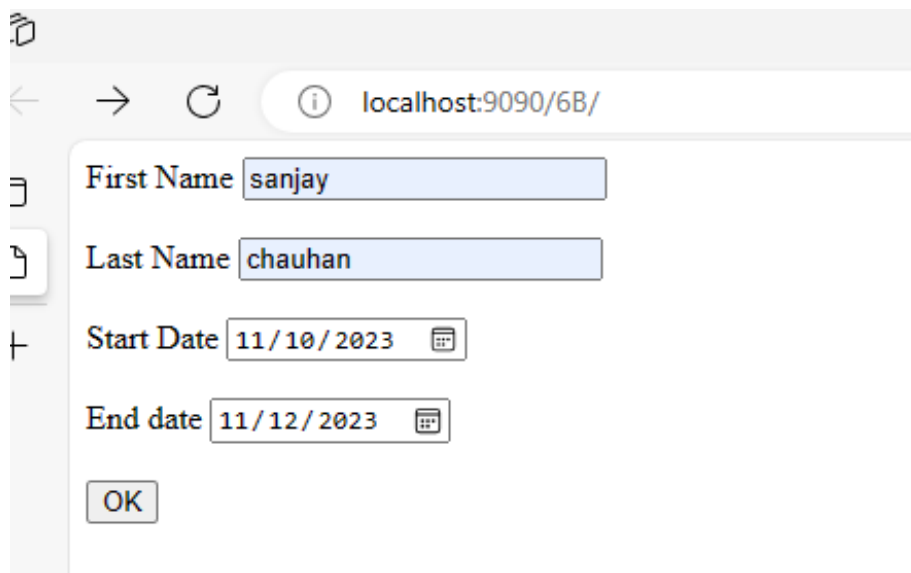
**Reservation_c.java:-**

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.ejb.EJB;
import Reservation.RoomRes;
public class Reservation_c extends HttpServlet
{
  @EJB
    RoomRes rr;
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      PrintWriter out = response.getWriter();
      try {
        String fname = request.getParameter("fname");
        String lname = request.getParameter("lname");
        String sdate = request.getParameter("sdate");
        String edate = request.getParameter("edate");
        rr = new RoomRes();
        boolean ans = rr.canRes(fname, lname, sdate, edate);
        if (ans == true)
        {
          out.println("WelCome "+ fname +" "+lname+"<br>");
```

```
        out.println("Room has been reserved");
      }
      else
      {
        out.println(" Sorry !! Room can not be reserve");
      }
   }
catch(Exception e)
   {
     out.println("Error "+ e);
   }
 }
 }
```

**OUTPUT:-**
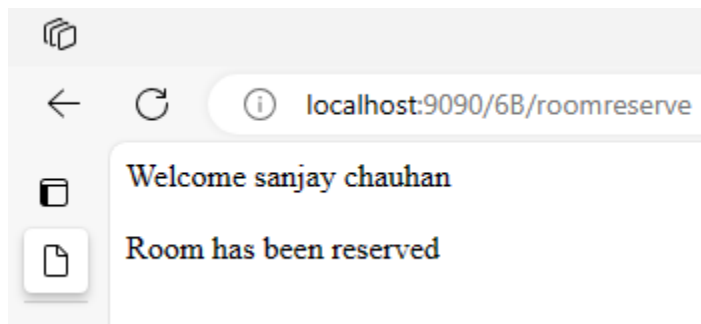
# Practical No 07.

**a. Problem:Develop simple EJB application to demonstrate Servlet Hit count using SingletonSession Beans.**
**Source Code:-**

**index.html**:
```html
<html>
<head>
<title>Visitor's Count</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<form action="Serv_HitCount" method="post">
<input type="submit" value="Click Here to Check Server hit count "/>
</form>

