

S.T.HINDU COLLEGE

(Re-Accredited by NAAC with B++ Grade)

Nagercoil-629 002

DEPARTMENT OF COMPUTER APPLICATIONS



[Estd.: 1952]

PRACTICAL RECORD OF ADVANCED JAVA PROGRAMMING LAB (2024 – 2025)

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DEPARTMENT OF COMPUTER APPLICATIONS



[Estd.: 1952]

CERTIFICATE

This is to Certify that Mr / Ms
Register Number..... is a bonafide student
of **I MCA** in the academic year **2024 – 2025** has completed
the practical programmes in **Advanced Java Programming** in
the computer lab of our college.

STAFF IN-CHARGE

HEAD OF THE DEPARTMENT

EXTERNAL EXAMINERS

1.

2.

INDEX

SL.NO.	DATE	TITLE	PAGE.NO
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STAFF-IN-CHARGE

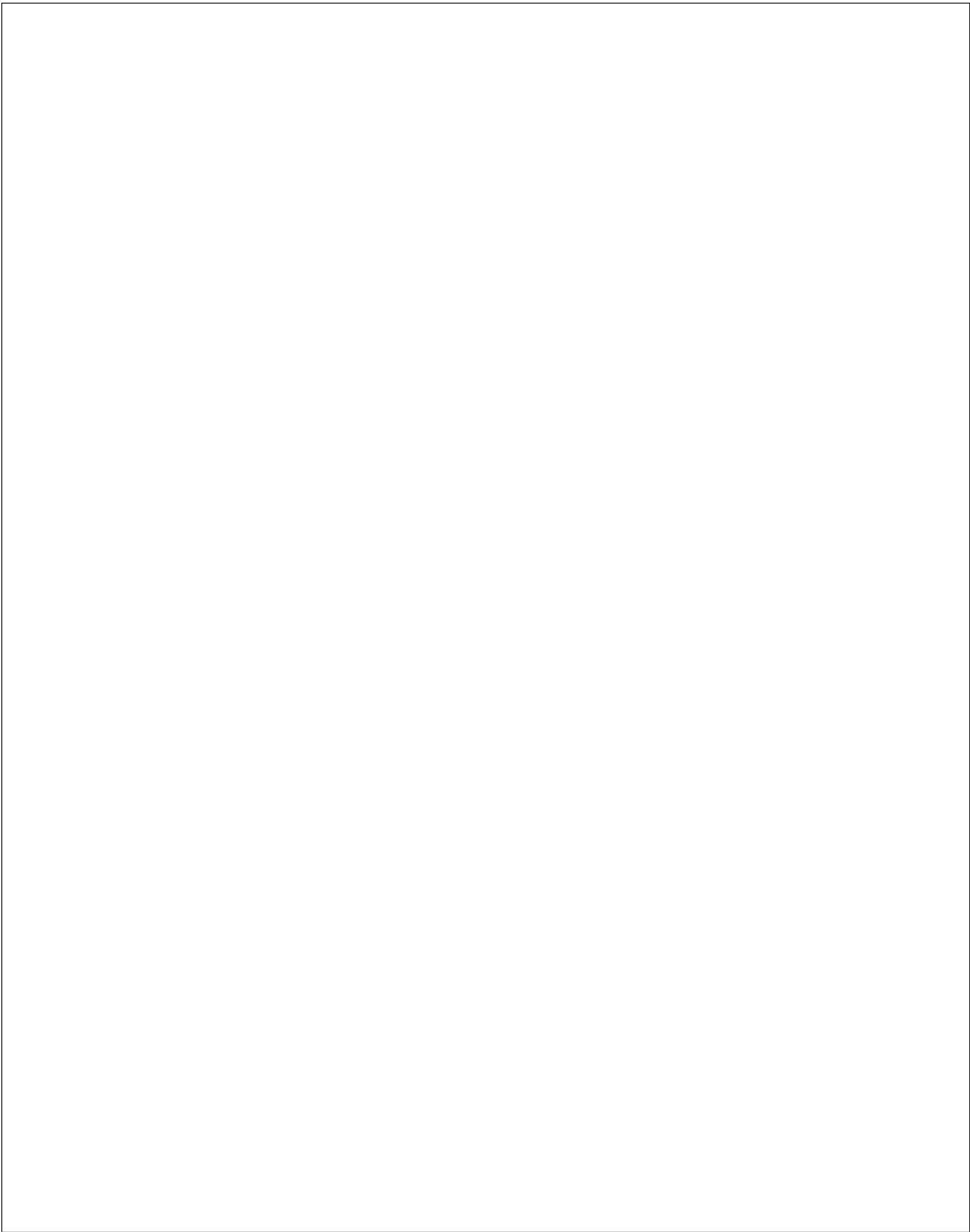
EX NO: 01

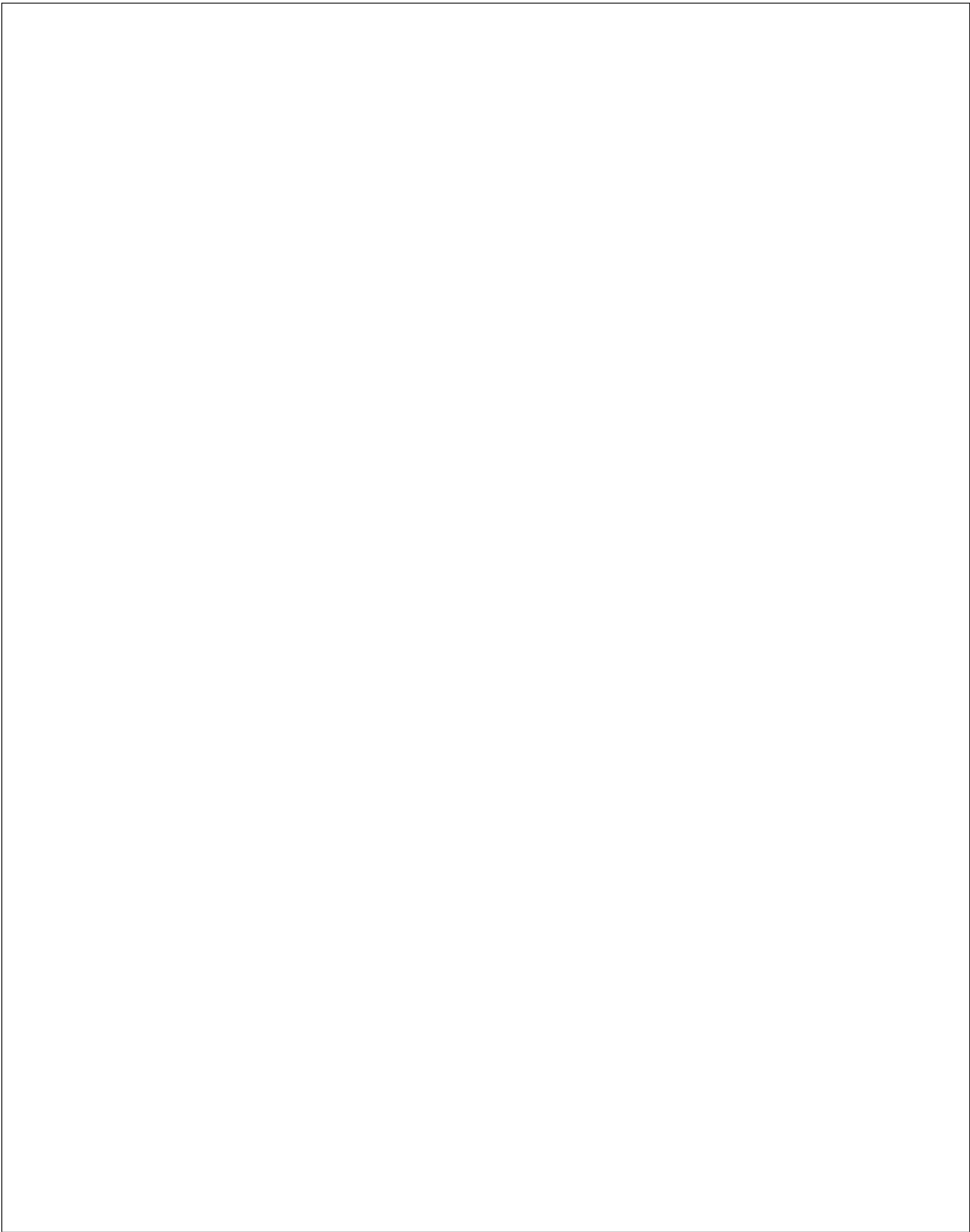
WELCOME MESSAGE USING SERVLET

DATE:

AIM:

PROCEDURE:





PROGRAM:

NewServlet.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;

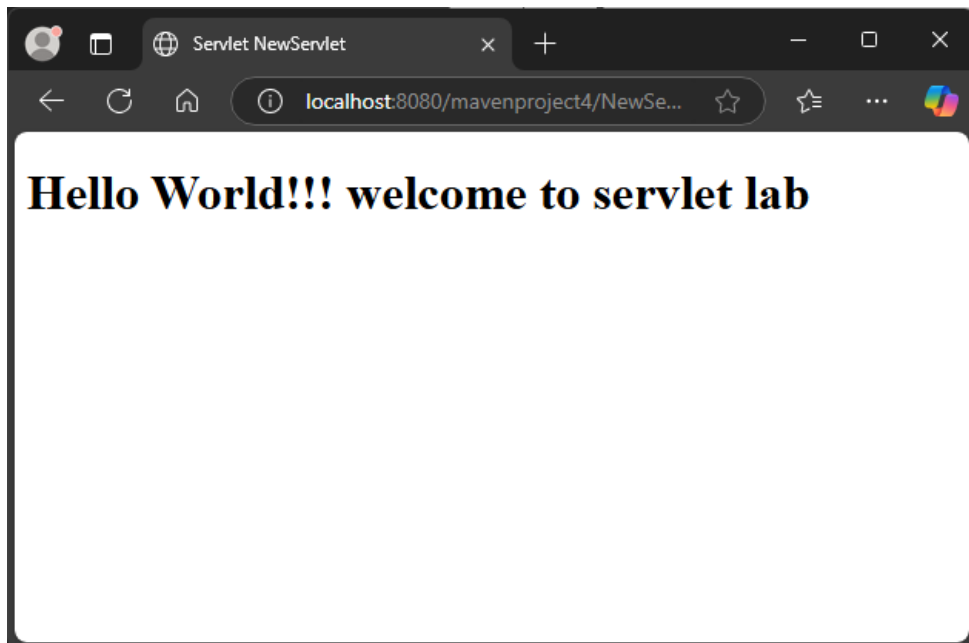
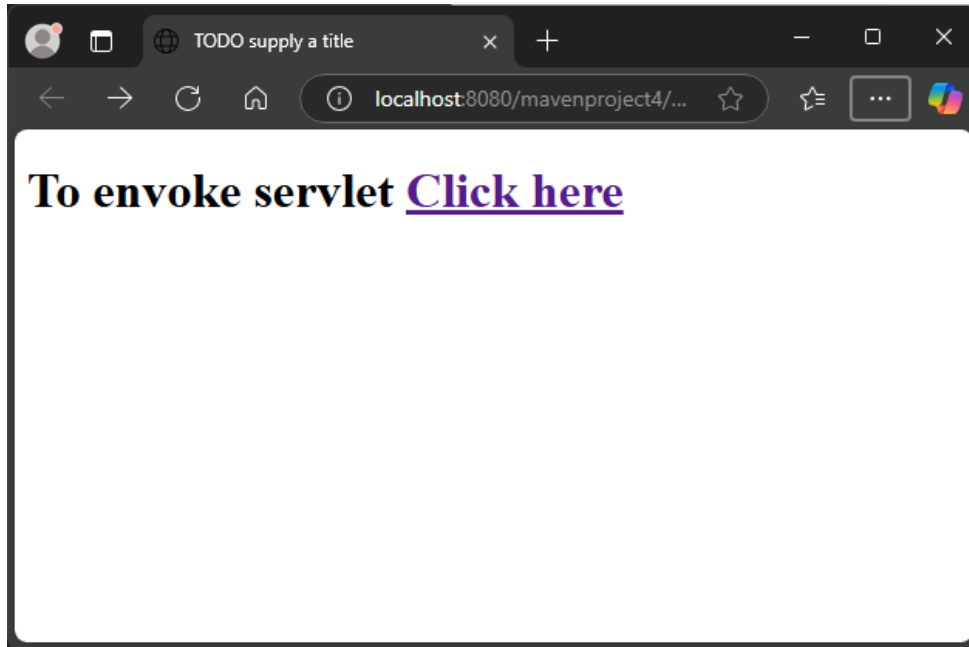
@WebServlet(name="NewServlet",urlPatterns = {"/NewServlet"})
public class NewServlet extends HttpServlet {

    protected void processRequest(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 NewServlet</title>");
            out.println("</head>");
            out.println("<body>");
            out.println("<h1>Hello World!!! welcome to servlet lab" + "</h1>");
            out.println("</body>");
            out.println("</html>");
        }
        finally
        {
            System.out.close();
        }
    }
}
```

newhtml.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>
    <h1>To envoke servlet <a href="NewServlet">Click here</a></h1>
  </body>
</html>
```


OUTPUT:



RESULT:

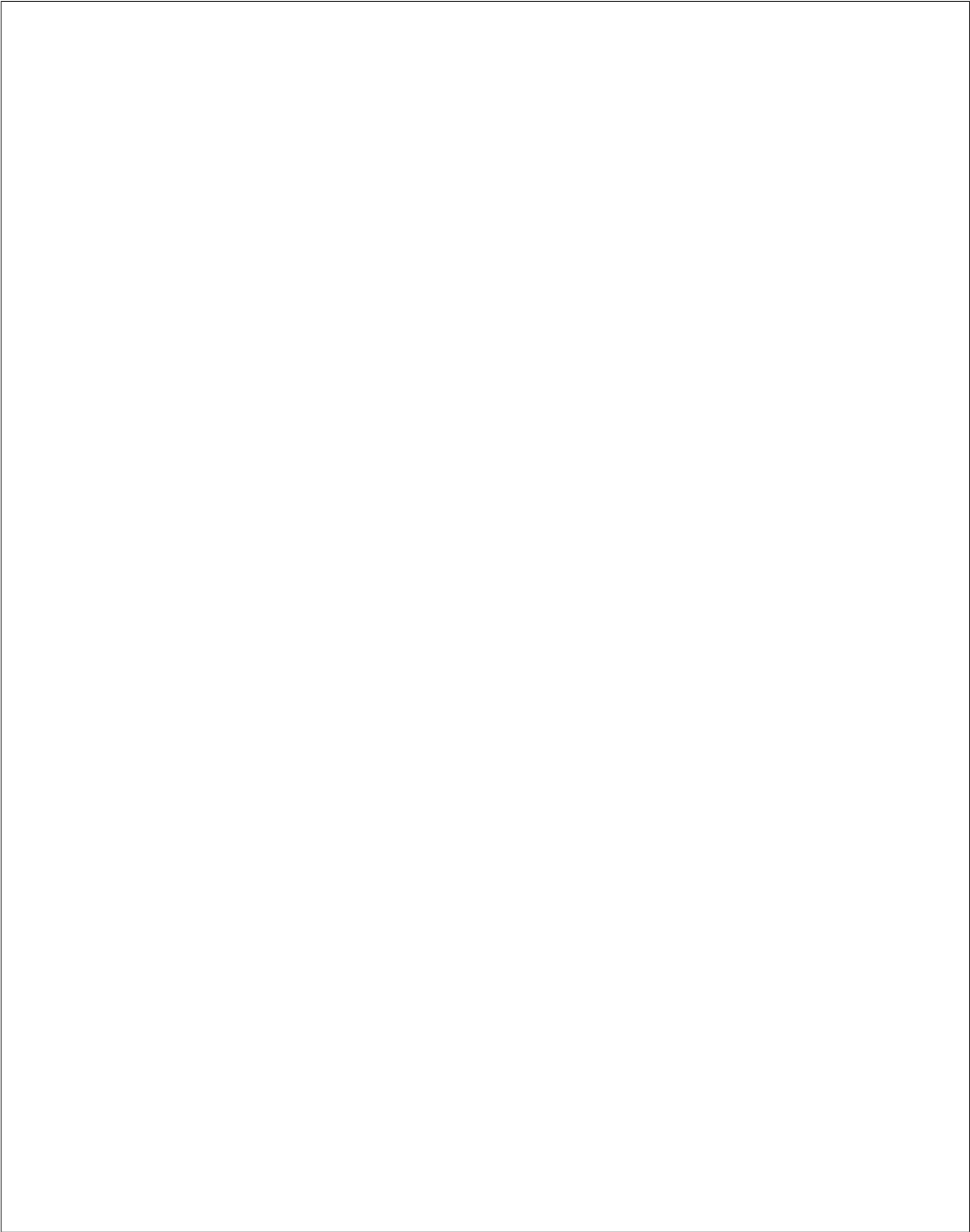
EX NO: 02

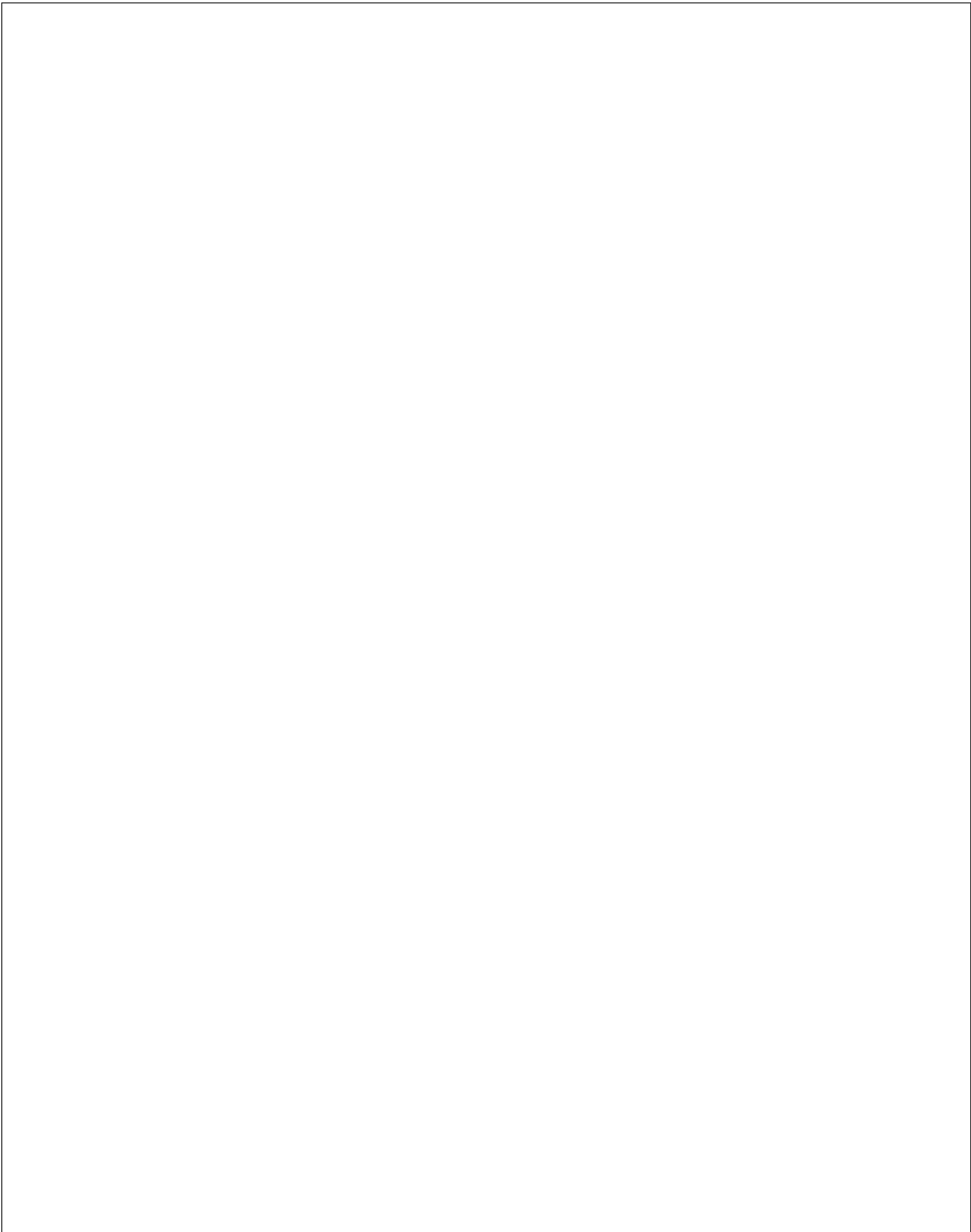
PURCHASE ORDER FORM USING SERVLET

DATE:

AIM:

PROCEDURE:





PROGRAM:

index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Start Page</title>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
  </head>
  <body>

    <table border="solid" cellpadding="10">
      <tr>
        <td>
          <center><h1>GLOBAL Home Collection</h1>
            <h4>211,BSNL Road, Nagercoil-2.</h4>
            <h3>ORDER FORM</h3>
          </center>
          <hr>
          <form action="NewServlet" method="get">
            Customer Name: <input type="text" name="name"><br><br>
            Customer Address:<input type="text" name="address"><br><br>
            Mobile Number: <input type="text" name="mobile"><br><br>
            Email ID: <input type="text" name="email"><br><br>
            Select Product: <br><br>
            <select name="utilities">
              <option value="Butterfly Cooker">Butterfly Cooker</option>
              <option value="Prestige gas stove">Prestige gas stover</option>
              <option value="Preeti Mixi">Preeti Mixer grinder</option>
              <option value="Prestige Non-stick Cookware">Prestige Non-Stick cookware set</option>
              <option value="LG Fridge">LG Fridge</option>