</body>
</html>
```

**HitCount.java:**

```java
package visitorhitcount;
import javax.ejb.Singleton;
@Singleton
public class HitCount {
private int count=1;
 public synchronized int incrCount()
 {
    return count++;
 }
}
```
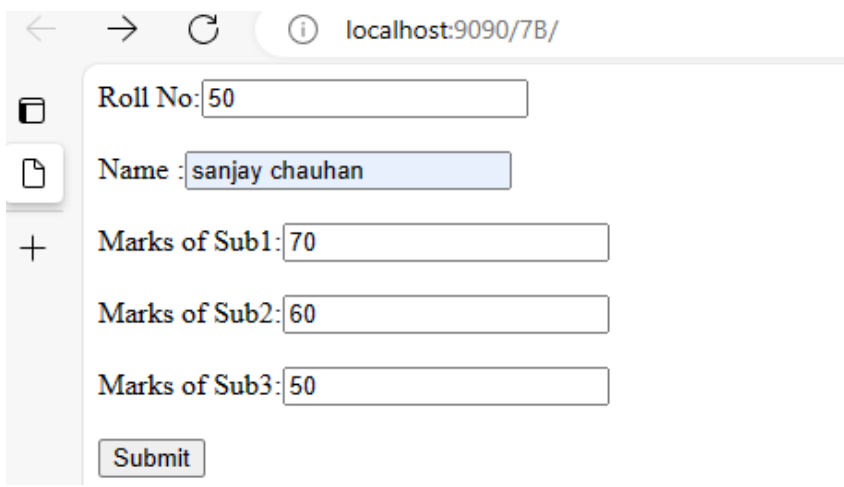
**Serv_HitCount.java:**

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.ejb.*;
import visitorhitcount.HitCount;
public class Serv_HitCount extends HttpServlet {
```

```
@EJB
   HitCount vc;
   protected void doPost(HttpServletRequest request, HttpServletResponse response)
       throws ServletException, IOException {
     response.setContentType("text/html;charset=UTF-8");
     try (PrintWriter out = response.getWriter()) {
       out.println("<!DOCTYPE html>");
       out.println("<html>");
       out.println("<head>");
       out.println("<title>Servlet Serv_HitCount</title>");
       out.println("</head>");
       out.println("<body>");
       out.println("<h1>You have visited this page  " + vc.incrCount()+ " times "+ "</h1>");
       out.println("</body>");
       out.println("</html>");
     }
   }
}
```