            </select>
            <br><br><br><br><br><br>
            <input type="submit" value="show order detail">
          </form>
        </td>
      </tr>
    </table>
  </body>
</html>
```

servconfirm.html

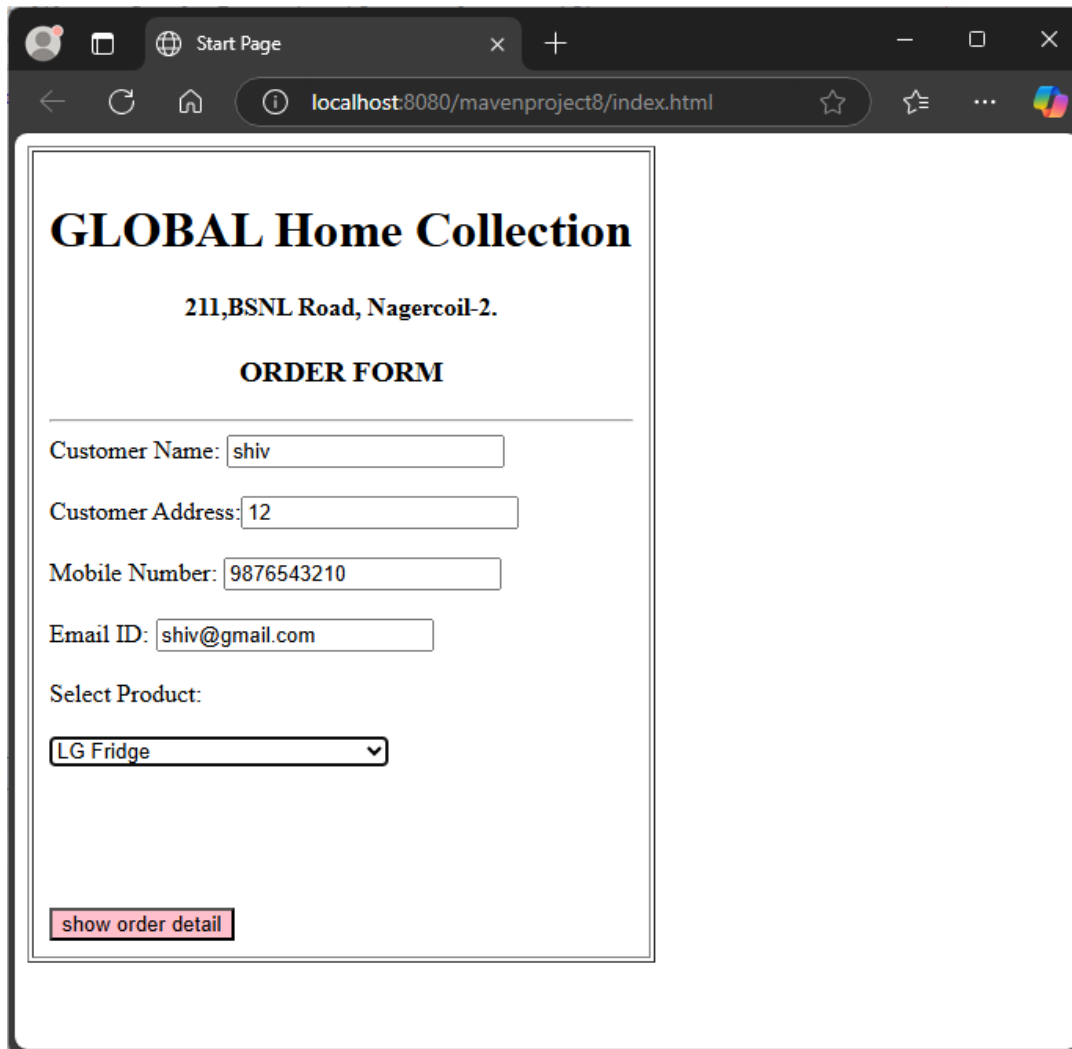
```
<!DOCTYPE html>
<html>
  <head>
    <title>TODO supply a title</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <center><h1>Dear Customer Your Order is Placed!!!</h1>
      <h2>Welcome Back</h2>
    </body>
  </html>
```

NewServlet.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;
@WebServlet(urlPatterns = {"/NewServlet"})
public class NewServlet extends HttpServlet
{
    protected void processRequest(HttpServletRequest request, HttpServletResponse
    response) throws ServletException, IOException
    {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter())
        {
            String name =request.getParameter("name");
            String address=request.getParameter("address");
            String mobile=request.getParameter("mobile");
            String email=request.getParameter("email");
            String utilities=request.getParameter("utilities");
```

```
out.println("<!DOCTYPE html>");
out.println("<html>");
out.println("<head>");
out.println("<title>Servlet NewServlet</title>");
out.println("</head>");
out.println("<body>");
out.println("<table border=solid cellpadding=10>");
out.println("<tr>");
out.println("<td>");
out.println("<center><h1>GLOBAL Home Collections</h1>");
out.println("<h4>23,Cap Road,Nagercoil-1.</h4></center>");
out.println("<hr>");
out.println("Customer Name:" + name + "<br>");
out.println("Customer Address:" + address + "<br>");
out.println("Customer Mobile:" + mobile + "<br>");
out.println("Customer Name:" + email + "<br>");
out.println("<hr>");
out.println("Product Ordered:" + utilities + "<br><br>");
out.println("<a href=servconfirm.html>Confirm Order</a>");
out.println("</td> </tr> </table>");
out.println("</body>");
out.println("</html>");
    }
}
}
```


OUTPUT:



A screenshot of a web browser window displaying an order form. The browser's address bar shows the URL 'localhost:8080/mavenproject8/index.html'. The form is titled 'GLOBAL Home Collection' and includes the address '211,BSNL Road, Nagercoil-2.' Below this is the heading 'ORDER FORM'. The form contains several input fields: 'Customer Name' with the value 'shiv', 'Customer Address' with '12', 'Mobile Number' with '9876543210', and 'Email ID' with 'shiv@gmail.com'. There is a 'Select Product' dropdown menu currently showing 'LG Fridge'. At the bottom of the form is a button labeled 'show order detail'.

GLOBAL Home Collection

211,BSNL Road, Nagercoil-2.

ORDER FORM

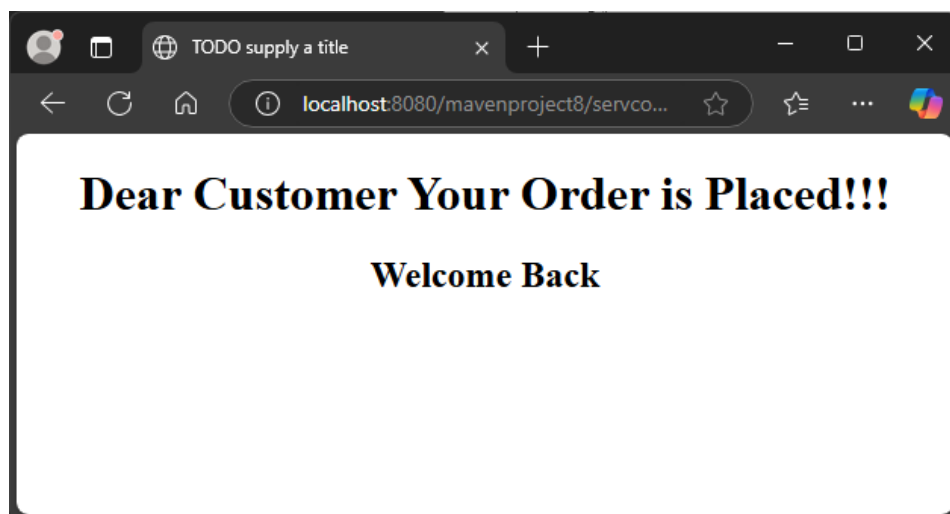
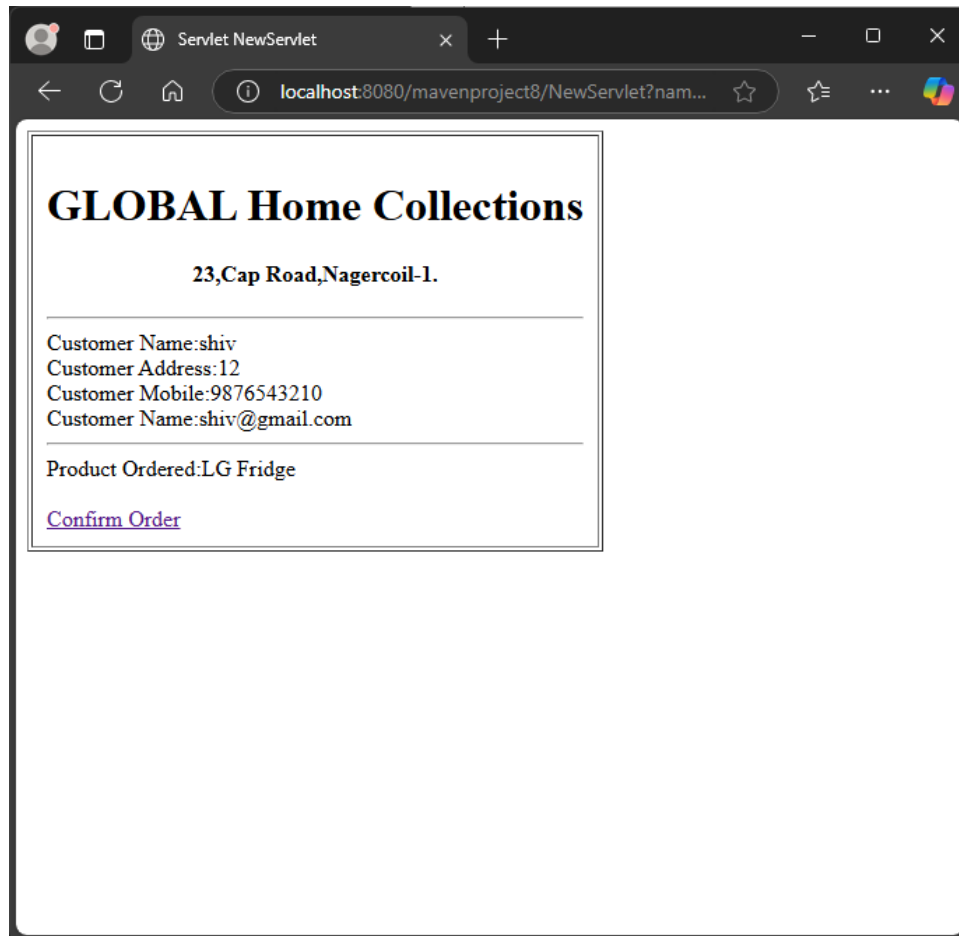
Customer Name:

Customer Address:

Mobile Number:

Email ID:

Select Product:



RESULT:

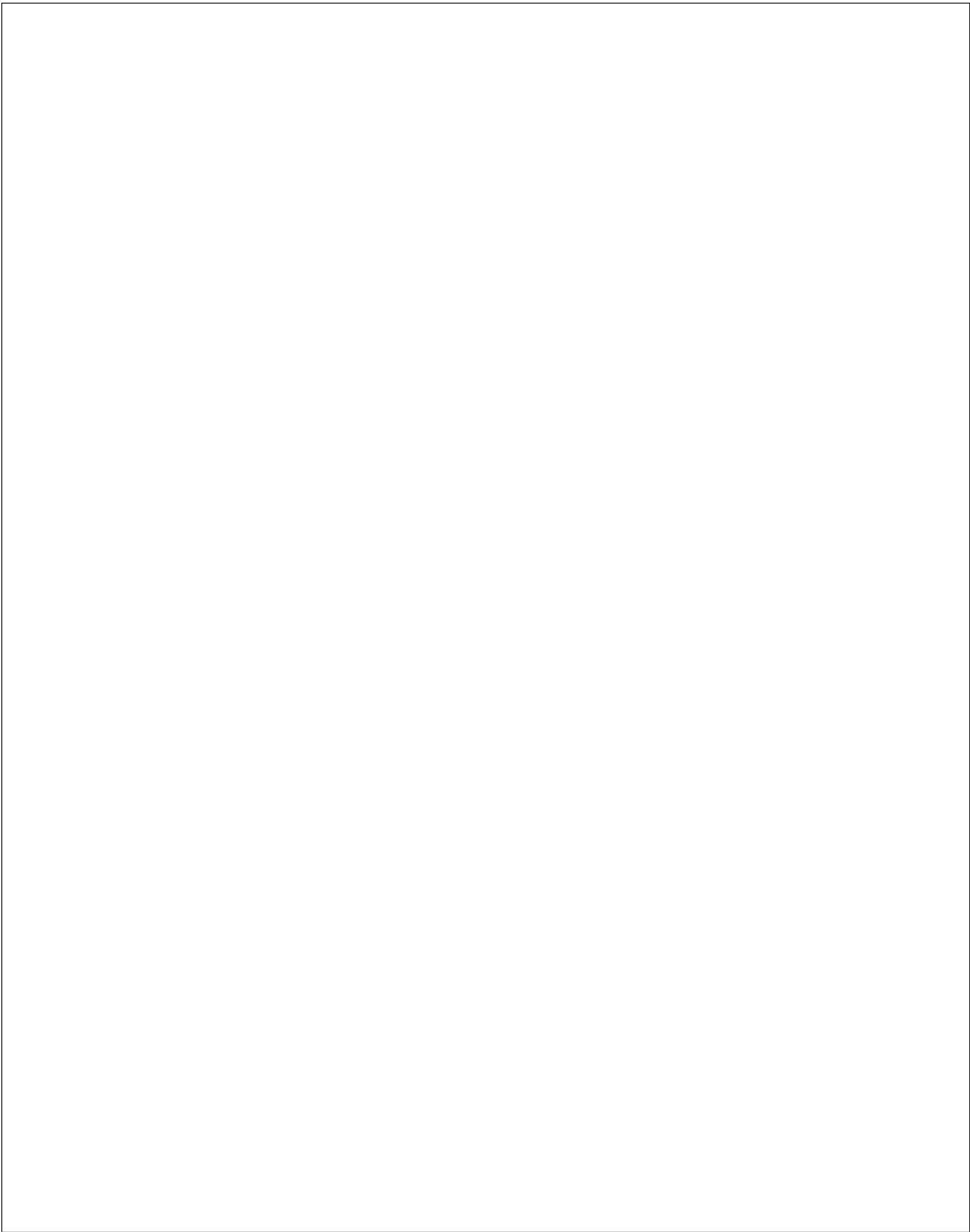
EX NO: 03

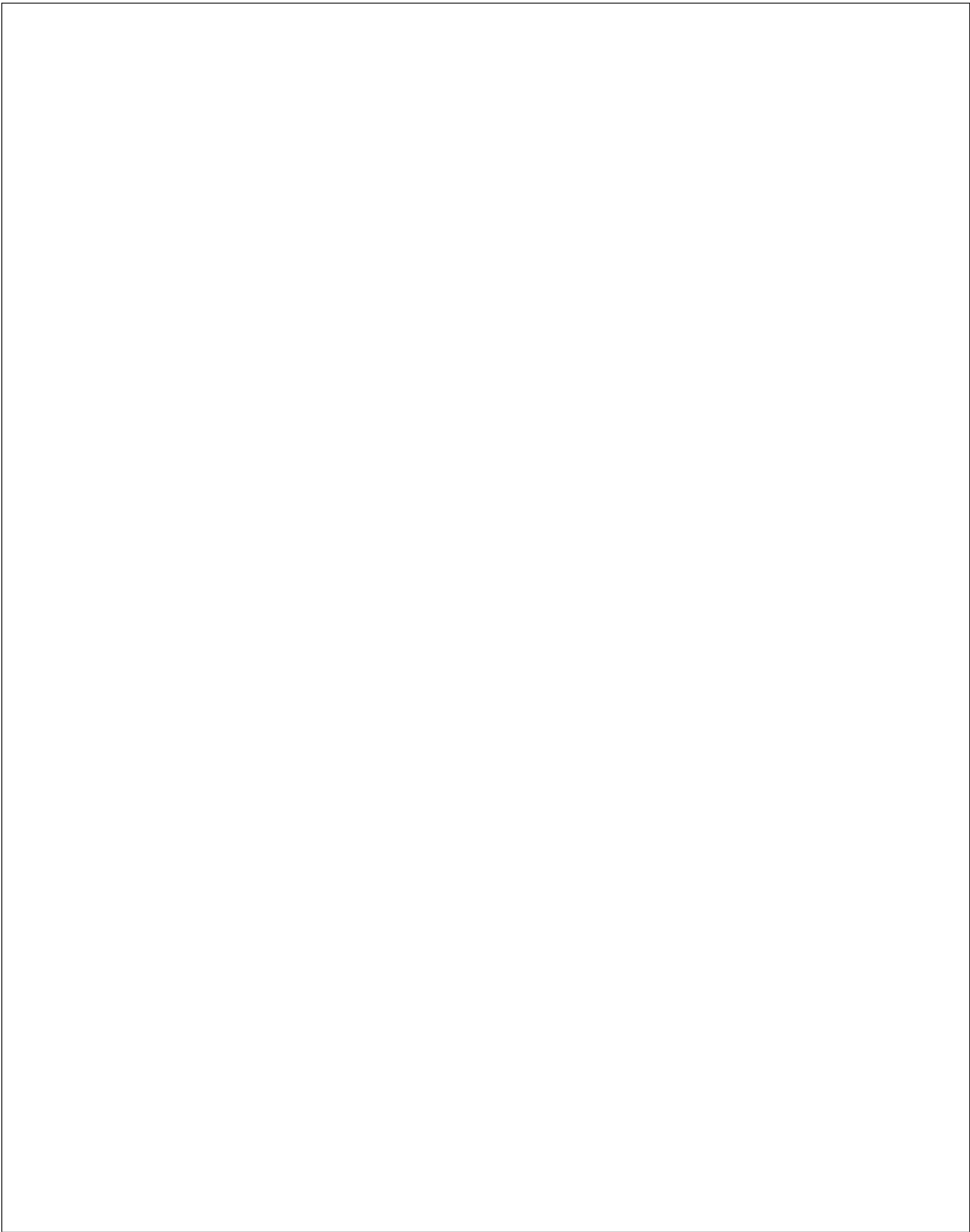
JSP TO CALCULATE PERCENTAGE OF MARKS

DATE:

AIM:

PROCEDURE:





PROGRAM:

marks.html

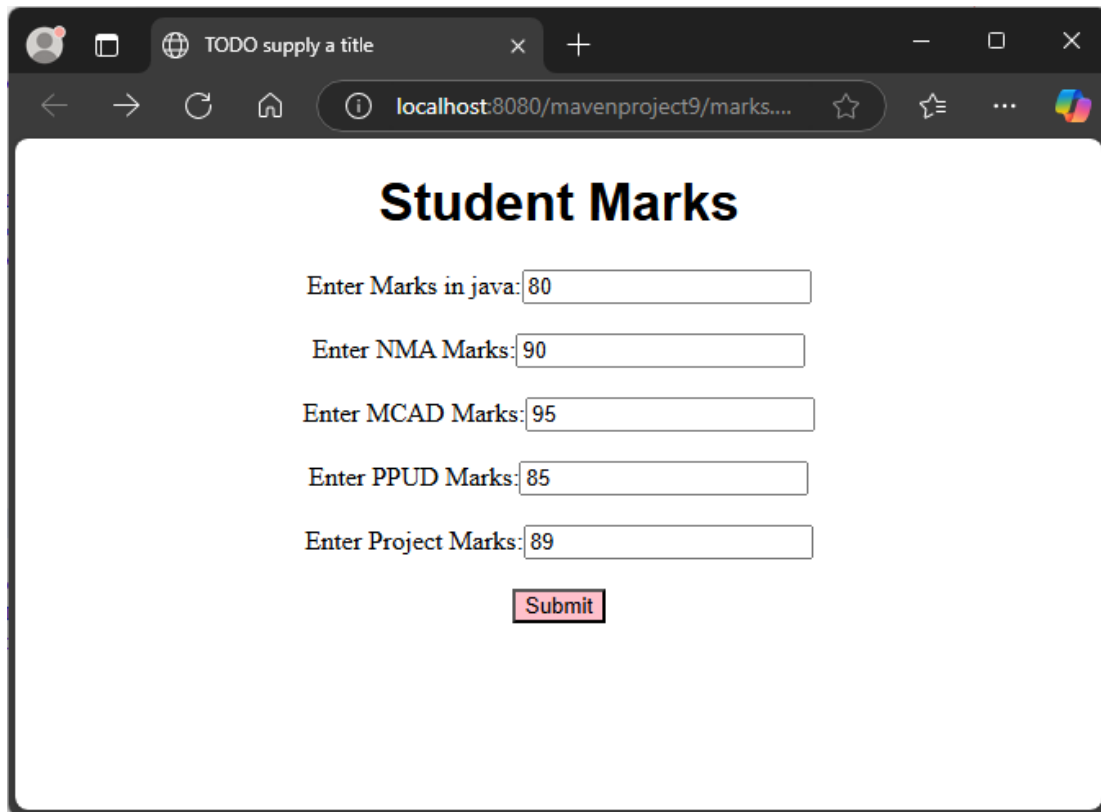
```
<!DOCTYPE html>
<html>
  <head>
    <title>TODO supply a title</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <center>
      <h1>Student Marks</h1>
      <form action="marks.jsp" method="get">
        Enter Marks in java:<input type="text" name="java"><br><br>
        Enter NMA Marks:<input type="text" name="NMA"><br><br>
        Enter MCAD Marks:<input type="text" name="MCAD"><br><br>
        Enter PPUD Marks:<input type="text" name="PPUD"><br><br>
        Enter Project Marks:<input type="text" name="pro"><br><br>
        <input type="submit">

      </form>
    </center>
  </body>
</html>
```

marks.jsp

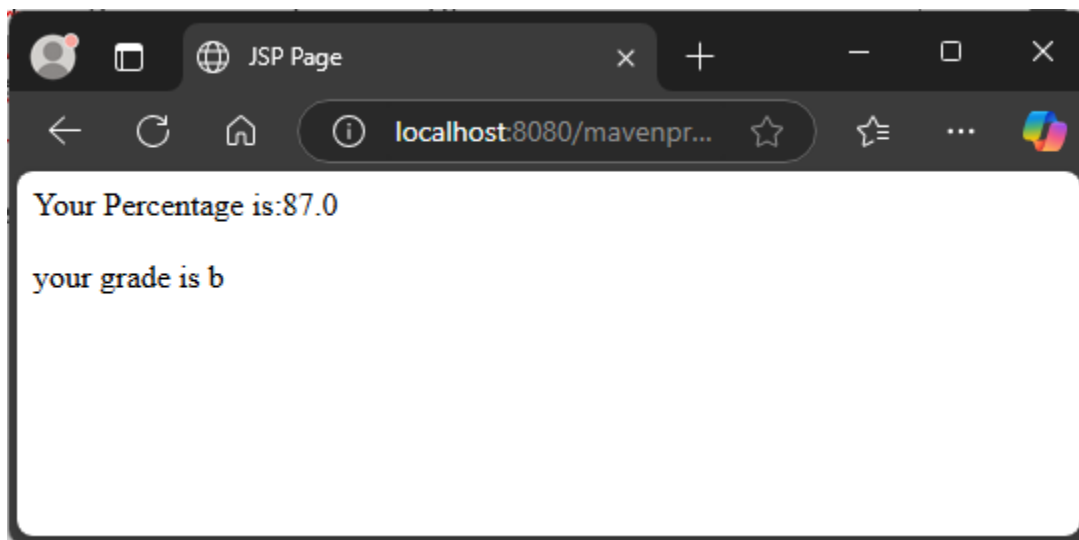
```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body>
    <%
      int java=Integer.parseInt(request.getParameter("java"));
      int NMA=Integer.parseInt(request.getParameter("NMA"));
      int MCAD=Integer.parseInt(request.getParameter("MCAD"));
      int PPUD=Integer.parseInt(request.getParameter("PPUD"));
      int Project=Integer.parseInt(request.getParameter("pro"));
      int c=java+NMA+MCAD+PPUD+Project;
      double avg=c/5;
      out.println("Your Percentage is:"+avg);
    %>
    <br><br>
    <%
      if(avg>90)
      {
        out.println("youre grade is A");
      }
      else if(avg>=80){
        out.println("your grade is b");
      }
      else if(avg>=70){
        out.println("your grade is c");
      }
      else if(avg>=60){
        out.println("your grade is d");
      }
      else{
        out.println("your grade is e");
      }
    %>
  </body>
</html>
```


OUTPUT:



A screenshot of a web browser window. The address bar shows 'localhost:8080/mavenproject9/marks...'. The page title is 'TODO supply a title'. The main content area has a heading 'Student Marks'. Below the heading are five input fields with labels: 'Enter Marks in java:', 'Enter NMA Marks:', 'Enter MCAD Marks:', 'Enter PPUD Marks:', and 'Enter Project Marks:'. The values entered in the fields are 80, 90, 95, 85, and 89 respectively. Below the input fields is a red 'Submit' button.

Subject	Marks
Enter Marks in java:	80
Enter NMA Marks:	90
Enter MCAD Marks:	95
Enter PPUD Marks:	85
Enter Project Marks:	89



A screenshot of a web browser window. The address bar shows 'localhost:8080/mavenpr...'. The page title is 'JSP Page'. The main content area displays the result of the form submission: 'Your Percentage is:87.0' and 'your grade is b'.