**OUTPUT:**
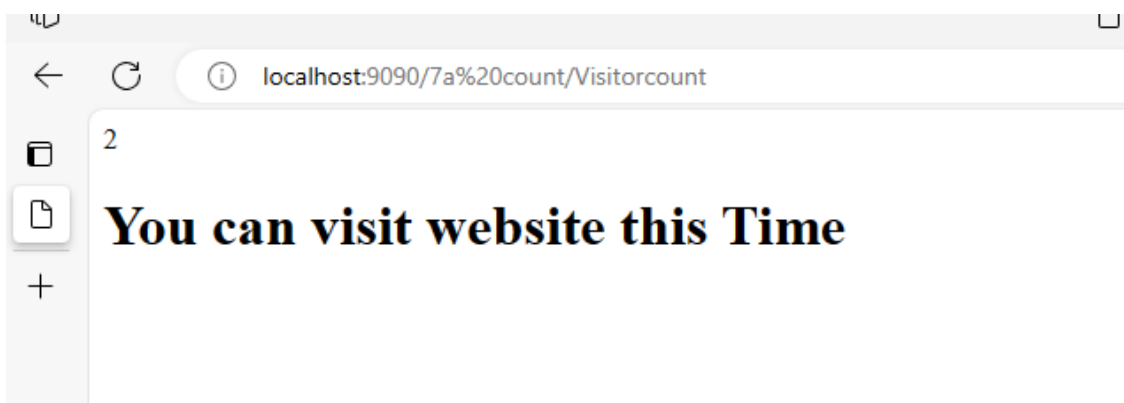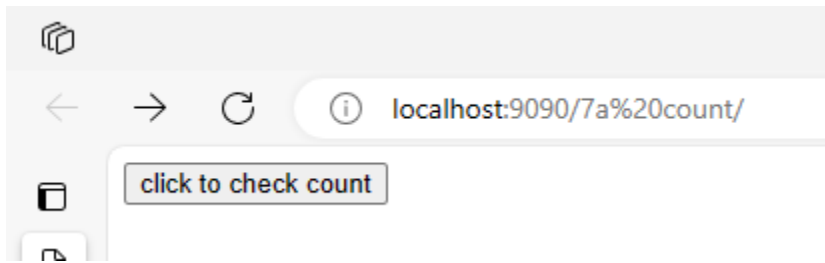
# Practical No 07.

**b.** **Problem:** **Develop simple Marks Entry Application to demonstrate accessing Database using EJB**.

**Source Code:-**

**index.html**:

```html
<html>
<head>
<title>Marks Entry Form</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<form action="M_Insert" method="post">
        Roll No:<input type="text" name="t1"/><br>
        Name :<input type="text" name="t2"/><br>
        Marks of Sub1:<input type="text" name="t3"/><br>
        Marks of Sub2:<input type="text" name="t4"/><br>
        Marks of Sub3:<input type="text" name="t5"/><br>
<input type="submit" value="Submit"/>
</form>
</body>
</html>
```

**StudMarksEntery.java:**

```java
package marks;

import javax.ejb.Stateful;
import javax.sql.*;
import java.sql.*;
@Stateful
public class StudMarksEntery
{
  public boolean  insertMarks(int r_no,String name,int m1,int m2,int m3)
{

  boolean f=true;
  try
  {
    Class.forName("com.mysql.jdbc.Driver");
    Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/Marks","root","123");
    PreparedStatement ps=con.prepareStatement("insert into stud values(?,?,?,?,?)");
    ps.setInt(1,r_no);
```

```
      ps.setString(2,name);
      ps.setInt(3,m1);
      ps.setInt(4,m2);
      ps.setInt(5,m3);
      ps.executeUpdate();
      f=true;
      return f;
   }
  catch(Exception e)
  {

    f=false;
    return f;
  }
 }
}
```

**M_Insert.java:**

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.ejb.*;
import marks.StudMarksEntery;
public class M_Insert extends HttpServlet {
   @EJB
   StudMarksEntery s1;
   protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException
   {
       String  name=request.getParameter("t2");

     response.setContentType("text/html;charset=UTF-8");
      boolean flag;
      int no=Integer.parseInt(request.getParameter("t1"));
      int m1=Integer.parseInt(request.getParameter("t3"));
      int m2=Integer.parseInt(request.getParameter("t4"));
      int m3=Integer.parseInt(request.getParameter("t5"));
      try (PrintWriter out = response.getWriter()) {
        flag=s1.insertMarks(no, name, m1, m2, m3);
         if(flag)
         {
            out.println("marks inserted");
         }
```
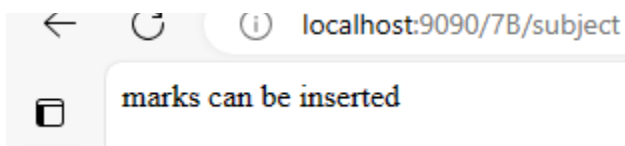
```
        else
        {
            out.println("failed to enter");
        }
      }
    }
}
```

**OUTPUT:**

# Practical No 08.

a. **Develop a Hibernate application to store Feedback of Website Visitor in MySQL Database.**
**Source Code:-**
**index.html**:

```html
<html>
<head>
<title>FeedBack Details</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<h4>Provide visitors Details</h4>
<form action="Check.jsp" method="post">
        Visitor name:<input type="text" name="t1"/><br>
        email:<input type="text" name="t2"/><br>
        feedback:<textarea rows="2" cols="30" name="t3"></textarea><br>
<input type="submit" value="Submit"/>
</form>
</body>
</html>
```

**Visitor.java:**

```java
package myApp;
import javax.persistence.*;
@Entity
@Table(name="Visitor")
public class Visitor {
@Id
@GeneratedValue
@Column(name="v_no")
Integer vno;
@Column(name="v_name")
String vname;
@Column(name="email")
 String email;
@Column(name="feedback")
   String feedback;
@Column(name="date")
String fdate;
   public Visitor(){ }
  public Visitor(String vname,String email,String feedback)
   {
```