Your Percentage is:87.0
your grade is b

RESULT:

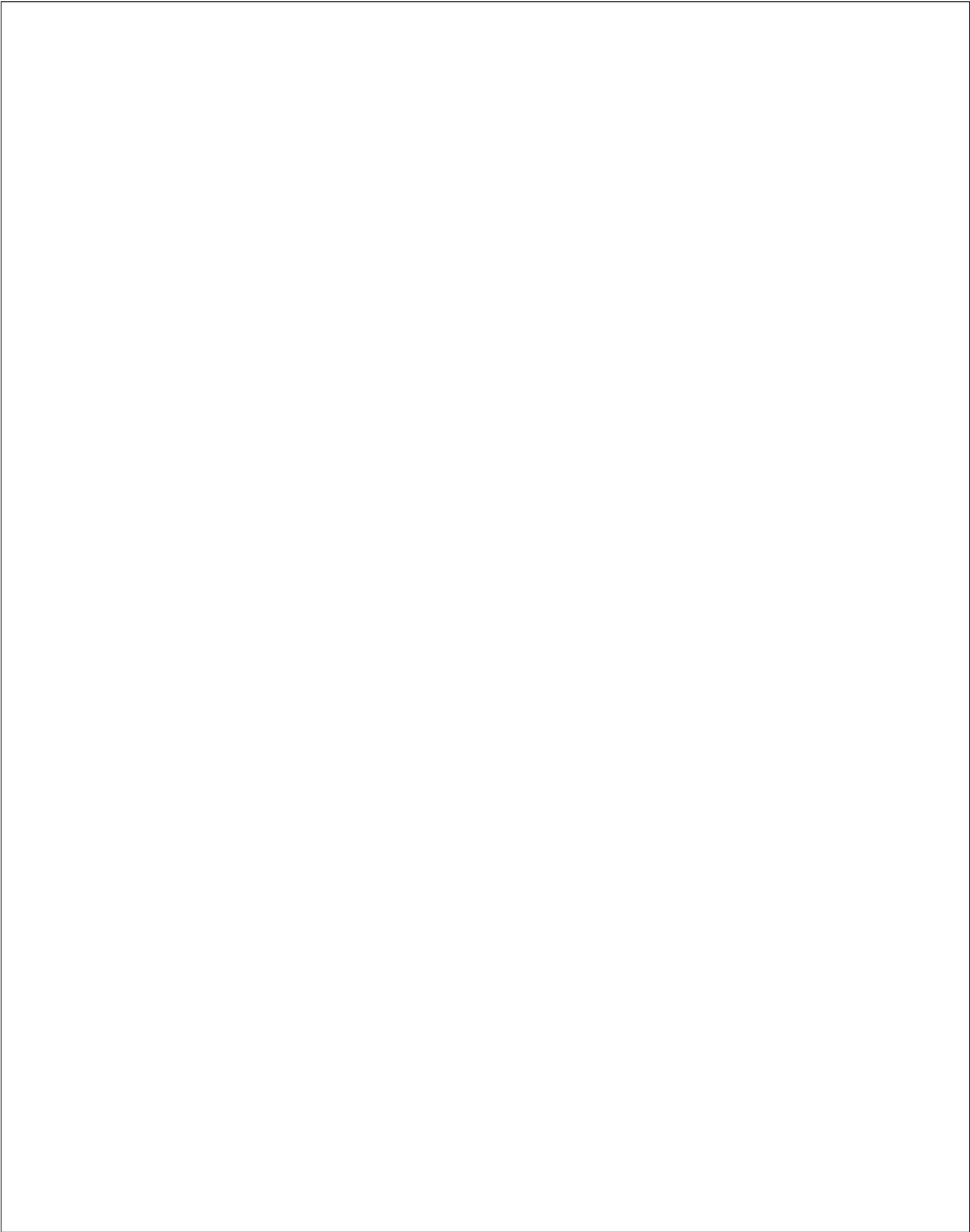
EX NO: 04

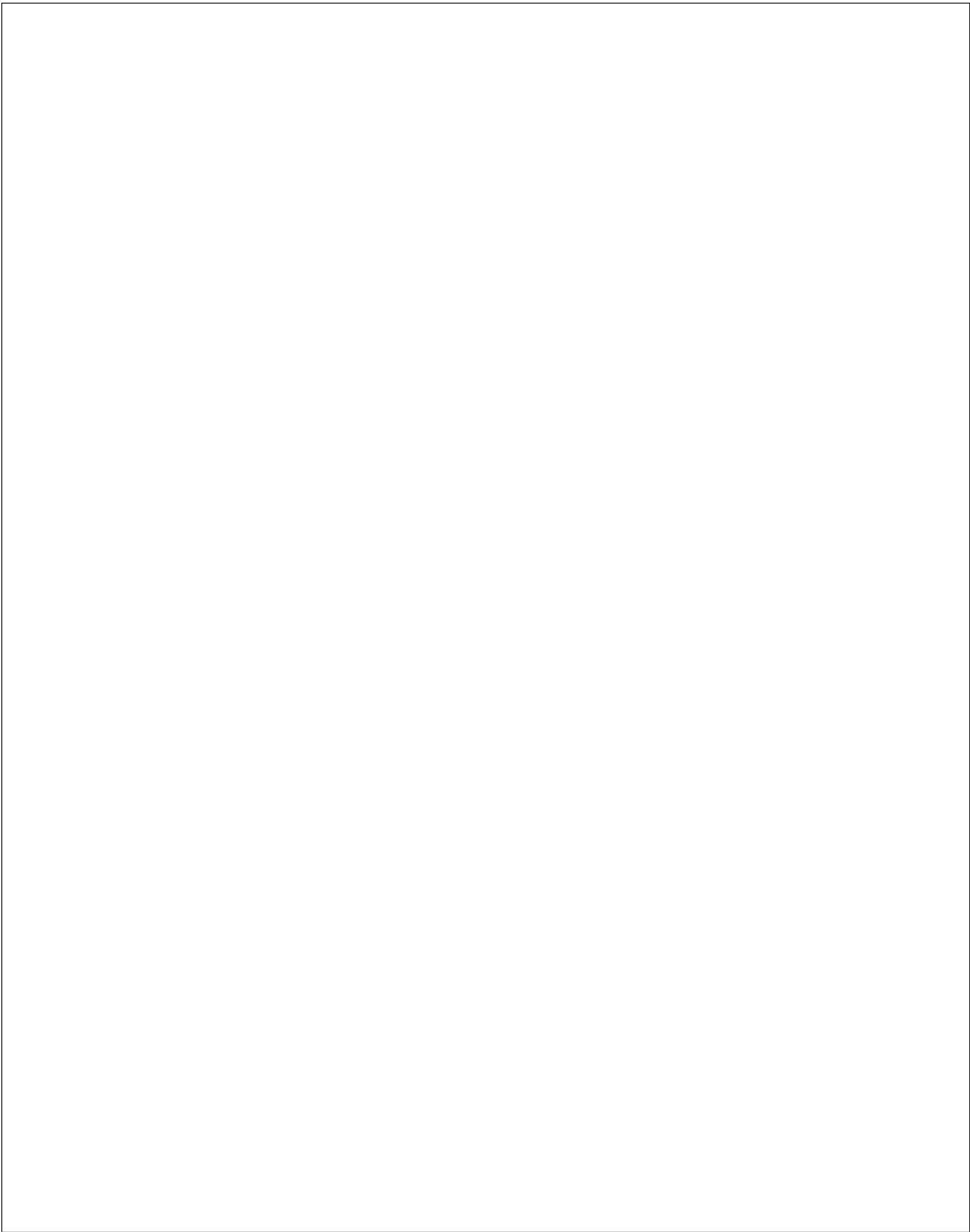
PURCHASE ORDER FORM USING JSP

DATE:

AIM:

PROCEDURE:





PROGRAM:

index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Start Page</title>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
  </head>
  <body>
    <table border="solid" cellpadding="10">
      <tr>
        <td>
          <center><h1>FURNISH HOUSE</h1>
            <h4>23, Cap Road, Nagercoil-1</h4></center>
          <br>
          <hr>
          <form action="order.jsp" method="get">
            Customer Name: <input type="text" name="name"><br><br>
            Customer Address:<input type="text" name="address"><br><br>
            Mobile Number: <input type="text" name="mobile"><br><br>
            Email ID:    <input type="text" name="email"><br>
            <p>
              Select Furniture:
              <select name="furniture">
                <option value="Double Cot">Double cot</option>
                <option value="Single cot">Single cot</option>
                <option value="Dining Table">Dining Table</option>
                <option value="Sofa Set">Sofa Set</option>
                <option value="Chair">Chair</option>

              </select>
              Number of Pieces:<input type="text" name="qty">
              Enter Unit Prices:<input type="text" name="p">
              <br><br><br>
              <input type="submit" value="Proceed">
            </form>
          </td>
        </tr>
      </table>
    </body>
  </html>
```

order.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>
    <%
      String name =request.getParameter("name");
      String address=request.getParameter("address");
      String mobile=request.getParameter("mobile");
      String email=request.getParameter("email");
      String furniture=request.getParameter("furniture");
      Integer qty=Integer.parseInt(request.getParameter("qty"));
      Integer up=Integer.parseInt(request.getParameter("p"));
      Integer amt=qty*up;
    %>
    <table border="solid" cellpadding="10">
      <tr>
        <td>
          <center><h1>FURNISH HOUSE</h1>
            <h4>23, Cap Road, Nagercoil-1.</h4>
          </center>
          <hr>
          Customer Name:<%=name%><br>
          Customer Address: <%=address%><br>
          Mobile Number:<%=mobile%><br>
          Email Id:<%=email%><br>
          <hr>
          <u>Order Detail</u><br>
          Product Name:<%=furniture%><br><br>
          Total Amount:Rs.<%=amt%><br>
          <a href="confirm.html">Confirm Order</a>

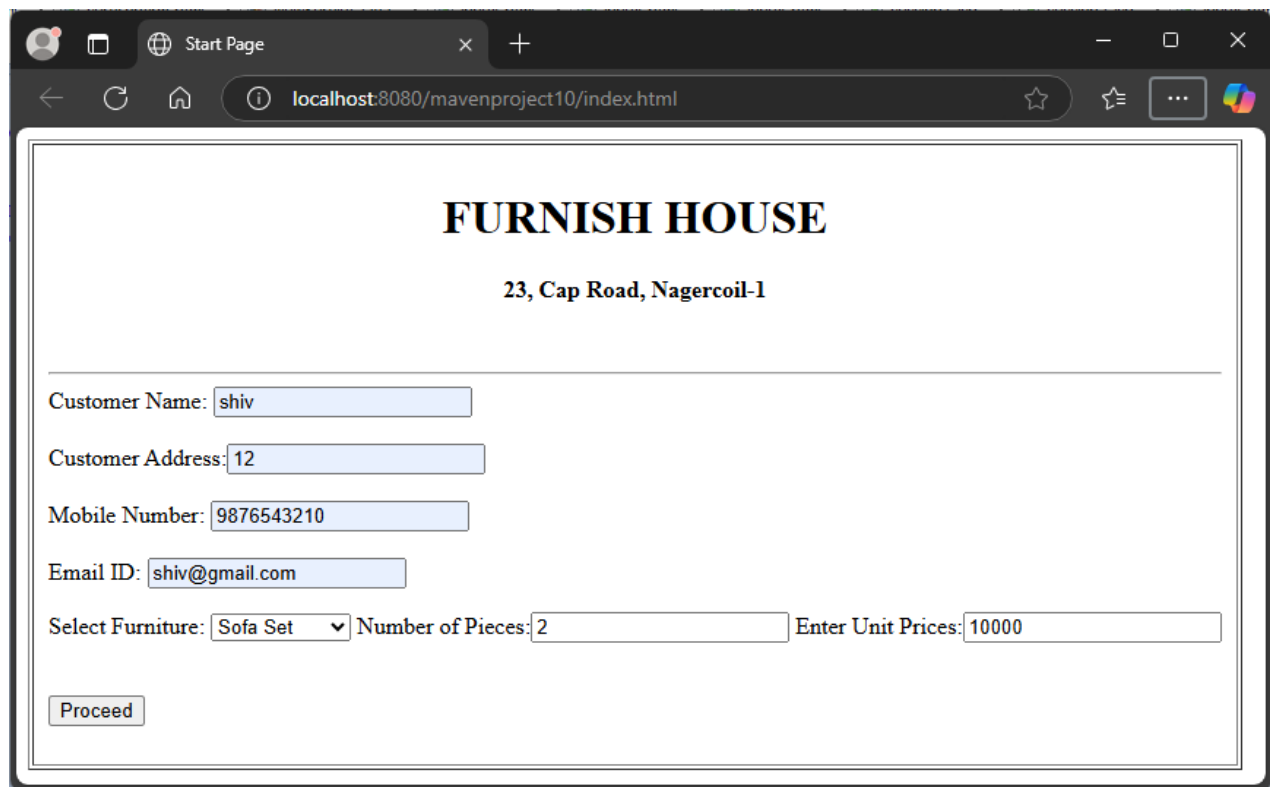
        </td>
      </tr>
    </table>

  </body>
</html>
```

confirm.html

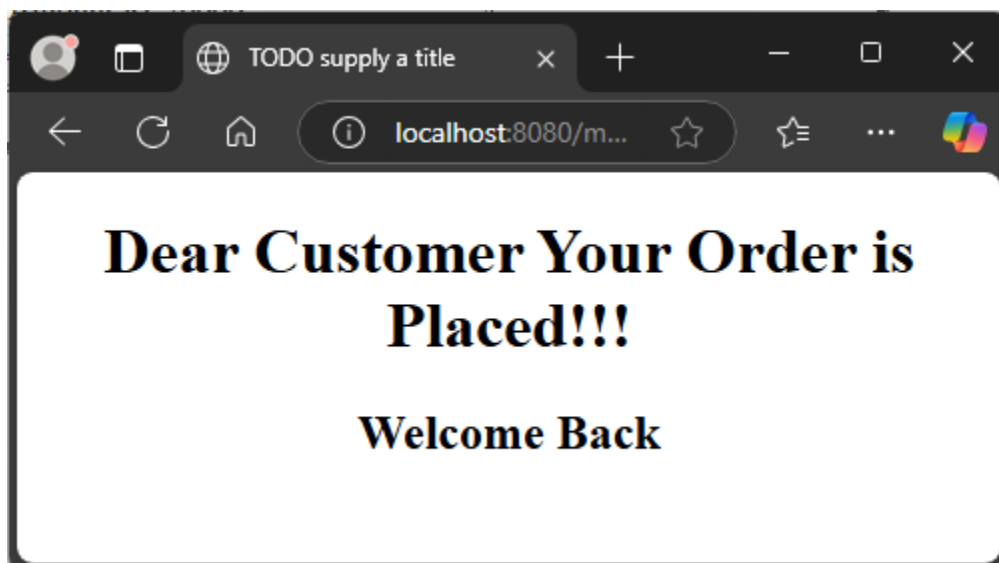
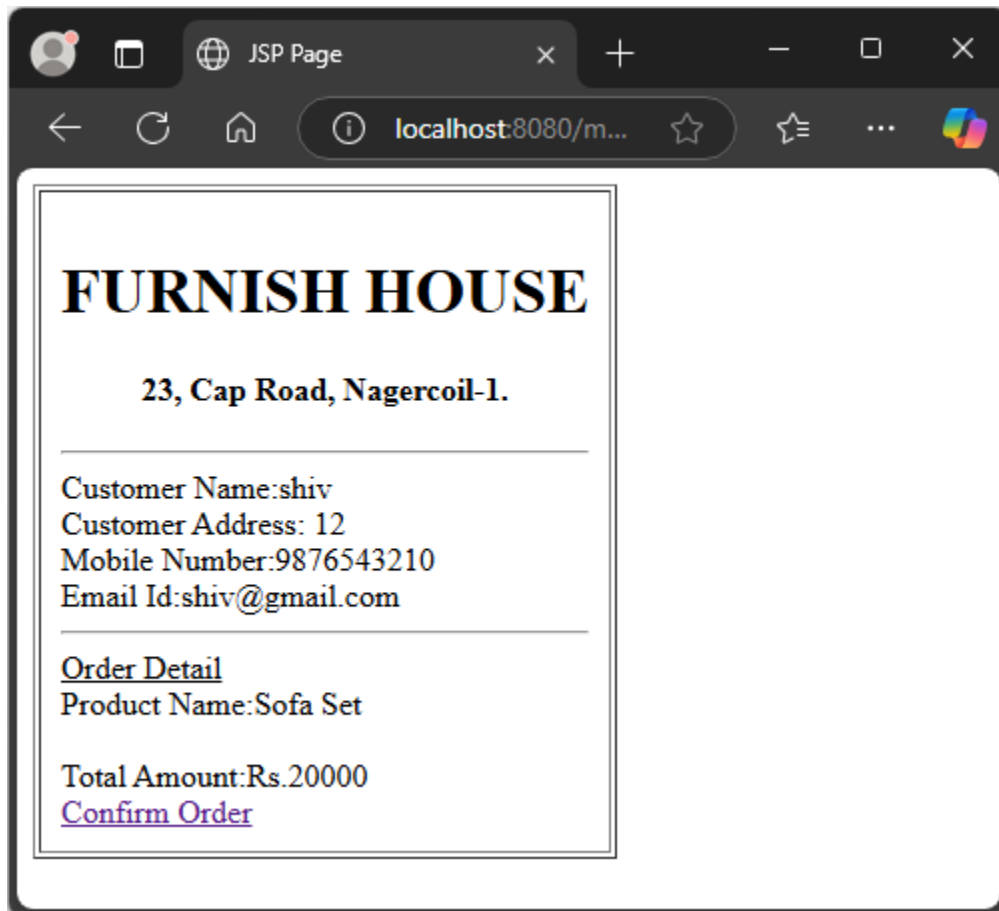
```
<html>
  <head>
    <title>TODO supply a title</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <center><h1>Dear Customer Your Order is Placed!!!</h1>
      <h2>Welcome Back</h2>
    </center>
  </body>
</html>
```


OUTPUT:



A screenshot of a web browser window displaying a form titled "FURNISH HOUSE". The browser's address bar shows "localhost:8080/mavenproject10/index.html". The form is enclosed in a double-bordered box and contains the following fields and controls:

- Customer Name:** A text input field containing the value "shiv".
- Customer Address:** A text input field containing the value "12".
- Mobile Number:** A text input field containing the value "9876543210".
- Email ID:** A text input field containing the value "shiv@gmail.com".
- Select Furniture:** A dropdown menu with "Sofa Set" selected.
- Number of Pieces:** A text input field containing the value "2".
- Enter Unit Prices:** A text input field containing the value "10000".
- Proceed:** A button located at the bottom left of the form.



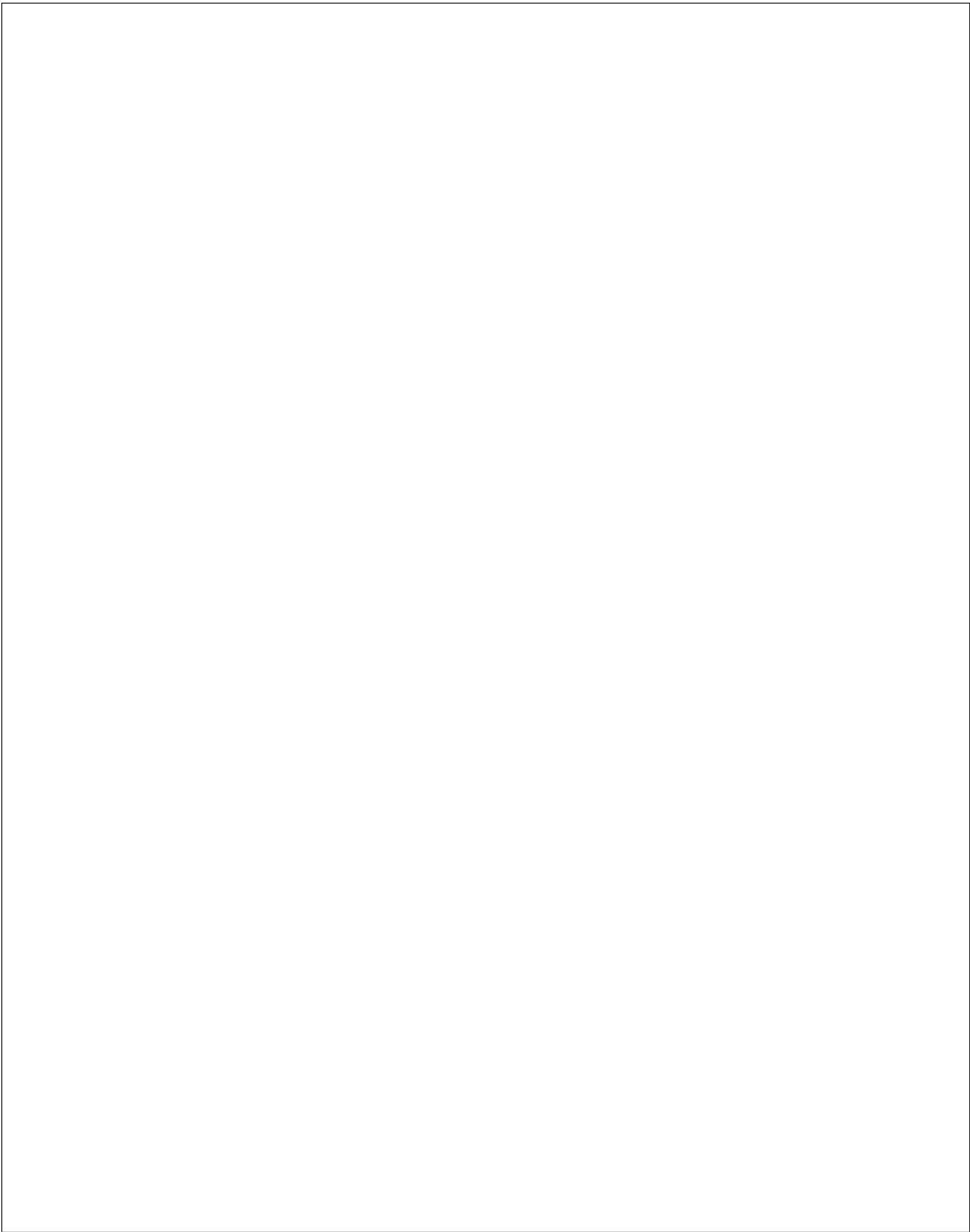
RESULT:

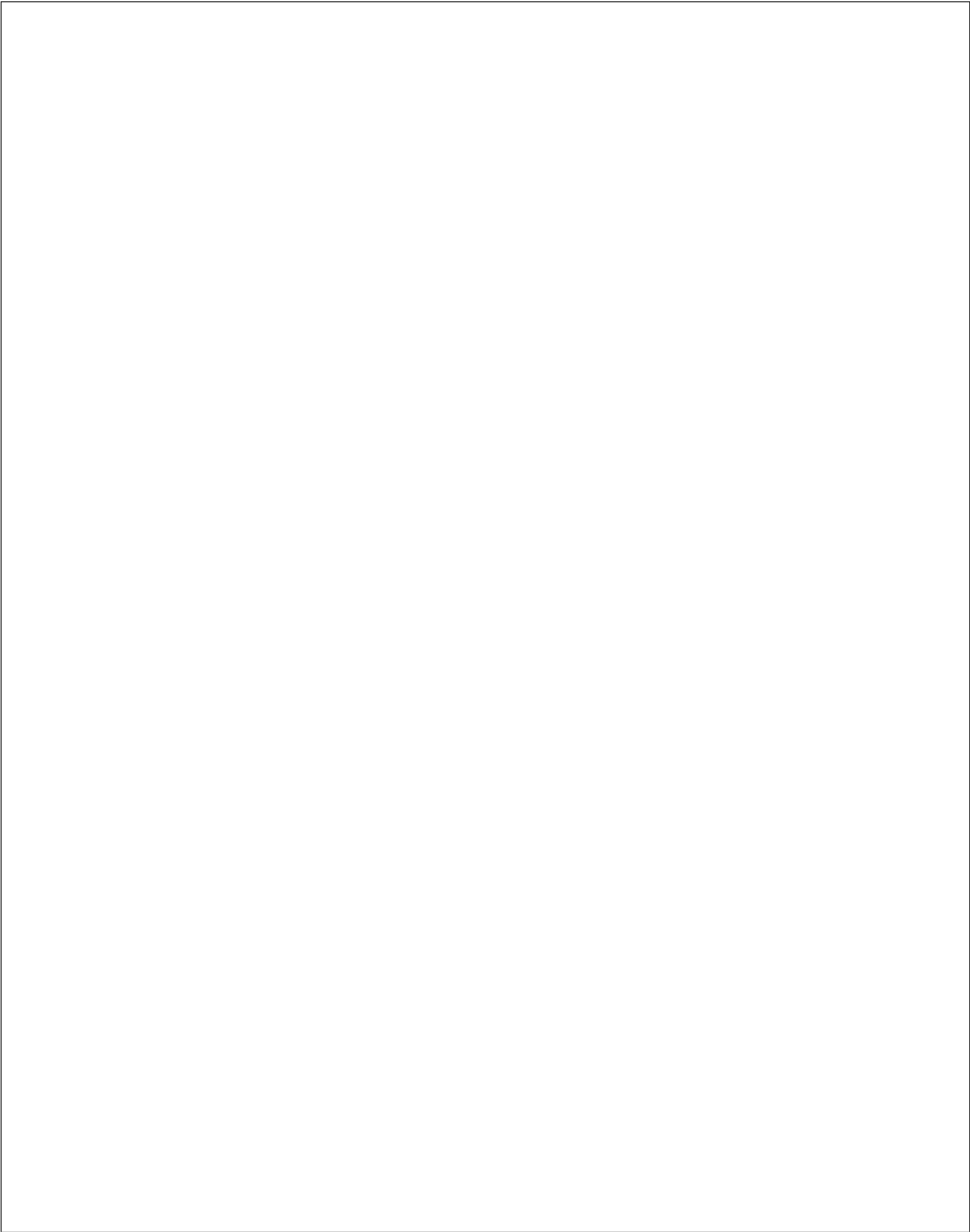
EX NO: 05
DATE:

EMPLOYEE PAYSIP USING JSP

AIM:

PROCEDURE:





PROGRAM:

newjsp.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>
    <h1>Hello World</h1>
    <%
      String ename=request.getParameter("username");
      int bs=Integer.parseInt(request.getParameter("sal"));
      if(bs>=10000)
      {
        double da=bs*0.3;
        double hra=bs*0.4;
        double gs=bs+da+hra;
        out.println("<h1>Employee Pay Slip</h1>");
        out.println("<br><h2>Employee Name:"+ename);
        out.println("<br><h2>Basic Pay:"+bs);
        out.println("<br><h2>DA:"+da);
        out.println("<br><h2>HRA:"+hra);
        out.println("<br><h2>Gross Salary:"+gs);
      }
      else
      {
        response.sendRedirect("newhtml2.html");
      }
    %>
  </body>
</html>
```

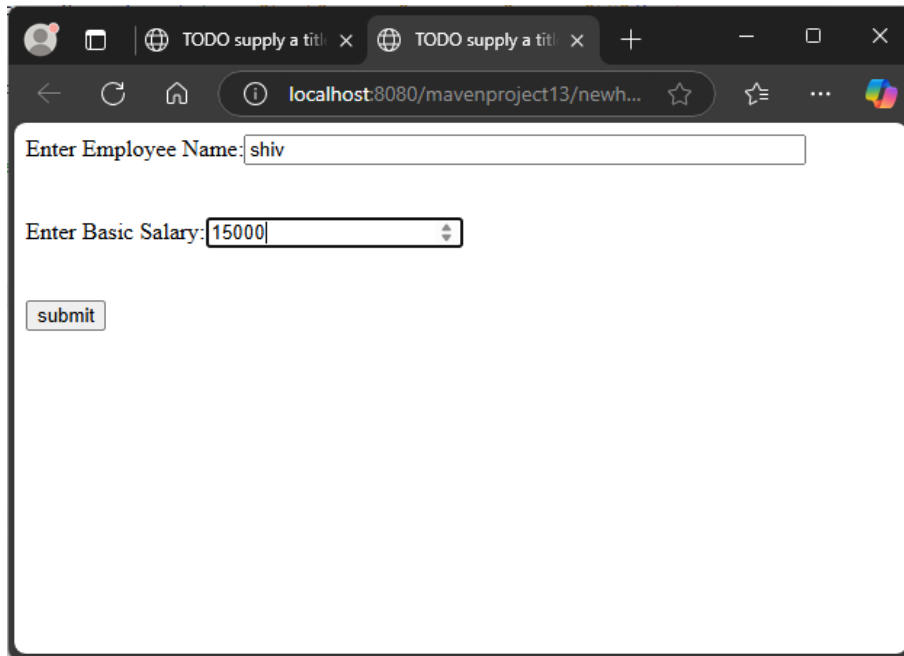
newhtml1.html

```
<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="newjsp.jsp" method="GET">
      Enter Employee Name:<input type="text" name="username" size="50"/>
      <br>
      <br>
      Enter Basic Salary:<input type="number" name="sal" size="20"/>
      <br>
      <br>
      <input type="submit" value="submit"/>
    </form>
  </body>
</html>
```

newhtml2.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>
    <h1>Error Found</h1>
    <h2>error due to salary less than 10000</h2>
  </body>
</html>
```


OUTPUT:

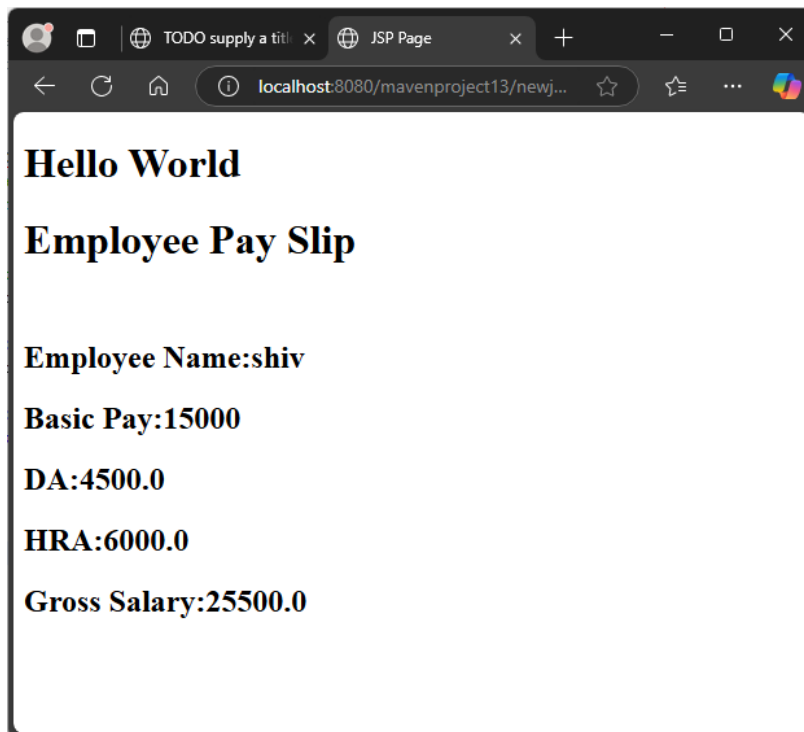


A screenshot of a web browser window. The address bar shows 'localhost:8080/mavenproject13/newh...'. The page contains a form with two input fields: 'Enter Employee Name:' with the value 'shiv' and 'Enter Basic Salary:' with the value '15000'. Below the fields is a 'submit' button.

Enter Employee Name: shiv

Enter Basic Salary: 15000

submit



A screenshot of a web browser window. The address bar shows 'localhost:8080/mavenproject13/newj...'. The page displays the output of the form submission, including 'Hello World', 'Employee Pay Slip', and the calculated values for Employee Name, Basic Pay, DA, HRA, and Gross Salary.

Hello World

Employee Pay Slip

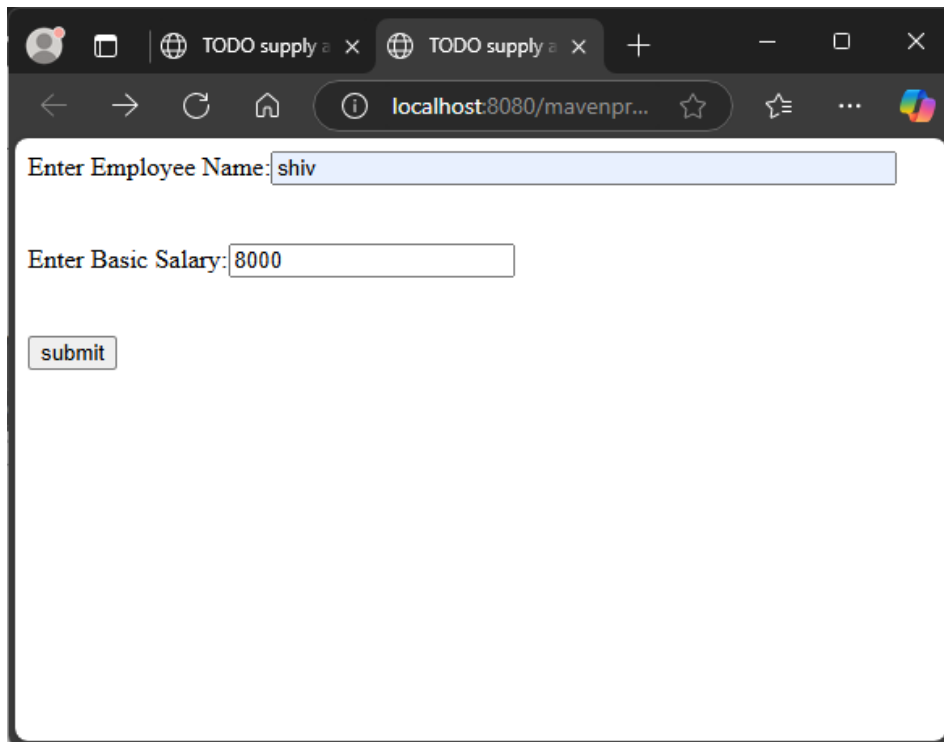
Employee Name:shiv

Basic Pay:15000

DA:4500.0

HRA:6000.0

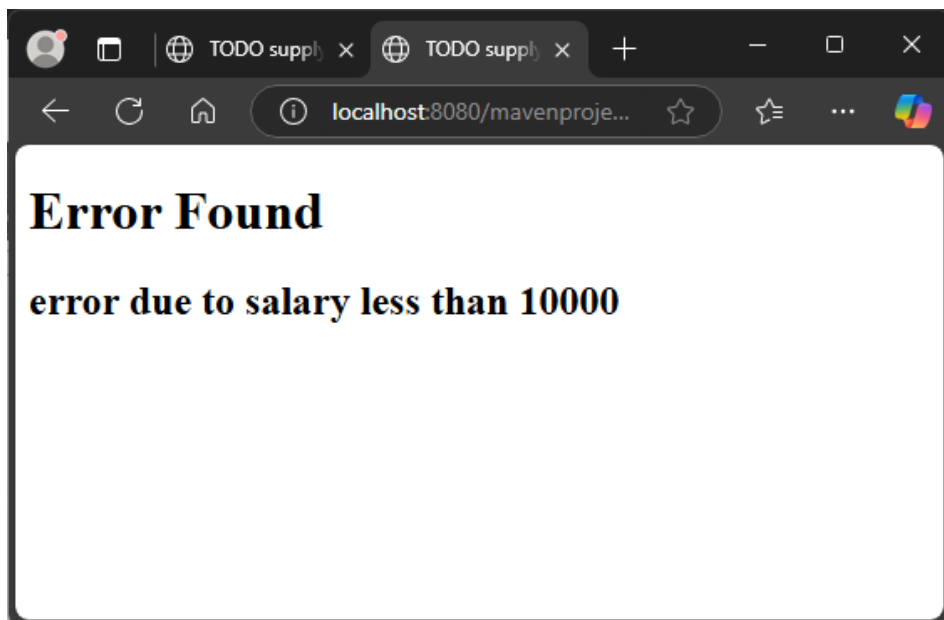
Gross Salary:25500.0



A screenshot of a web browser window with two tabs labeled "TODO supply". The address bar shows "localhost:8080/mavenpr...". The page contains a form with two input fields and a submit button. The first input field is labeled "Enter Employee Name:" and contains the text "shiv". The second input field is labeled "Enter Basic Salary:" and contains the text "8000". Below the input fields is a button labeled "submit".

Enter Employee Name:

Enter Basic Salary:



A screenshot of a web browser window with two tabs labeled "TODO supply". The address bar shows "localhost:8080/mavenproje...". The page displays an error message in bold black text.

Error Found

error due to salary less than 10000

RESULT:

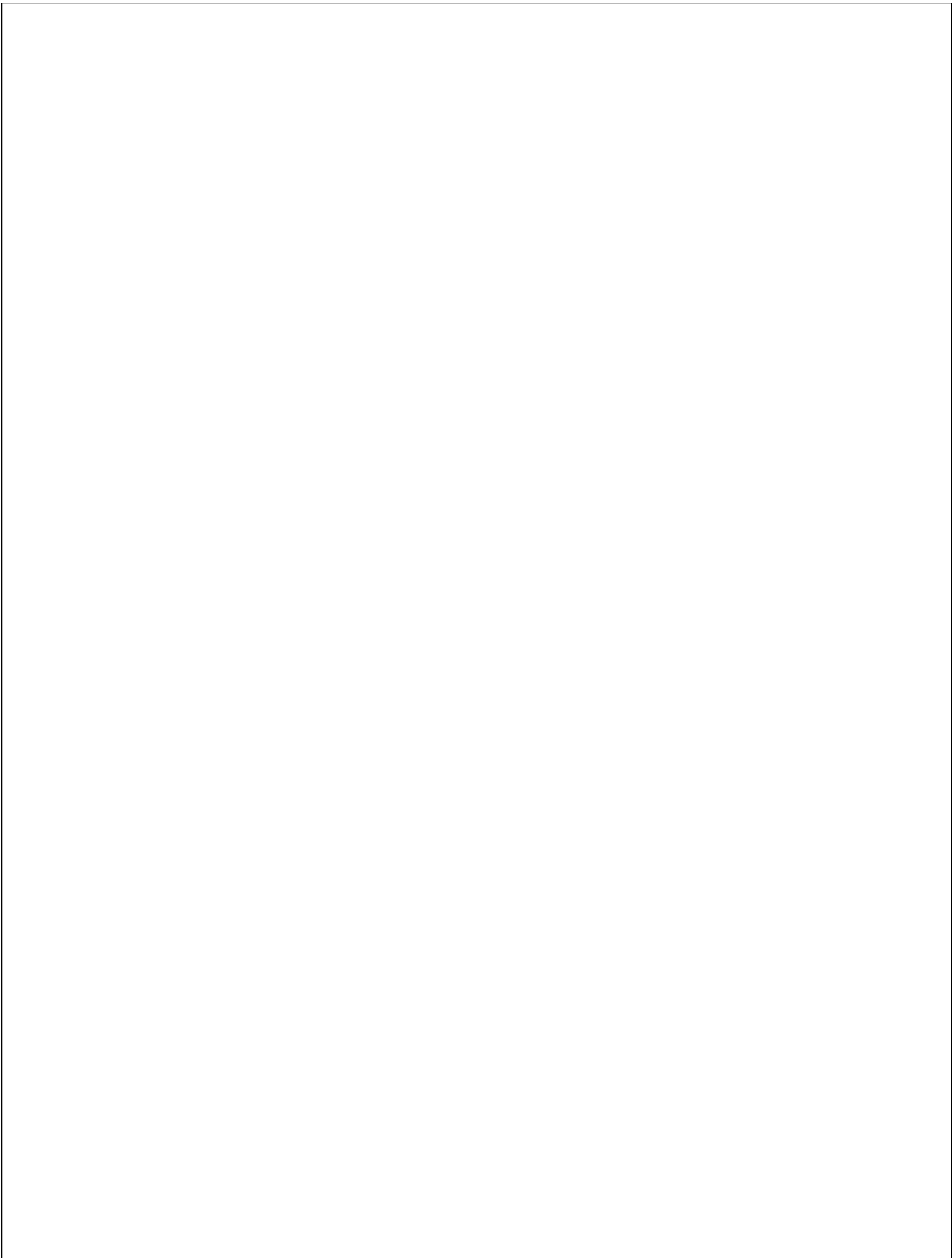
EX NO: 06

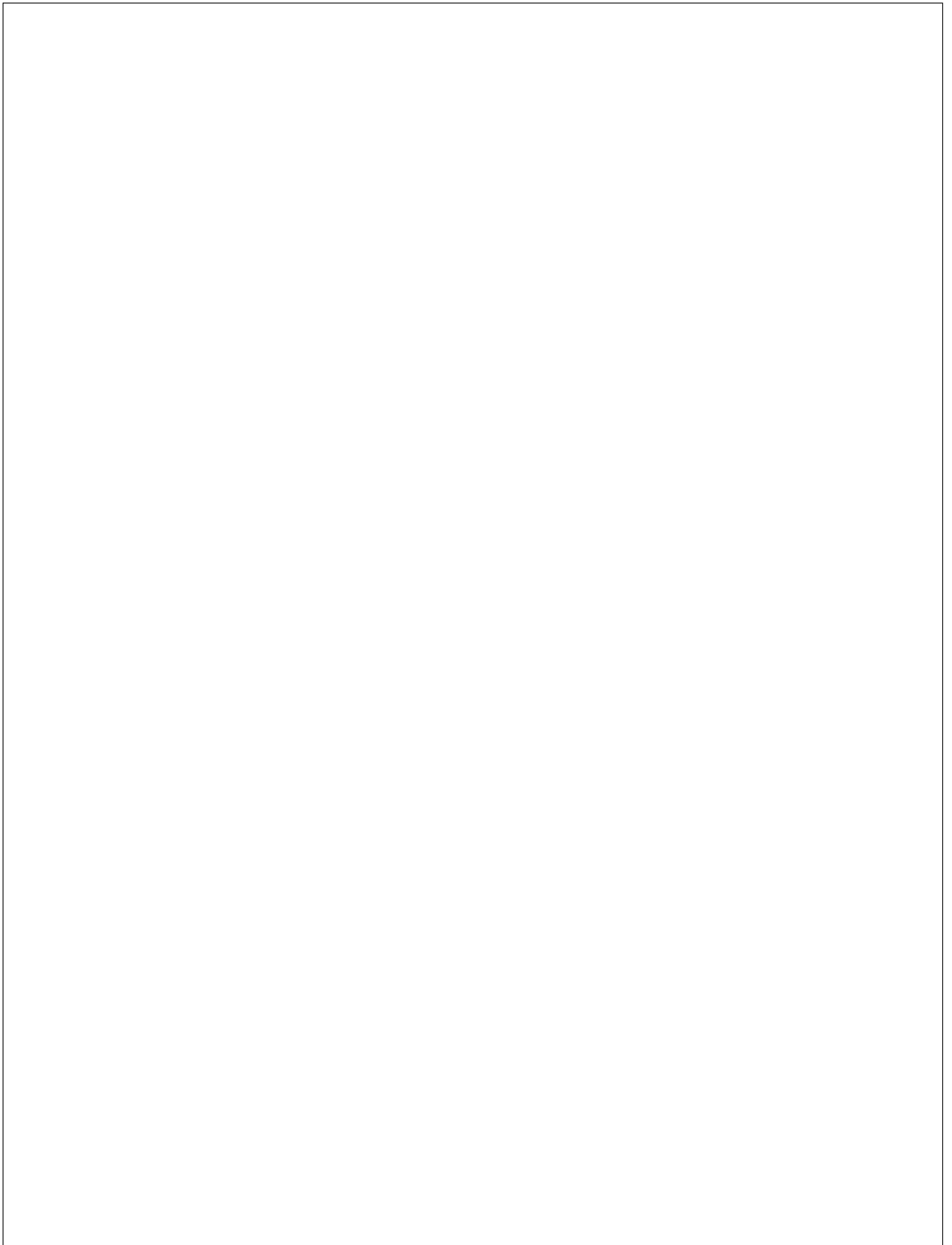
DATE:

DATABASE ACCESS USING JDBC

AIM:

PROCEDURE:



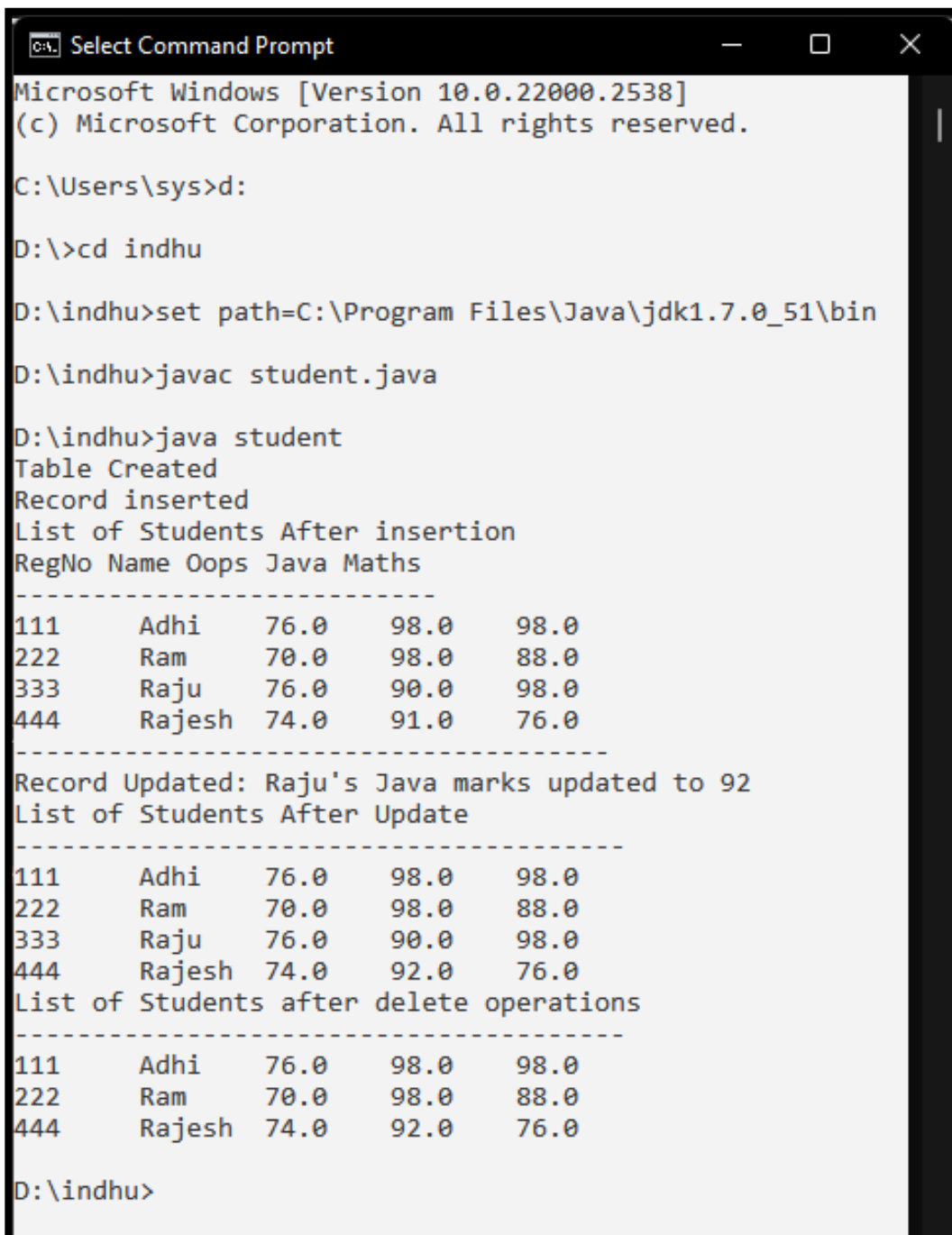


PROGRAM:

```
import java.sql.*;
public class student
{
    public static void main(String[] args)
    {
        try
        {
            Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
            Connection con=DriverManager.getConnection("jdbc:odbc:dsk"," "," ");
            Statement s=con.createStatement();
            s.execute("create table table1(regno integer,name varchar(20),oops number,java number,maths
            number)");
            System.out.println("Table Created");
            s.execute("insert into table1 values(111,'Adhi',76,98,98)");
            s.execute("insert into table1 values(222,'Ram',70,98,88)");
            s.execute("insert into table1 values(333,'Raju',76,90,98)");
            s.execute("insert into table1 values(444,'Rajesh',74,91,76)");
            System.out.println("Record inserted");
            s.execute("select * from table1");
            ResultSet rs1=s.getResultSet();
            System.out.println("List of Students After insertion");
            System.out.println("RegNo Name Oops Java Maths");
            System.out.println("-----");
            if(rs1!=null)
            while(rs1.next())
            {
                System.out.println(rs1.getString(1)+"\t"+rs1.getString(2)+"\t"+rs1.getString(3)+"\t"+
                rs1.getString(4)+"\t"+rs1.getString(5));
            }
            System.out.println("-----");
            s.executeUpdate("UPDATE table1 SET java = 92 WHERE regno = 444");
            System.out.println("Record Updated: Raju's Java marks updated to 92");
            s.execute("select * from table1");
            ResultSet rs2 = s.getResultSet();
            System.out.println("List of Students After Update");
            System.out.println("-----");
```

```
if (rs2 != null)
{
while (rs2.next())
{
System.out.println(rs2.getString(1) + "\t" + rs2.getString(2) + "\t" + rs2.getString(3) + "\t" +
rs2.getString(4) + "\t" + rs2.getString(5));
}
}
s.executeUpdate("DELETE FROM table1 WHERE regno=333");
System.out.println("List of Students after delete operations");
s.execute("select * from table1");
ResultSet rs3=s.getResultSet();
System.out.println("-----");
if(rs3!=null)
while(rs3.next())
{
System.out.println(rs3.getString(1)+"\t"+rs3.getString(2)+"\t"+rs3.getString(3)+"\t"+
rs3.getString(4)+"\t"+rs3.getString(5));
}
s.close();
con.close();
}
catch(Exception err)
{
System.out.println("ERROR:"+err);
}
}
}
```