```java
            this.vname=vname;
            this.email=email;
            this.feedback=feedback;
        }

public Integer getVno() {
            return vno;
        }

        public void setVno(Integer vno) {
            this.vno = vno;
        }

         public String getVname() {
            return vname;
        }

        public void setVname(String vname) {
            this.vname = vname;
        }

        public String getEmail() {
            return email;
        }

        public void setEmail(String email) {
            this.email = email;
        }

        public String getFeedback() {
            return feedback;
        }

        public void setFeedback(String feedback) {
            this.feedback = feedback;
        }

        public String getFdate() {
            return fdate;
        }

        public void setFdate(String fdate) {
            this.fdate = fdate;
        }
    }
```

**hibernate.cfg.xml:**

```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:3306/FeedBack?zeroDateTimeBehav
ior=convertToNull</property>
<property name="hibernate.connection.username">root</property>
<property name="hibernate.connection.password">123</property>
<mapping class="myApp.Visitor"/>
</session-factory>
</hibernate-configuration>
```
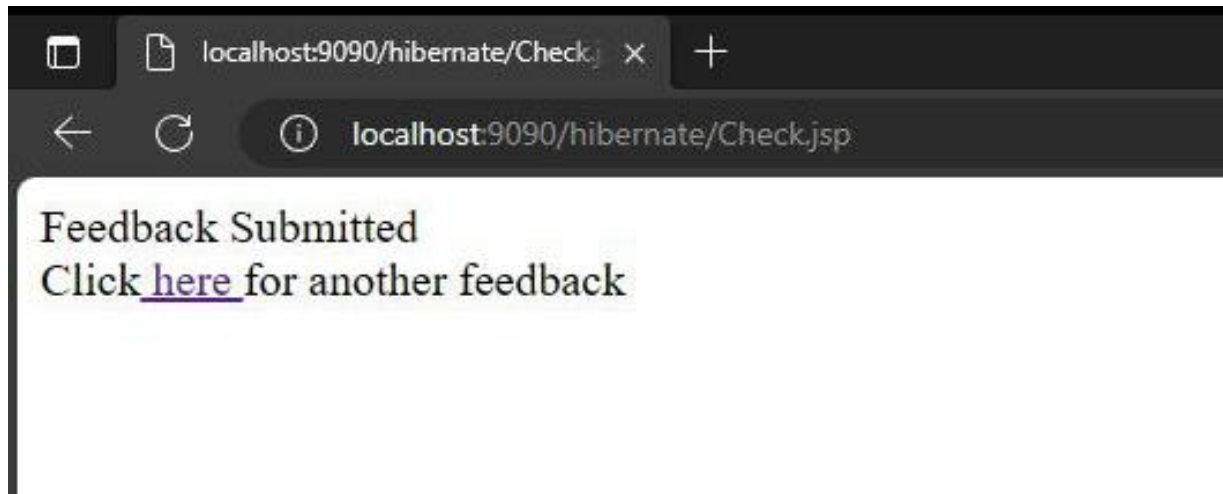
**Check.jsp:**

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page
import="java.util.Iterator,org.hibernate.Transaction,org.hibernate.service.ServiceRegistryBuild
er,org.hibernate.cfg.Configuration,org.hibernate.service.ServiceRegistry,java.util.List,myApp.
Visitor,org.hibernate.SessionFactory" %>
<!DOCTYPE html>
<%!
    SessionFactory sF;
    ServiceRegistry sR;
    org.hibernate.Session hbSession;
    List<Visitor> flist;
%>
<%
    Configuration configuration = new Configuration();
    configuration.configure();
    sR = new
ServiceRegistryBuilder().applySettings(configuration.getProperties()).buildServiceRegistry();
    sF = configuration.buildSessionFactory(sR);
    hbSession = sF.openSession();
    Transaction transaction = null;
    Visitor v=new Visitor();
    try {
        transaction = hbSession.beginTransaction();
        String vname=request.getParameter("t1");
        String email =request.getParameter("t2");
        String feedback=request.getParameter("t3");
        String fdate=new java.util.Date().toString();
```

```
        v.setVname(vname);
        v.setEmail(email);
        v.setFeedback(feedback);
        v.setFdate(fdate);
        hbSession.save(v);
        transaction.commit();
        out.println("Feedback Submitted"+"<br>");
        out.println("Click"+"<a href='index.html'> here </a> "+"for another feed back");
    }
    catch (RuntimeException e) {
        if(transaction != null) transaction.rollback();
        throw e;
    }
%>
```

**OUTPUT:**