OUTPUT:



```
C:\Users\sys>d:
D:\>cd indhu
D:\indhu>set path=C:\Program Files\Java\jdk1.7.0_51\bin
D:\indhu>javac student.java
D:\indhu>java student
Table Created
Record inserted
List of Students After insertion
RegNo Name Oops Java Maths
-----
111      Adhi      76.0      98.0      98.0
222      Ram       70.0      98.0      88.0
333      Raju       76.0      90.0      98.0
444      Rajesh     74.0      91.0      76.0
-----
Record Updated: Raju's Java marks updated to 92
List of Students After Update
-----
111      Adhi      76.0      98.0      98.0
222      Ram       70.0      98.0      88.0
333      Raju       76.0      90.0      98.0
444      Rajesh     74.0      92.0      76.0
List of Students after delete operations
-----
111      Adhi      76.0      98.0      98.0
222      Ram       70.0      98.0      88.0
444      Rajesh     74.0      92.0      76.0
D:\indhu>
```

The screenshot shows a Windows Command Prompt window titled "Select Command Prompt". The user navigates to the D:\indhu directory and sets the Java path to C:\Program Files\Java\jdk1.7.0_51\bin. They then compile and run a Java program named student.java. The program output includes a table of student marks before and after an update, and a list of students after delete operations. The table has columns for RegNo, Name, Oops, Java, and Maths. The update operation changes Raju's Java marks from 90.0 to 92.0. The delete operation removes the student with RegNo 333 (Raju).

RESULT:

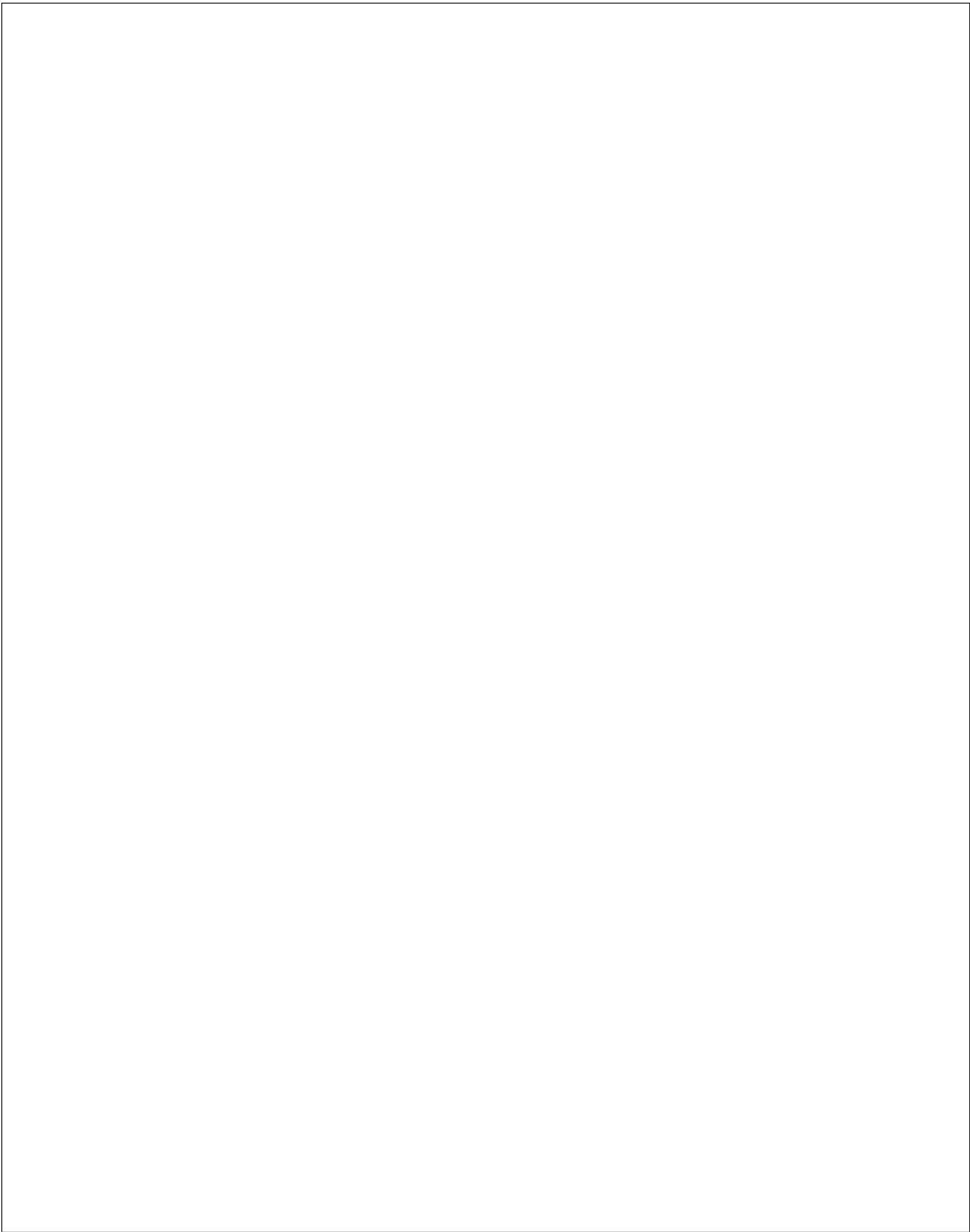
EX NO: 07

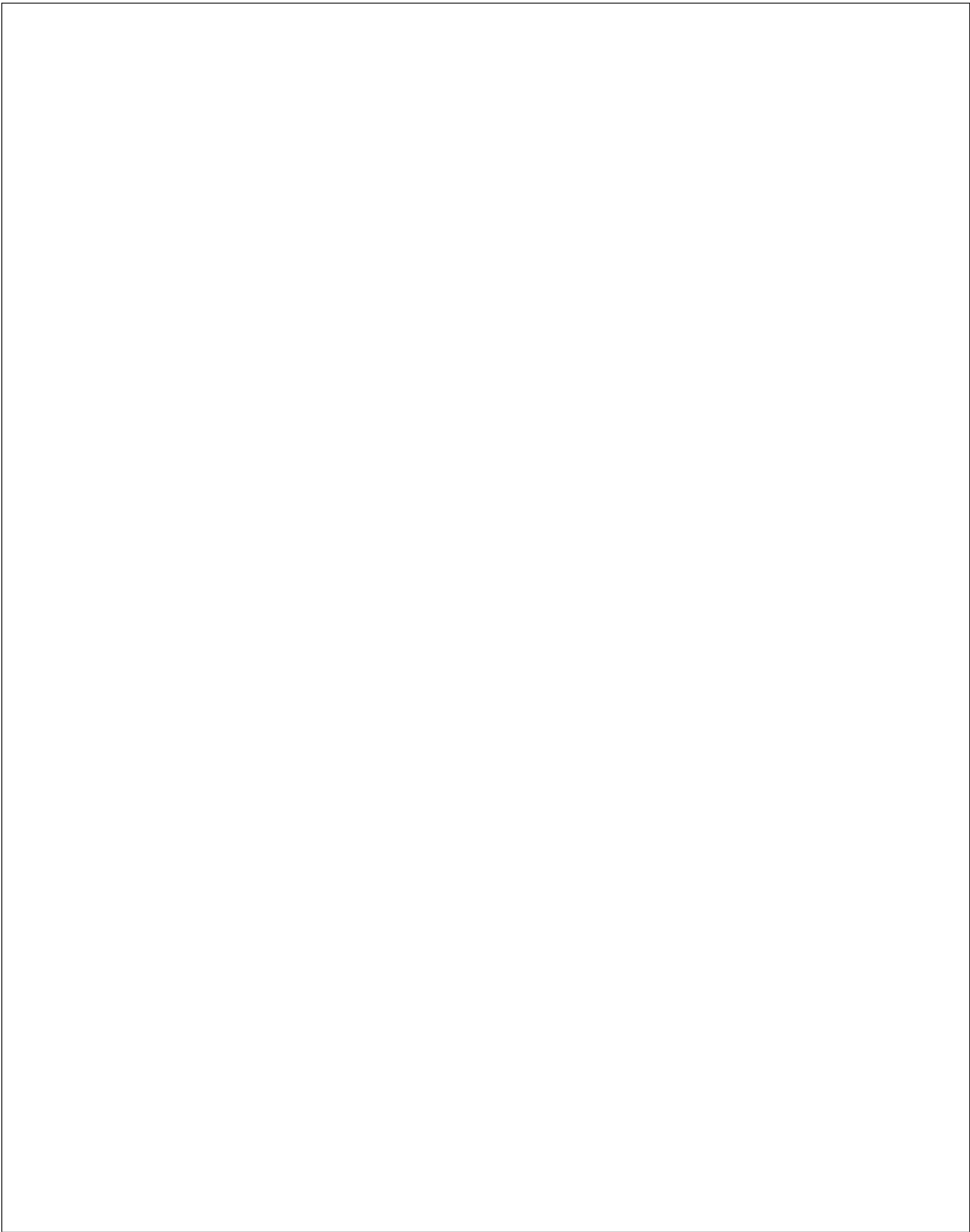
**CREATING FORM DATA USING
JAVA SERVLET**

DATE:

AIM:

PROCEDURE:





PROGRAM:

New Servlet.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;

@WebServlet(name="NewServlet",urlPatterns = {"/NewServlet"})
public class NewServlet extends HttpServlet{

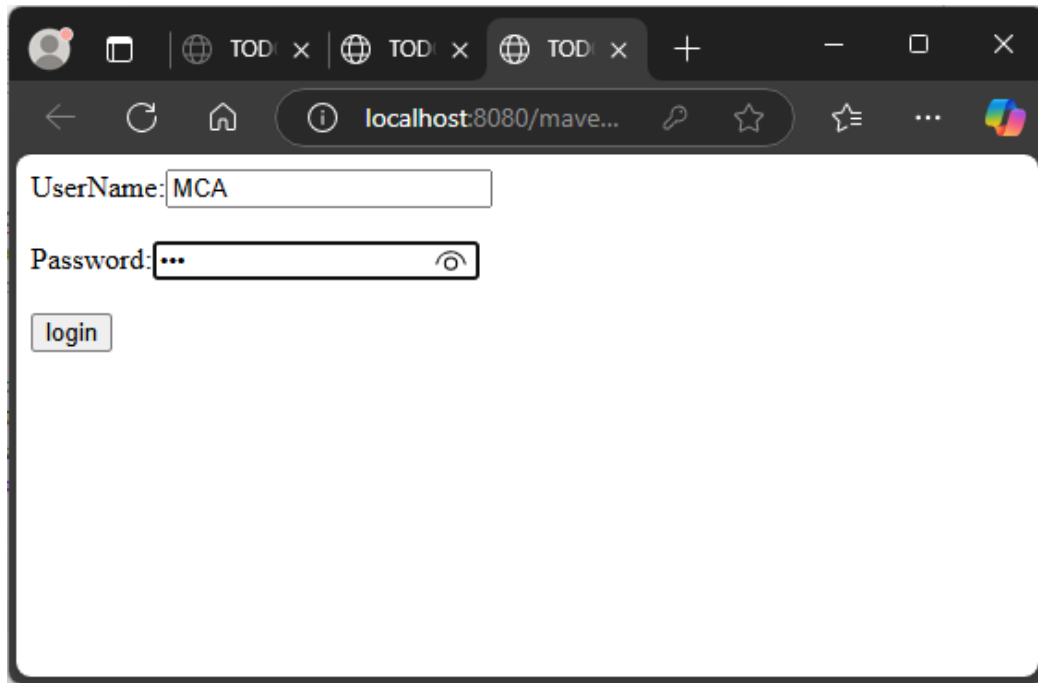
    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            String name=request.getParameter("t1");
            String password=request.getParameter("p1");
            if(name.equals("MCA")&& password.equals("123"))
                out.println("<h1>" + "Welcome!!! First Year " + name + " Computer Application" + "</h1>");

            else
                out.println("<h1>"+ "Sorry wrong username or password" + "</h1>");
        }
        finally
        {
            System.out.close();
        }
    }
}
```

newhtml.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="NewServlet" method="GET">
      UserName:<input type="text" name="t1"><br><br>
      Password:<input type="password" name="p1"><br><br>
      <input type="submit" value="login">
    </form>
  </body>
</html>
```

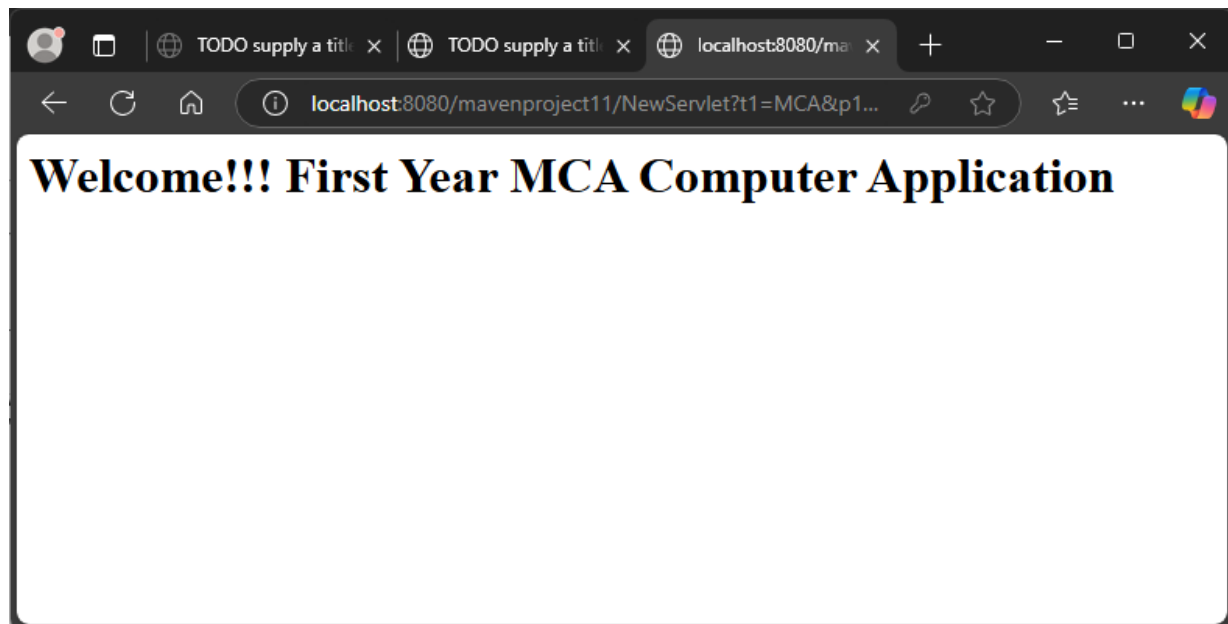

OUTPUT:

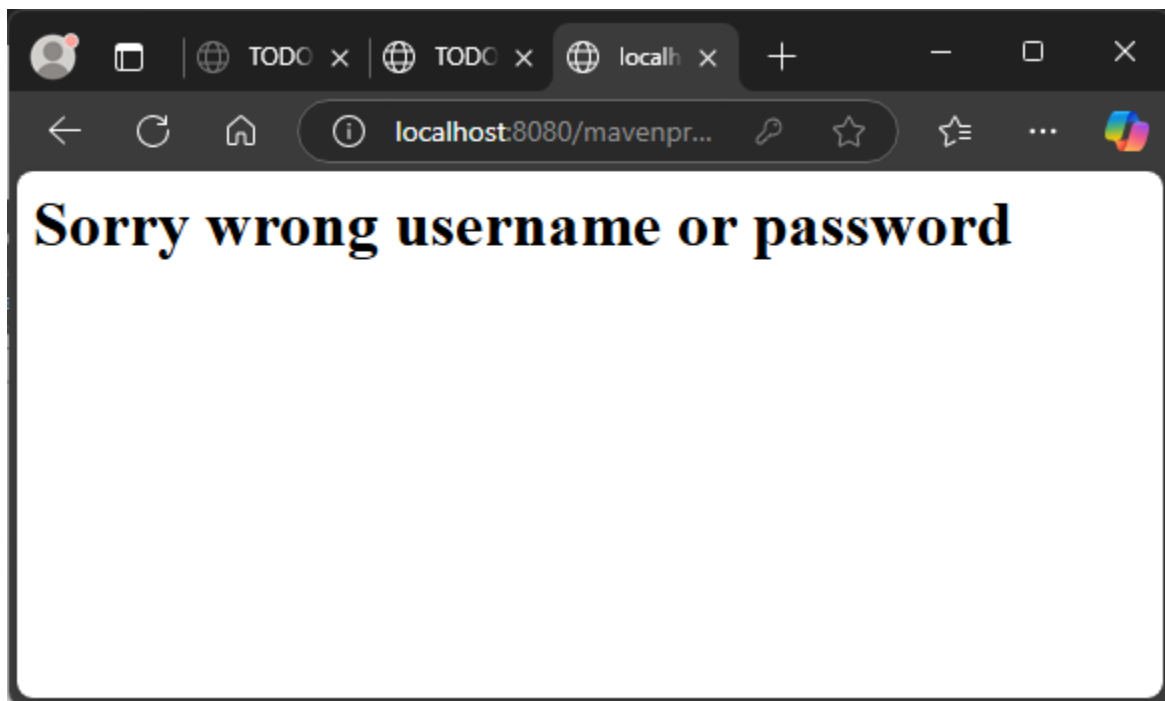
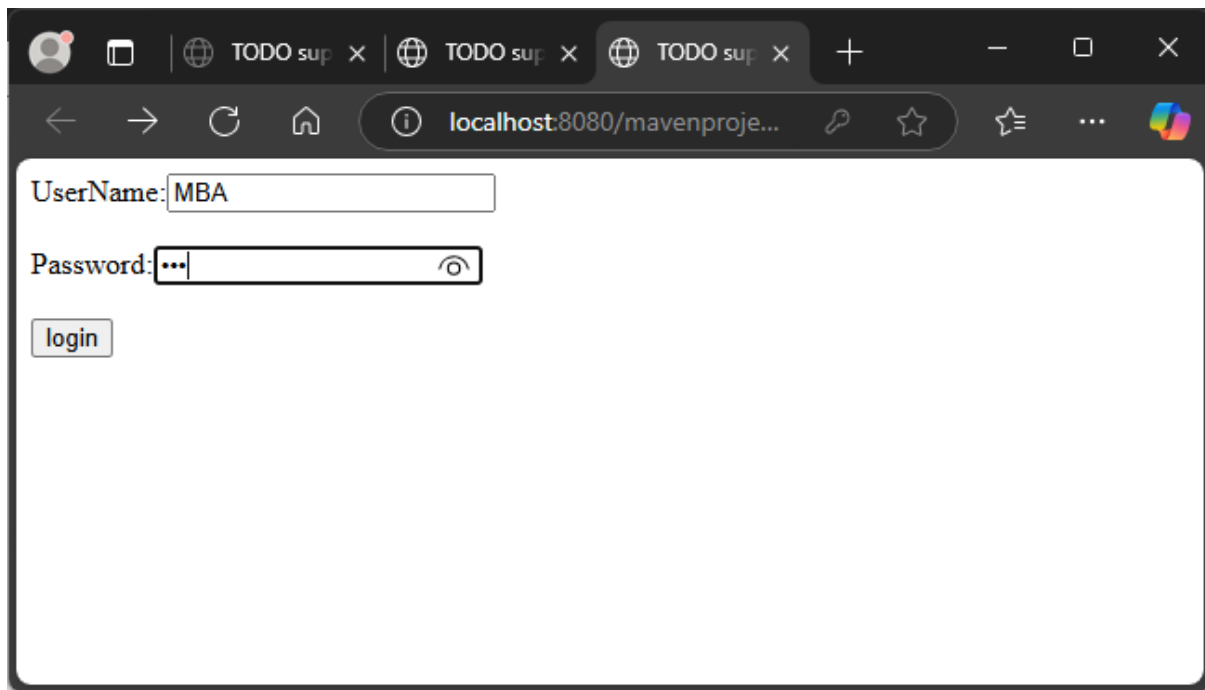


A screenshot of a web browser window. The address bar shows 'localhost:8080/mave...'. The page contains a login form with two input fields: 'UserName:' with the value 'MCA' and 'Password:' with masked characters '...'. Below the password field is a 'login' button.

UserName:

Password:





RESULT:

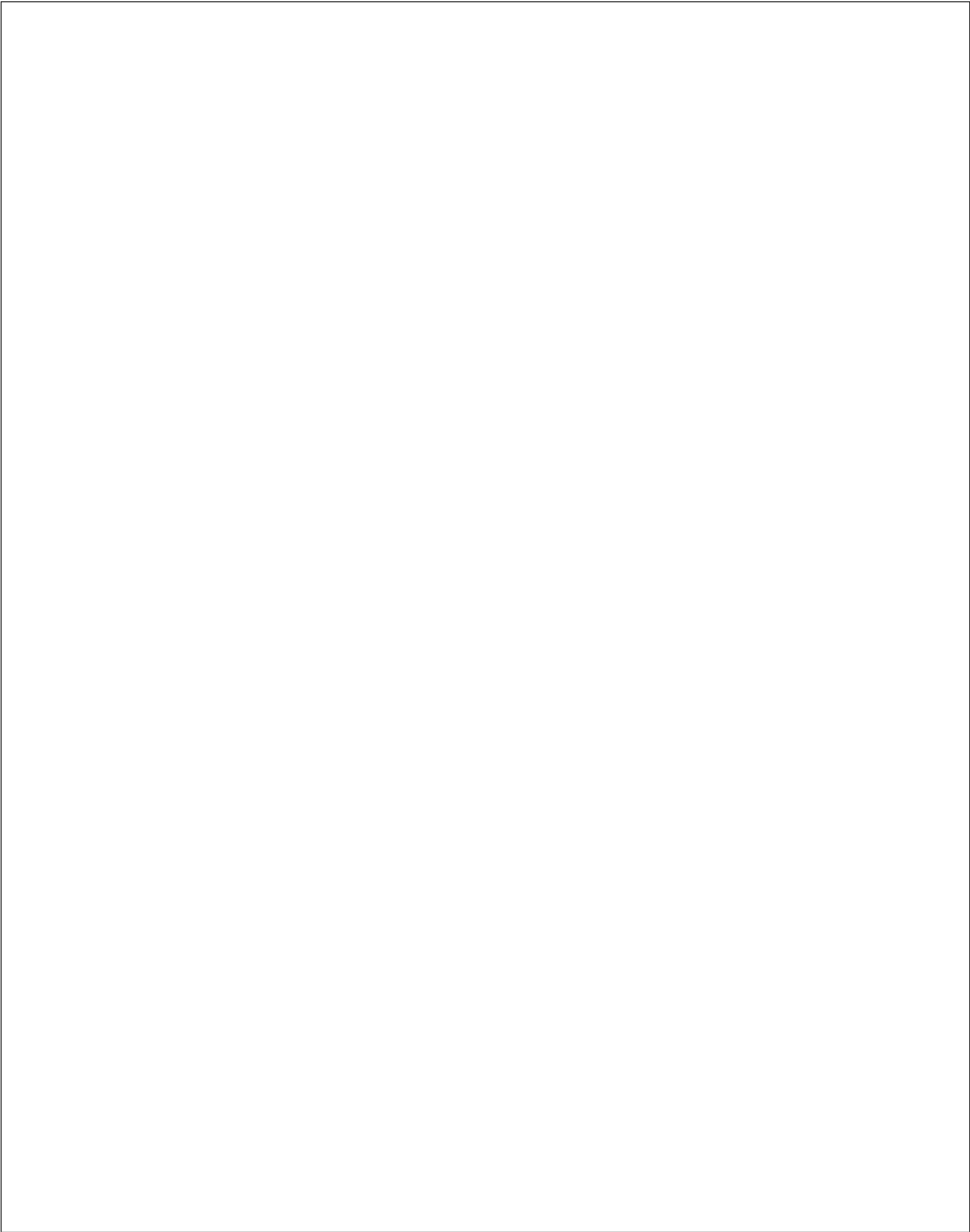
EX NO: 08

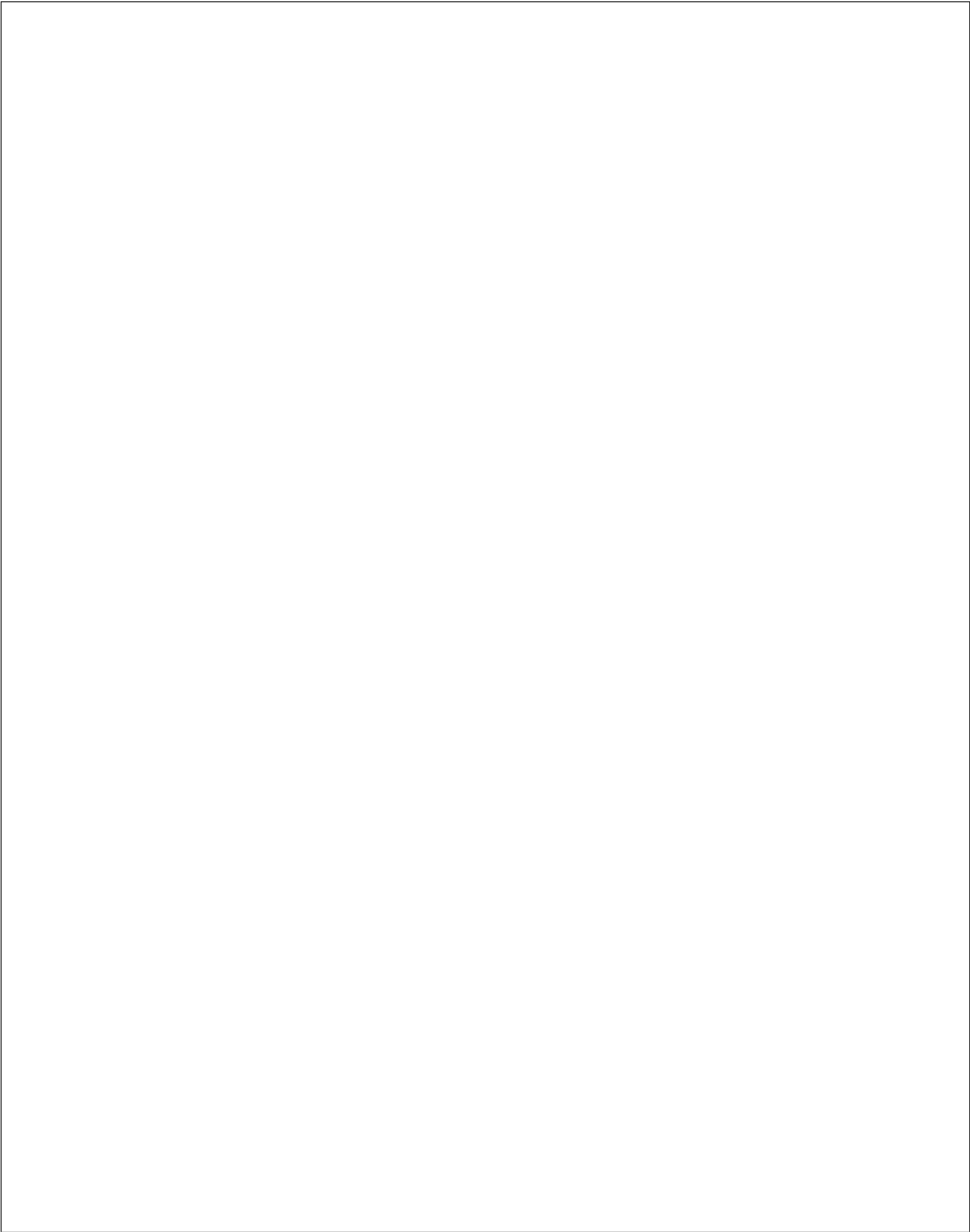
HEADER NAME AND ITS VALUES

DATE:

AIM:

PROCEDURE:





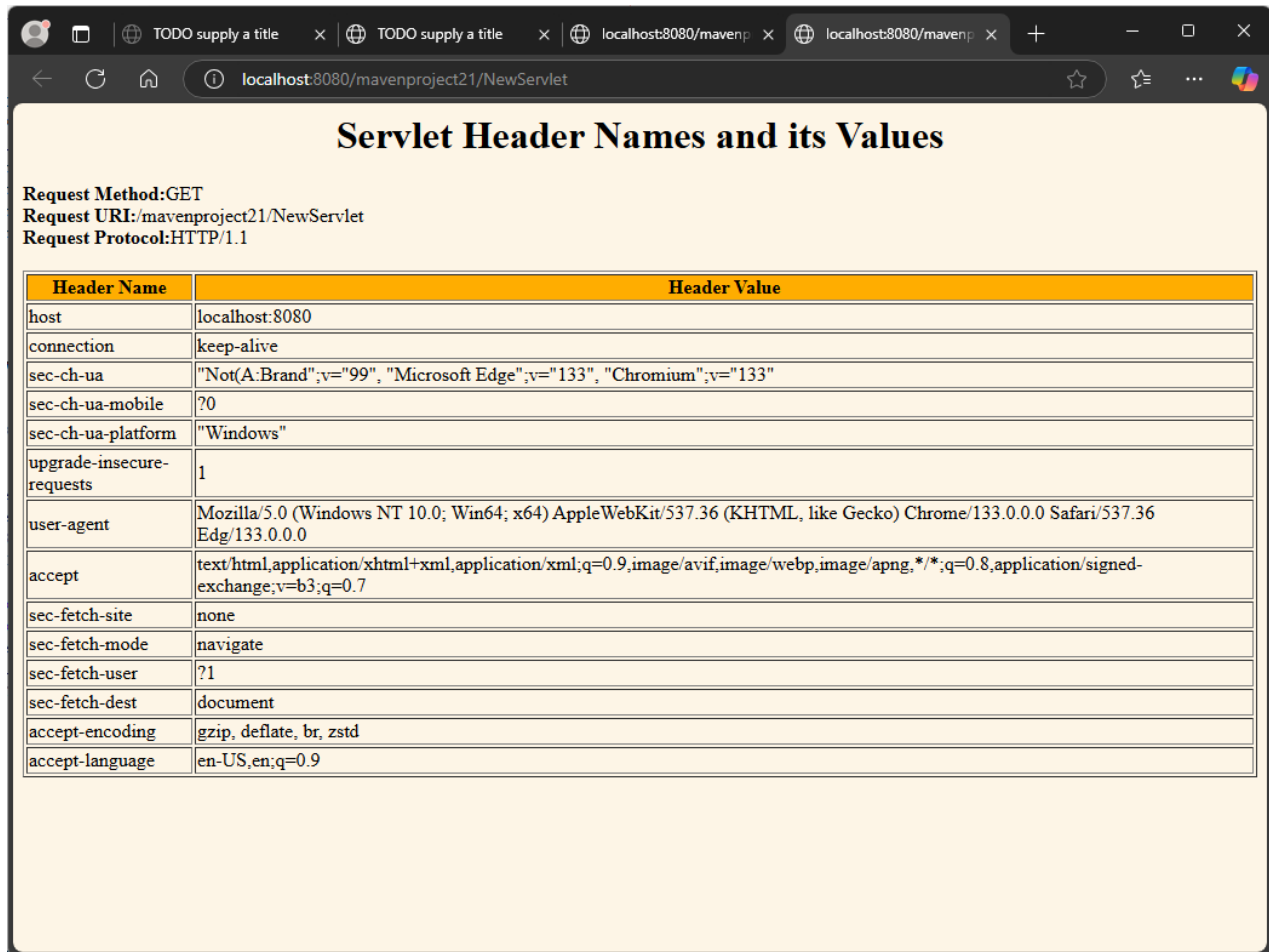
PROGRAM:

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

public class NewServlet extends HttpServlet {

    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            out.println("<BODY BGCOLOR=\"\#FDF5E6\">\n"+
                "<H1 ALIGN=CENTER>"+ "Servlet Header Names and its Values" + "</H1>\n"+
                "<B>Request Method:</B>"+
                request.getMethod()+"<BR>\n"+
                "<B>Request URI:</B>"+
                request.getRequestURI()+"<BR>\n"+
                "<B>Request Protocol:</B>"+
                request.getProtocol()+"<BR><BR>\n"+
                "<TABLE BORDER=1 ALIGN=CENTER>\n"+
                "<TR BGCOLOR=\"\#FFA000\">\n"+
                "<TH>Header Name<TH>Header Value");
            Enumeration headerNames=request.getHeaderNames();
            while(headerNames.hasMoreElements())
            {
                String headerName=(String)headerNames.nextElement();
                out.println("<TR><TD>"+headerName);
                out.println(" <TD>"+request.getHeader(headerName));
            }
            out.println("</TABLE>\n</BODY><HTML>");
        }
    }
}
```

OUTPUT:



Header Name	Header Value
host	localhost:8080
connection	keep-alive
sec-ch-ua	"Not(A.Brand";v="99", "Microsoft Edge";v="133", "Chromium";v="133"
sec-ch-ua-mobile	?0
sec-ch-ua-platform	"Windows"
upgrade-insecure-requests	1
user-agent	Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/133.0.0.0 Safari/537.36 Edg/133.0.0.0
accept	text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7
sec-fetch-site	none
sec-fetch-mode	navigate
sec-fetch-user	?1
sec-fetch-dest	document
accept-encoding	gzip, deflate, br, zstd
accept-language	en-US,en;q=0.9

RESULT:

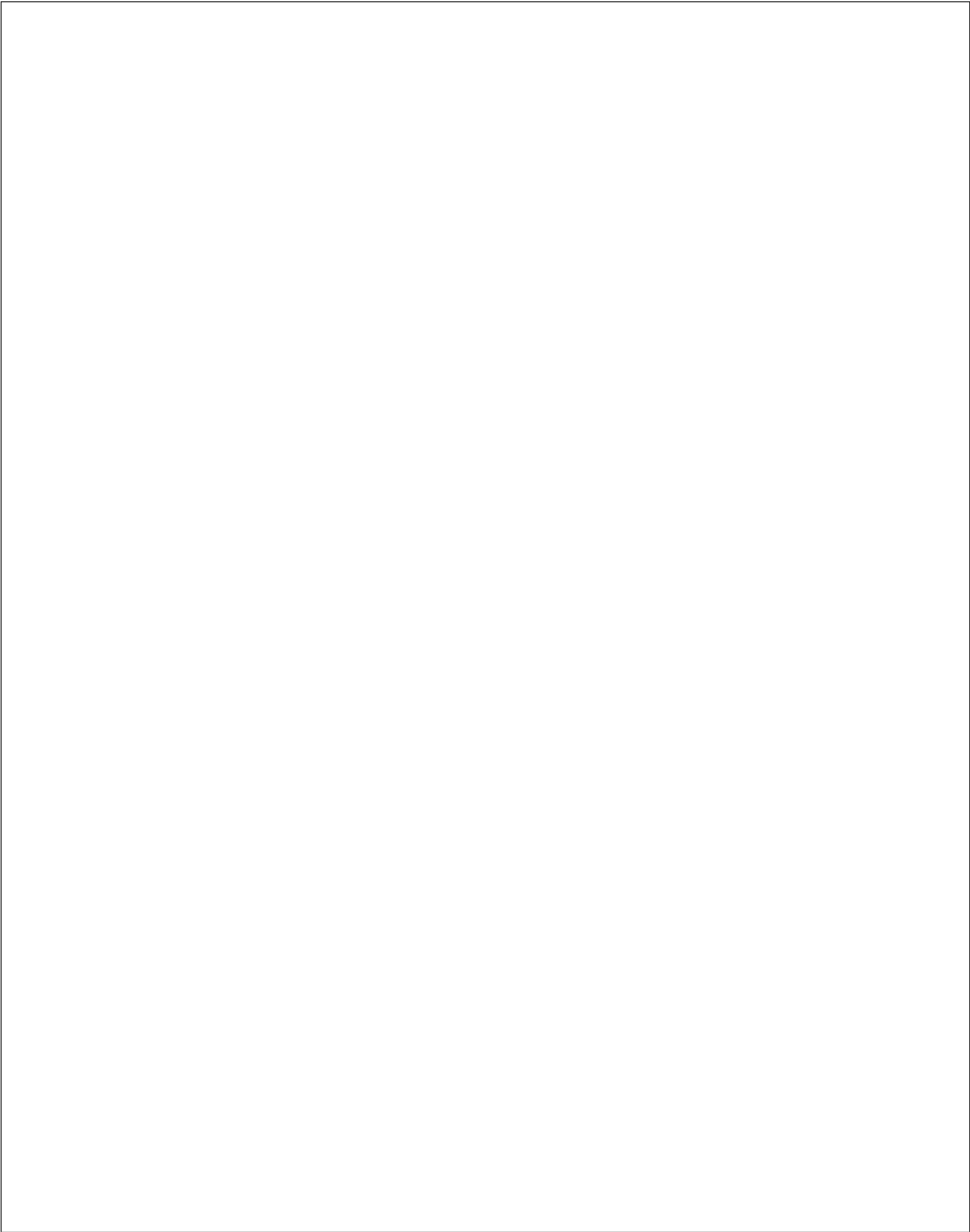
EX NO: 09

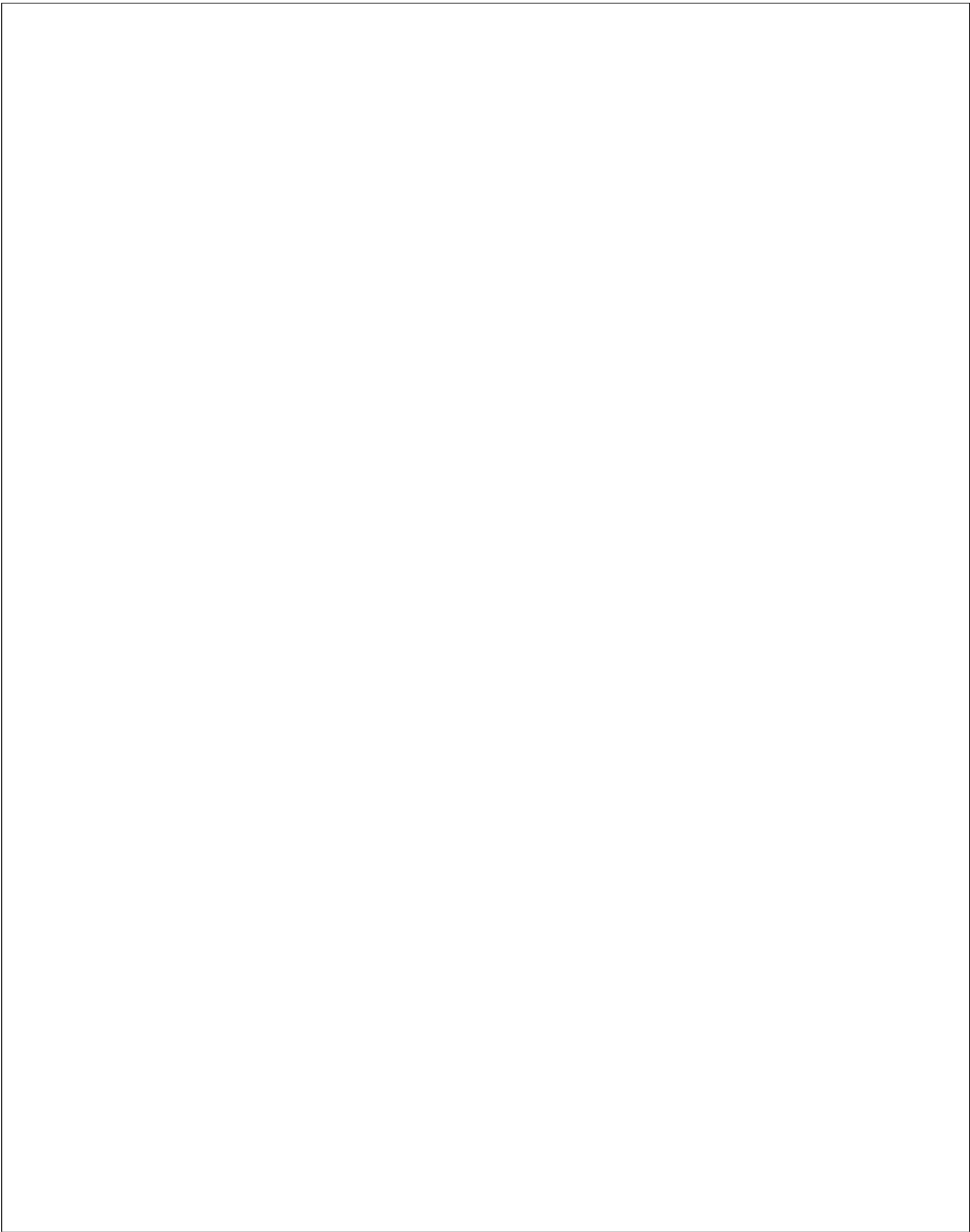
JSP USING SESSION OBJECT

DATE:

AIM:

PROCEDURE:





PROGRAM:

index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Start Page</title>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
  </head>
  <body>
    <h1>Session Implementation using JSP</h1>
    <form action="session1.jsp">
      Enter User Name:
      <br><br>
      <input type="text" name="inputname">
      <br><br>
      <input type="submit" value="show session detail"><br/>
    </form>
  </body>
</html>
```

session1.jsp

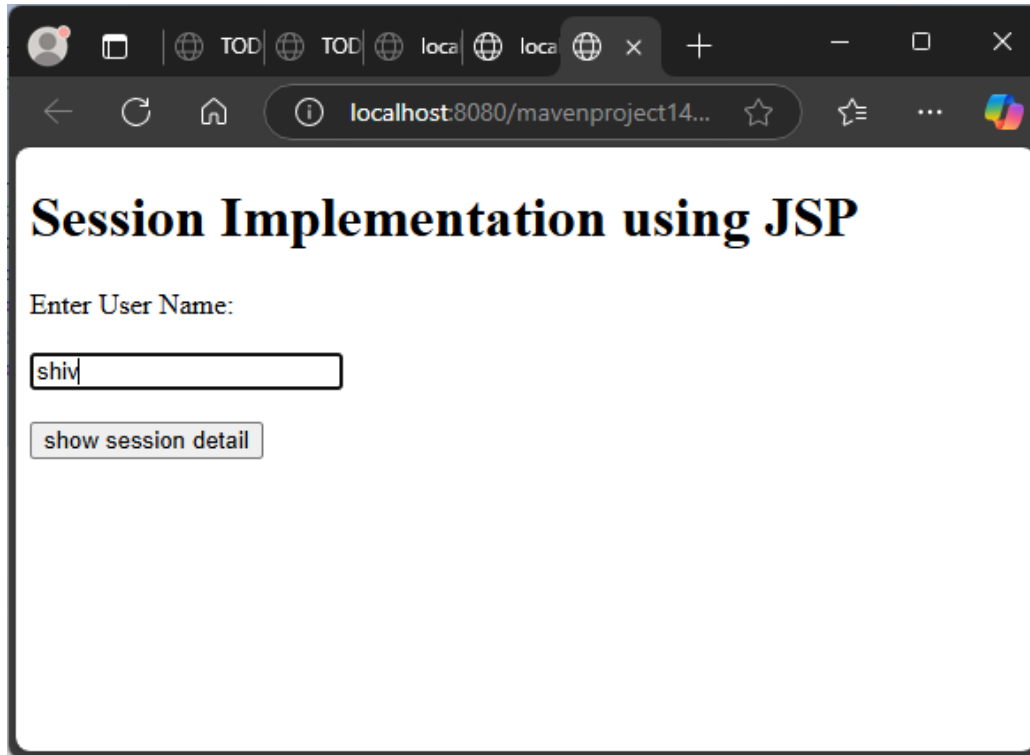
```
<%@page import="java.util.Date"%>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body>
    <%String Username=request.getParameter("inputname");
    out.print("Welcome"+Username);%>
  </b><br><br>
    <b>
      <% Date createTime=new Date(session.getCreationTime());
      out.println("Session Created Time is:"+createTime);%>
    </b><br><br>
    <b>
      <%out.print("Session Id is:"+session.getId());%>
    </b><br><br>
    <%session.setAttribute("sessname",Username);%>
    <br><br>
    <h2><a href="session2.jsp">Set Session name and check it</a></h2>

  </body>
</html>
```

session2.jsp

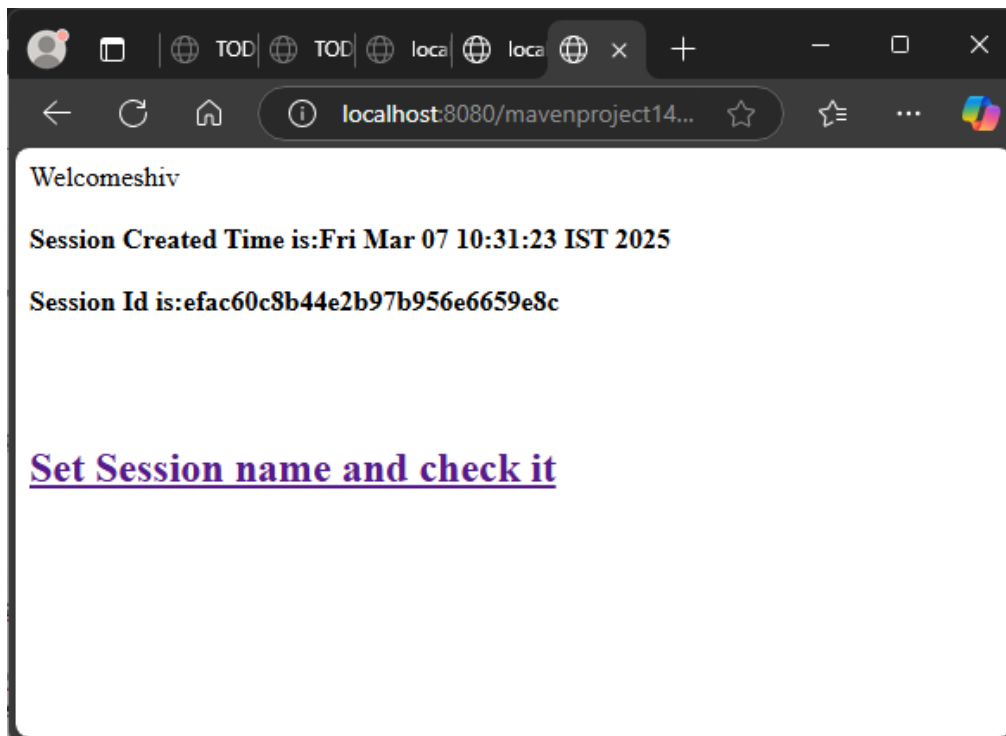
```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body>
    <h3>
      <%@page import="java.io.*,java.util.*"%>
      <%
        String name=(String)session.getAttribute("sessname");
        out.print("Hello User!! You set the Session Name as:"+name);
      %>
    </h3>
  </body>
</html>
```

OUTPUT:



Session Implementation using JSP

Enter User Name:

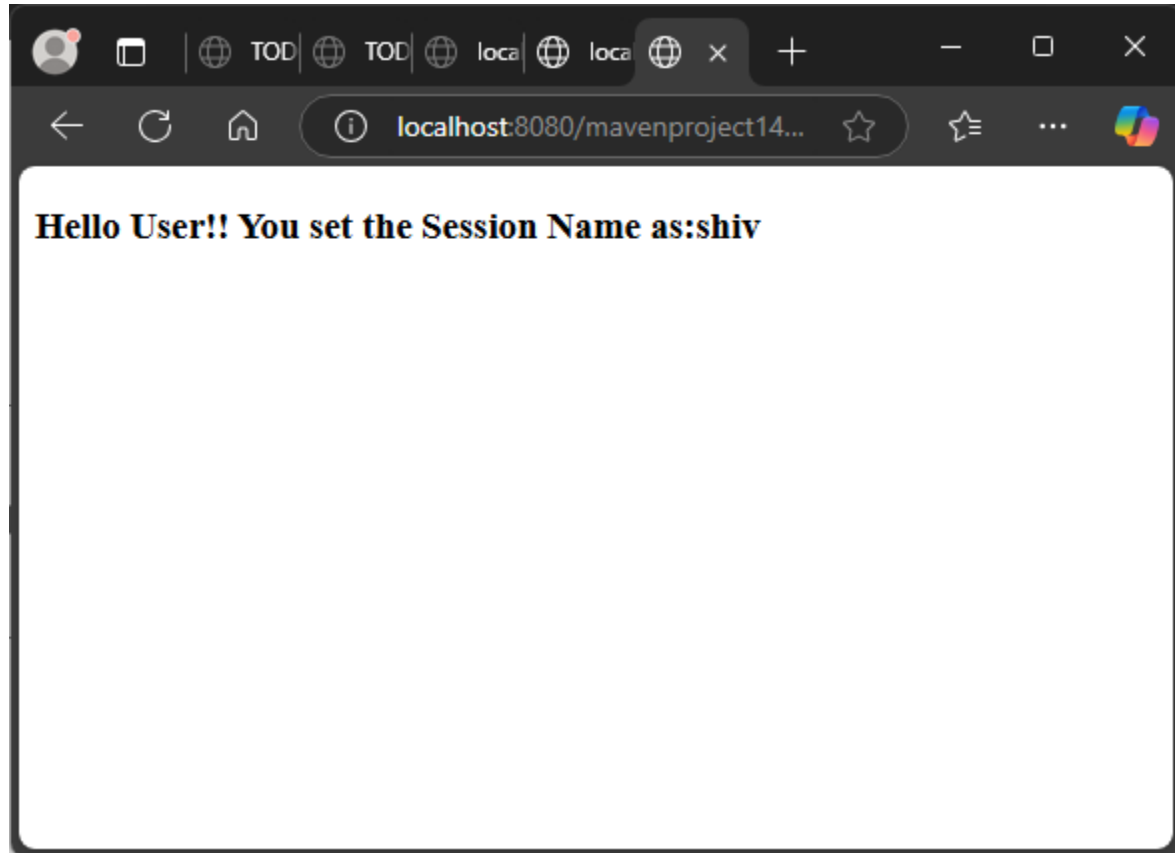


Welcomeshiv

Session Created Time is:Fri Mar 07 10:31:23 IST 2025

Session Id is:efac60c8b44e2b97b956e6659e8c

[Set Session name and check it](#)



RESULT:

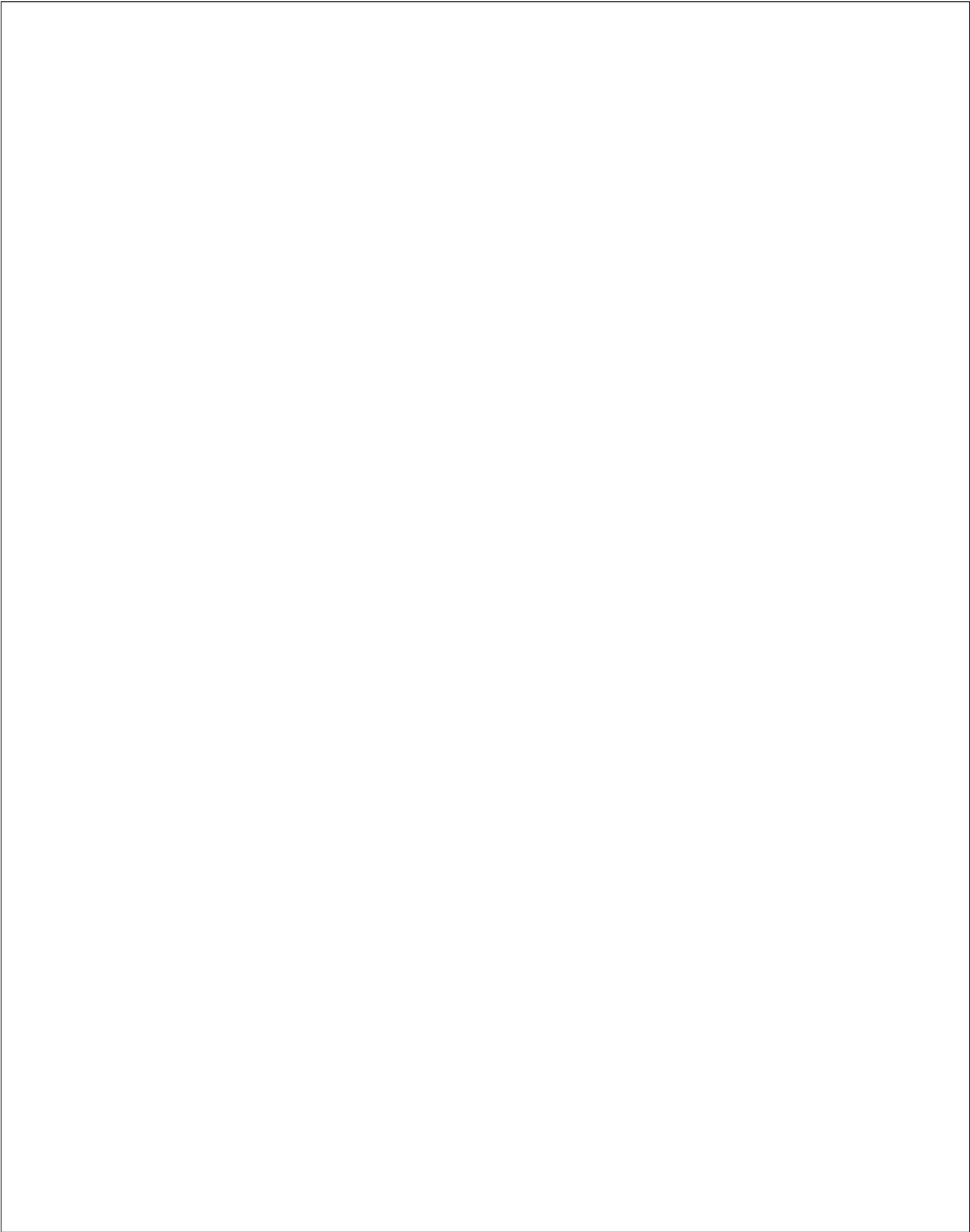
EX NO: 10

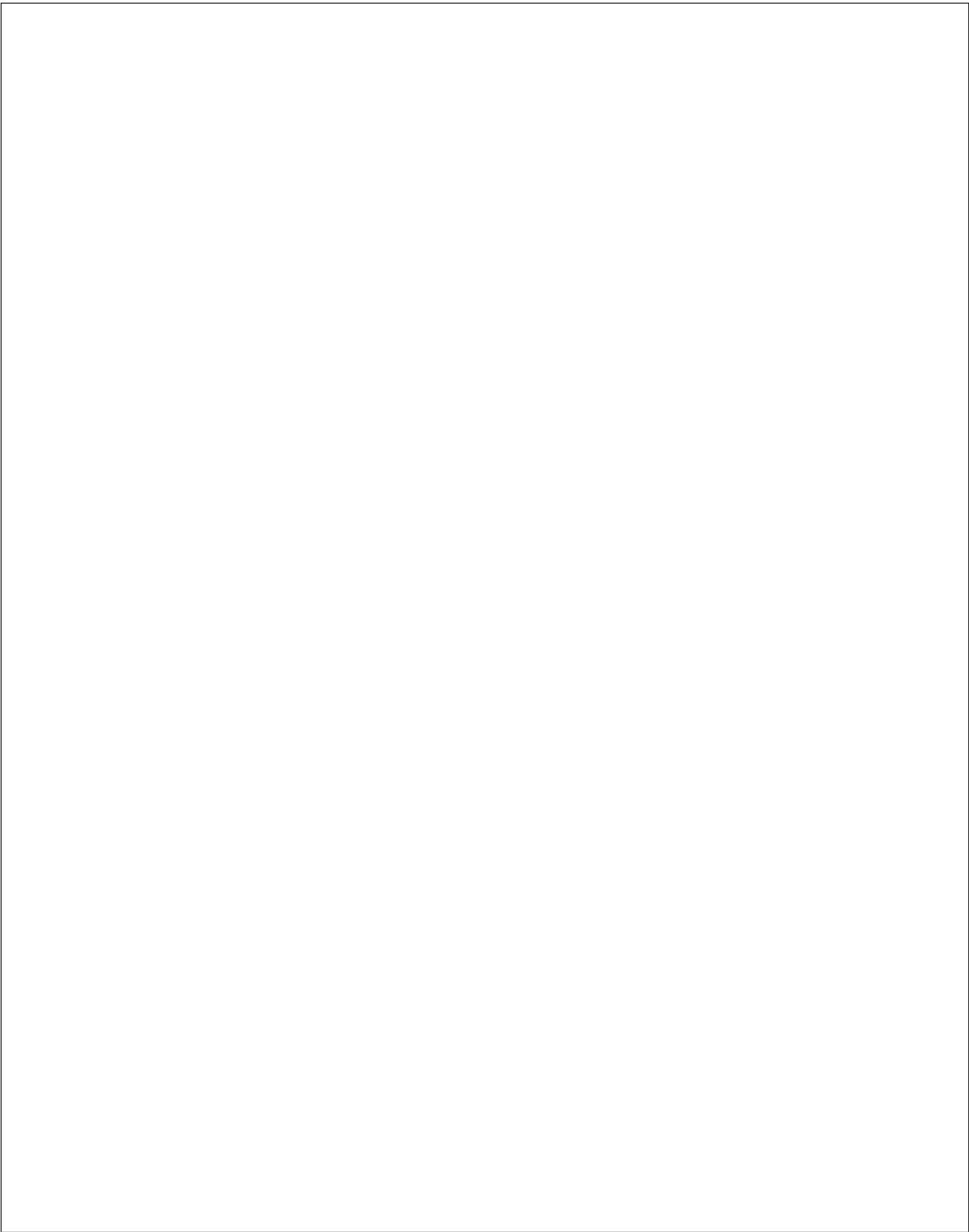
**CLIENT SERVER APPLICATION
USING RMI**

DATE:

AIM:

PROCEDURE:





PROGRAM:

Adder.java

```
import java.rmi.*;
public interface Adder extends Remote
{
    public int add(int x,int y)throws RemoteException;
}
```

AdderRemote.java

```
import java.rmi.*;
import java.rmi.server.*;
public class AdderRemote extends UnicastRemoteObject implements Adder
{
    AdderRemote() throws RemoteException
    {
        super();
    }
    public int add(int x, int y)
    {
        return x+y;
    }
}
```

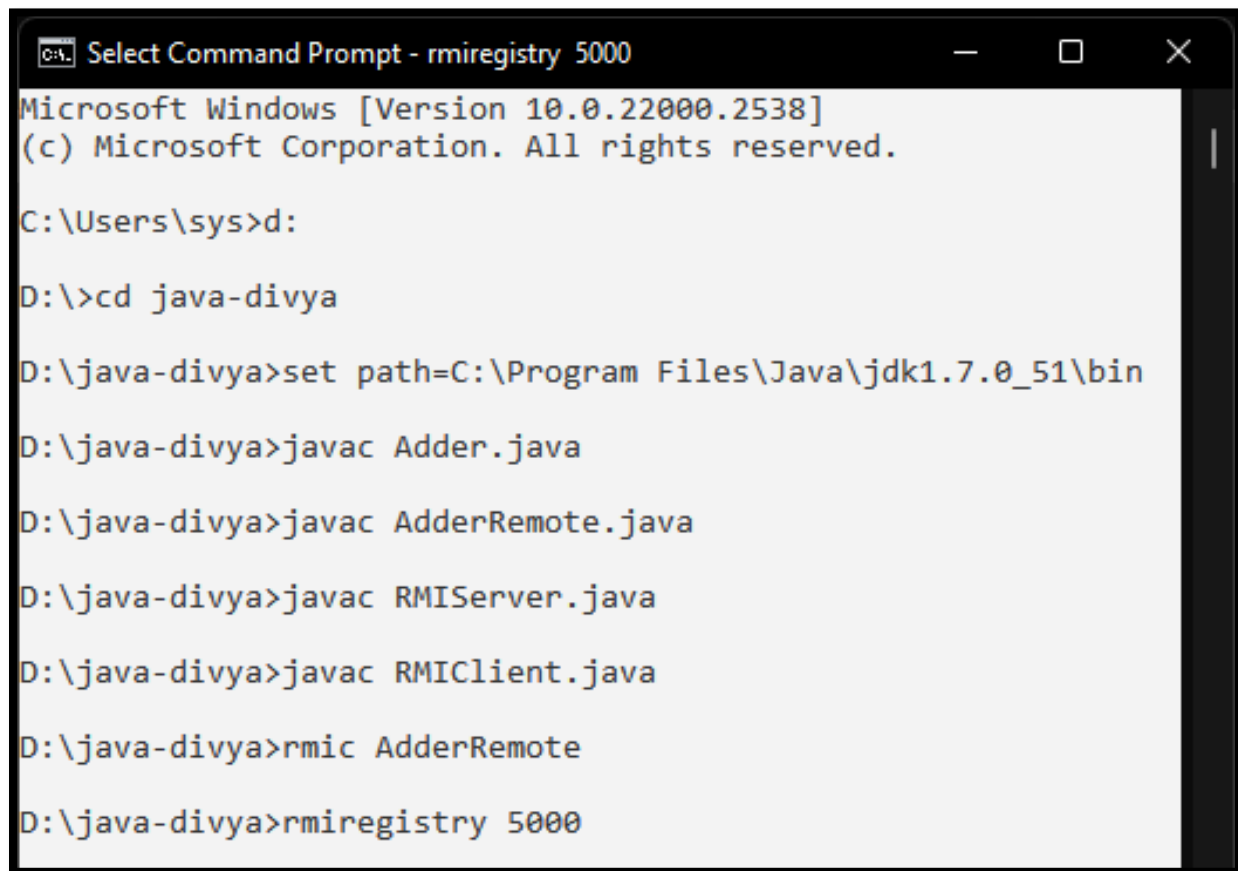
RMI Server.java

```
import java.rmi.*;
import java.rmi.registry.*;
public class RMIServer
{
    public static void main(String args[])
    {
        try
        {
            Adder stub=new AdderRemote();
            Naming.rebind("rmi://localhost:5000/sonoo",stub);
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
    }
}
```

RMI Client.java

```
import java.rmi.*;
public class RMIClient
{
    public static void main(String args[])
    {
        try
        {
            Adder stub=(Adder)Naming.lookup("rmi://localhost:5000/sonoo");
            System.out.println(stub.add(34,4));
        }
        catch(Exception e)
        {}
    }
}
```

OUTPUT:



```
Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sys>d:

D:\>cd java-divya

D:\java-divya>set path=C:\Program Files\Java\jdk1.7.0_51\bin

D:\java-divya>javac Adder.java

D:\java-divya>javac AdderRemote.java

D:\java-divya>javac RMIServer.java

D:\java-divya>javac RMIClient.java

D:\java-divya>rmic AdderRemote

D:\java-divya>rmiregistry 5000
```



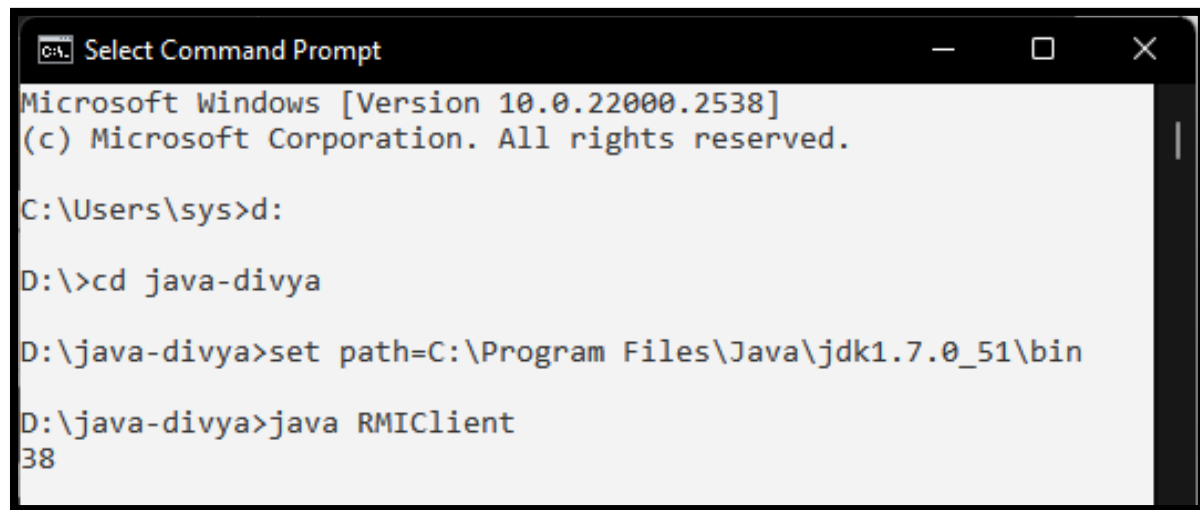
```
Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sys>d:

D:\>cd java-divya

D:\java-divya>set path=C:\Program Files\Java\jdk1.7.0_51\bin

D:\java-divya>java RMIServer
```

```
Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sys>d:

D:\>cd java-divya

D:\java-divya>set path=C:\Program Files\Java\jdk1.7.0_51\bin

D:\java-divya>java RMIClient
38
```

RESULT:

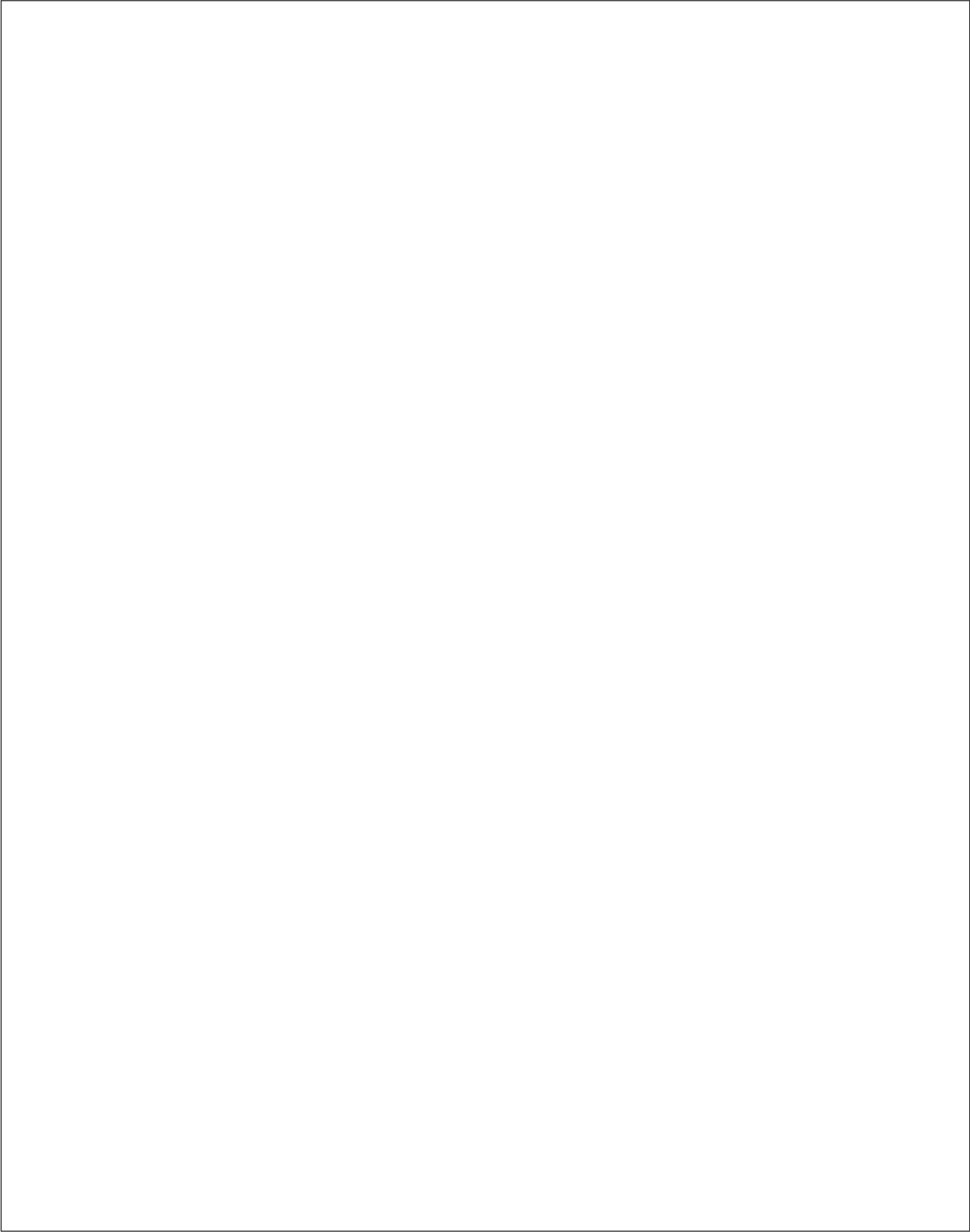
EX NO: 11

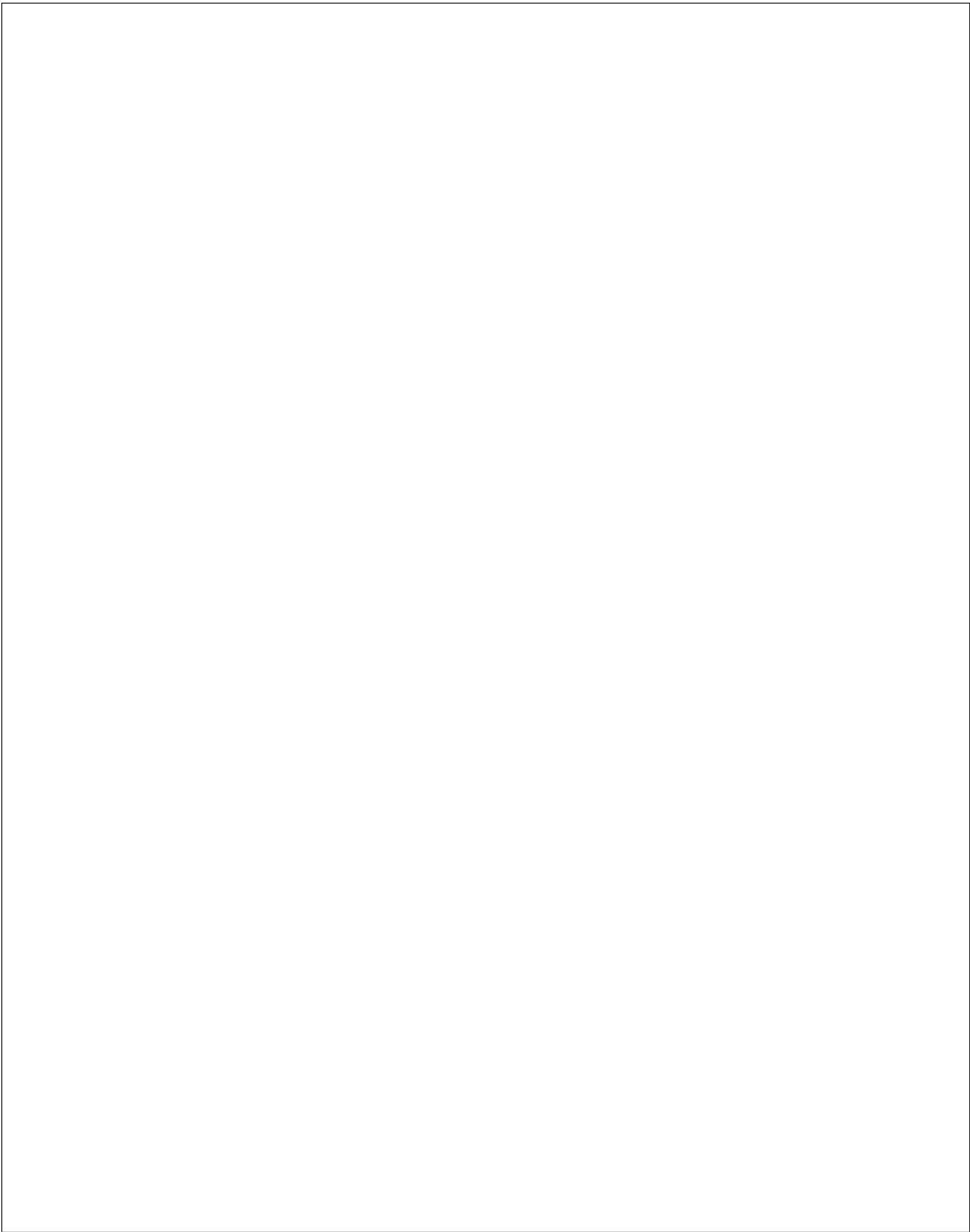
CALCULATER USING SWING

DATE:

AIM:

PROCEDURE:



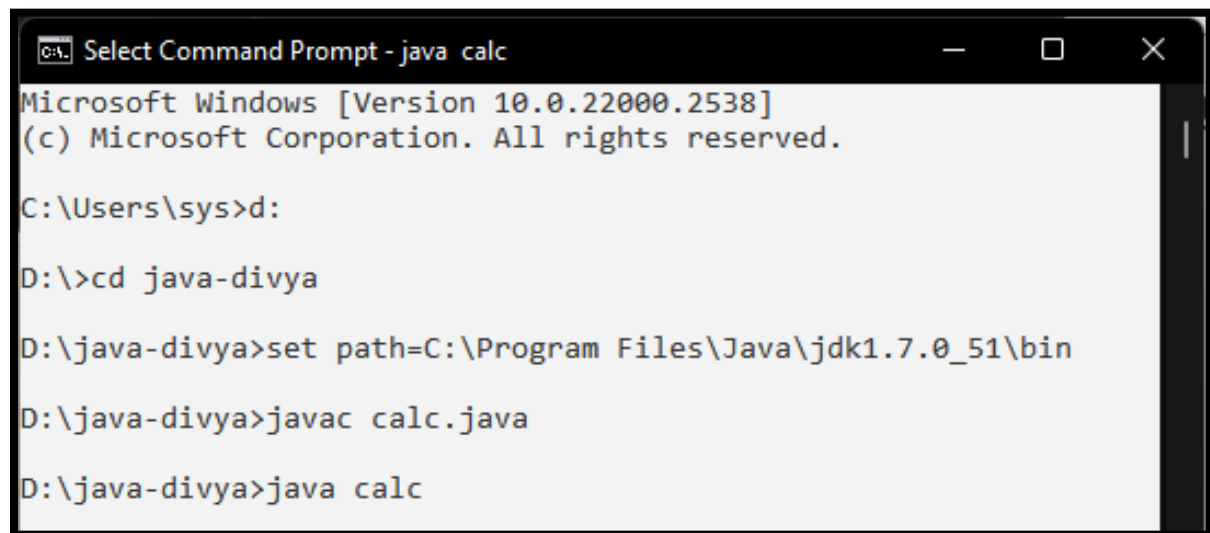


PROGRAM:

```
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JTextField;
public class calc extends JFrame implements ActionListener
{
    JButton jb1,jb2,jb3,jb4;
    JTextField jt1,jt2;
    JLabel lb1;
    calc()
    {
        jt1=new JTextField();
        jt1.setBounds(90,50,150,30);
        add(jt1);
        jt2=new JTextField();
        jt2.setBounds(90,90,150,30);
        add(jt2);
        lb1=new JLabel("Result:");
        lb1.setBounds(90,140,150,30);
        add(lb1);
        jb1=new JButton("ADD:");
        jb1.setBounds(50,200,100,30);
        add(jb1);
        jb2=new JButton("SUB:");
        jb2.setBounds(150,200,100,30);
        add(jb2);
        jb3=new JButton("MUL:");
        jb3.setBounds(250,200,100,30);
        add(jb3);
        jb4=new JButton("DIV");
        jb4.setBounds(350,200,100,30);
        add(jb4);
        jb1.addActionListener(this);
        jb2.addActionListener(this);
```

```
jb3.addActionListener(this);
jb4.addActionListener(this);
setLayout(null);
setSize(600,500);
setVisible(true);
}
public void actionPerformed(ActionEvent e)
{
int a=Integer.parseInt(jt1.getText());
int b=Integer.parseInt(jt2.getText());
int c=0;
if(e.getSource().equals(jb1))
{
c=a+b;
lb1.setText(String.valueOf(c));
}
else if(e.getSource().equals(jb2))
{
c=a-b;
lb1.setText(String.valueOf(c));
}
else if(e.getSource().equals(jb3))
{
c=a*b;
lb1.setText(String.valueOf(c));
}
else if(e.getSource().equals(jb4))
{
c=a/b;
lb1.setText(String.valueOf(c));
}
}
public static void main(String args[])
{
calc f=new calc();
f.setTitle("Closing Frame with Default Close Operation");
f.setBounds(100,50,500,300);
f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
f.setVisible(true);
}
```

OUTPUT:



```
Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

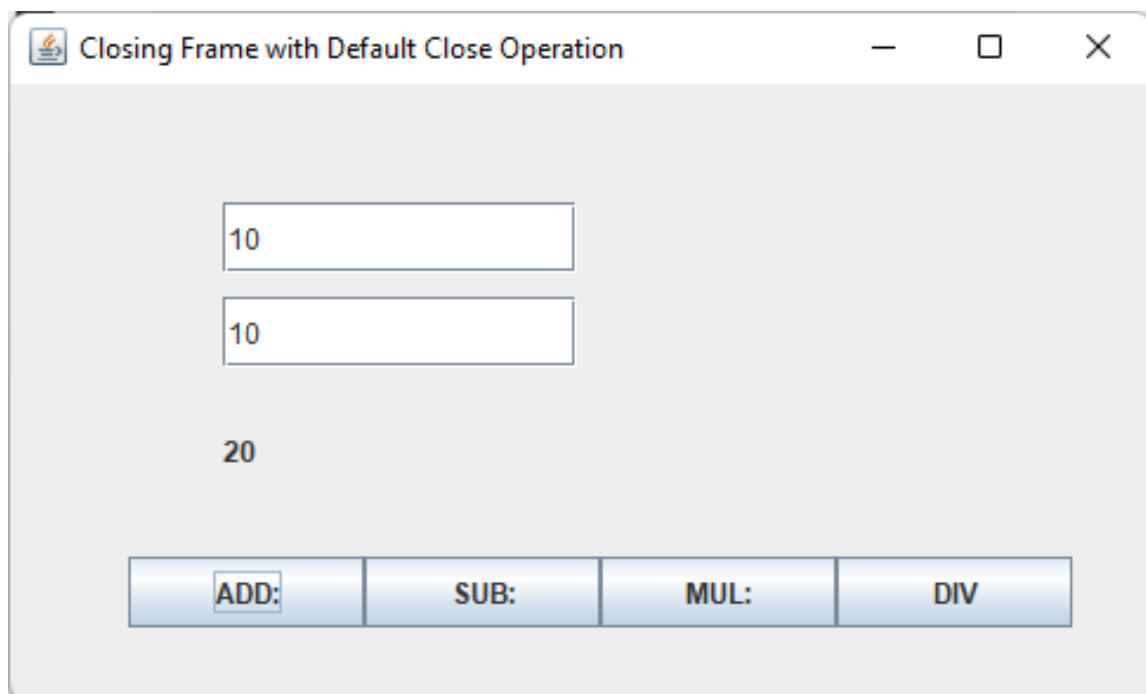
C:\Users\sys>d:

D:\>cd java-divya

D:\java-divya>set path=C:\Program Files\Java\jdk1.7.0_51\bin

D:\java-divya>javac calc.java

D:\java-divya>java calc
```



RESULT:

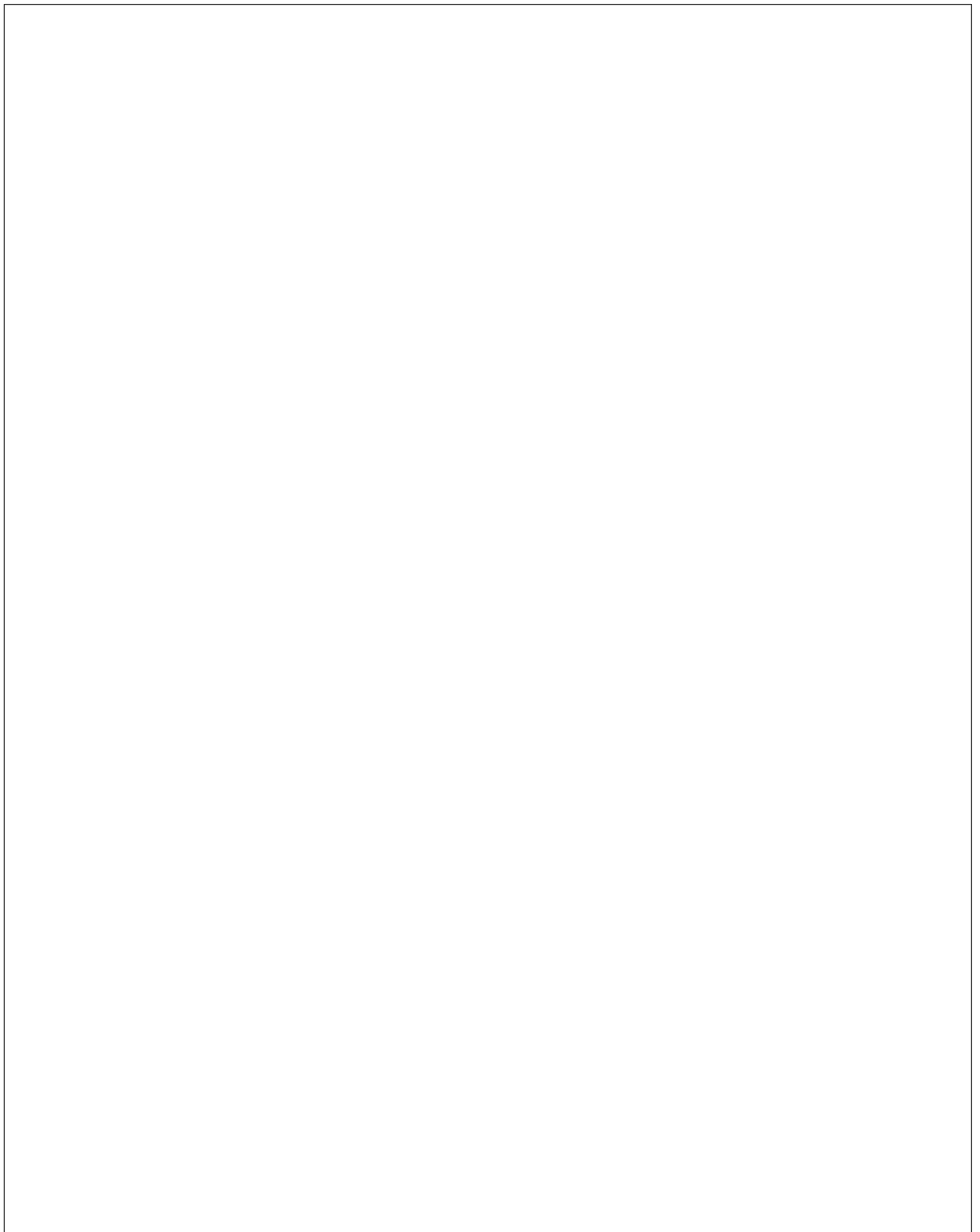
EX NO: 12

DATE:

**SENDING AND RECEIVING TEXT MESSEGE
USING SOCKET PROGRAMMING**

AIM:

PROCEDURE:





PROGRAM:

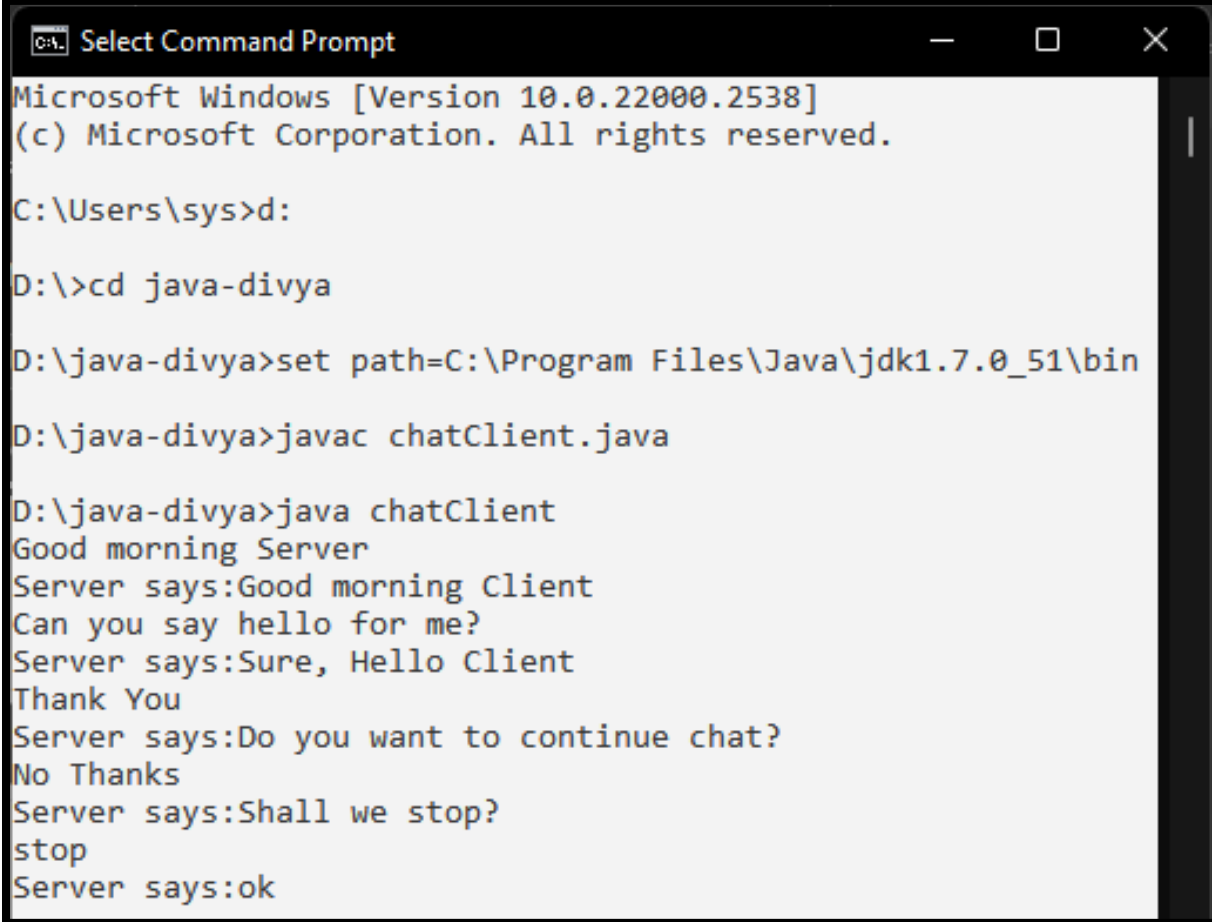
chatServer.java

```
import java.net.*;
import java.io.*;
class chatServer
{
public static void main(String args[])throws Exception
{
ServerSocket ss=new ServerSocket(3333);
Socket s=ss.accept();
DataInputStream din=new DataInputStream(s.getInputStream());
DataOutputStream dout=new DataOutputStream(s.getOutputStream());
BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
String str=" ",str2=" ";
while(!str.equals("stop"))
{
str=din.readUTF();
System.out.println("client says:"+str);
str2=br.readLine();
dout.writeUTF(str2);
dout.flush();
}
din.close();
s.close();
ss.close();
}
}
```

chatClient.java

```
import java.net.*;
import java.io.*;
class chatClient
{
    public static void main(String args[])throws Exception
    {
        Socket s=new Socket("localhost",3333);
        DataInputStream din=new DataInputStream(s.getInputStream());
        DataOutputStream dout=new DataOutputStream(s.getOutputStream());
        BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
        String str=" ",str2=" ";
        while(!str.equals("stop"))
        {
            str=br.readLine();
            dout.writeUTF(str);
            dout.flush();
            str2=din.readUTF();
            System.out.println("Server says:"+str2);
        }
        dout.close();
        s.close();
    }
}
```

OUTPUT:



```
Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

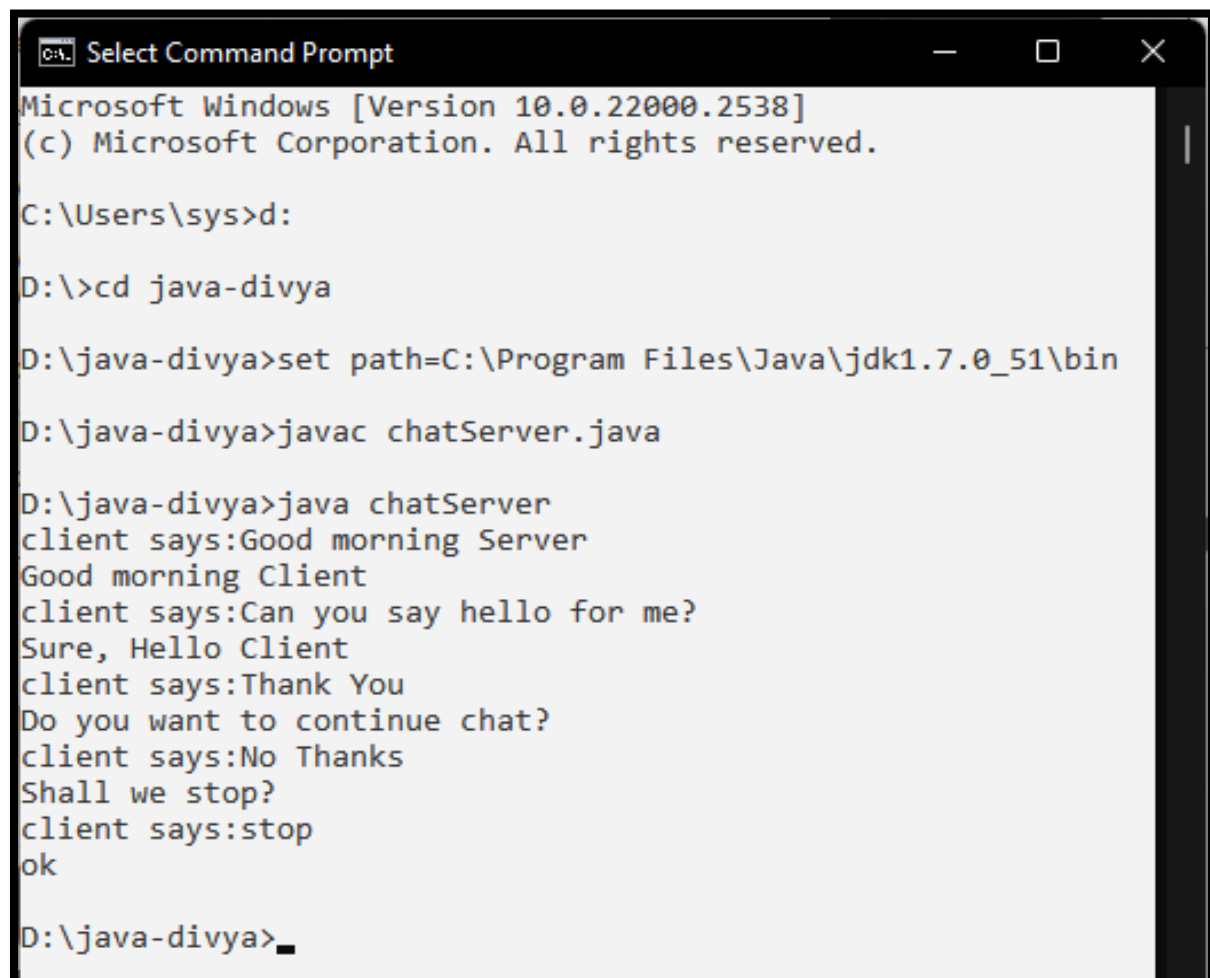
C:\Users\sys>d:

D:\>cd java-divya

D:\java-divya>set path=C:\Program Files\Java\jdk1.7.0_51\bin

D:\java-divya>javac chatClient.java

D:\java-divya>java chatClient
Good morning Server
Server says:Good morning Client
Can you say hello for me?
Server says:Sure, Hello Client
Thank You
Server says:Do you want to continue chat?
No Thanks
Server says:Shall we stop?
stop
Server says:ok
```



```
Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sys>d:

D:\>cd java-divya

D:\java-divya>set path=C:\Program Files\Java\jdk1.7.0_51\bin

D:\java-divya>javac chatServer.java

D:\java-divya>java chatServer
client says:Good morning Server
Good morning Client
client says:Can you say hello for me?
Sure, Hello Client
client says:Thank You
Do you want to continue chat?
client says:No Thanks
Shall we stop?
client says:stop
ok

D:\java-divya>
```


RESULT: