

Practical No. 1(a)

Q. Create a web application using servlet to display a Welcome message.

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="get" action="WelcomeServlet">
      <h1>A Welcome Web Application</h1>
      Enter your Name:<input type="text" name="txtName">
      <input type="submit">
    </form>
  </body>
</html>
```

WelcomeServlet.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 WelcomeServlet extends HttpServlet {

    @Override
    protected void doGet(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 WelcomeServlet</title>");
            out.println("</head>");
```

```

        out.println("<body>");
        out.println("<h1> Welcome "+request.getParameter("txtName")+"</h1>");
        out.println("<br><br><a href='index.html'>Click here to go back</a>");
        out.println("</body>");
        out.println("</html>");
    }
}
}

```

web.xml

```

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

```

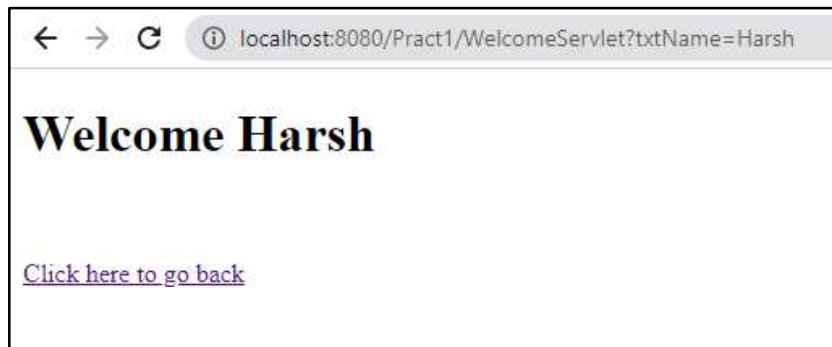
Output:



A screenshot of a web browser window. The address bar shows 'localhost:8080/Pract1/index.html'. The page content includes a heading 'A Welcome Web Application' and a form with the label 'Enter your name:' followed by an empty text input field and a 'Submit' button.



A screenshot of a web browser window. The address bar shows 'localhost:8080/Pract1/index.html'. The page content includes a heading 'A Welcome Web Application' and a form with the label 'Enter your name:' followed by a text input field containing the name 'Harsh' and a 'Submit' button.



A screenshot of a web browser window. The address bar shows 'localhost:8080/Pract1/WelcomeServlet?txtName=Harsh'. The page content includes a heading 'Welcome Harsh' and a link labeled 'Click here to go back'.



A screenshot of a web browser window. The address bar shows 'localhost:8080/Pract1/index.html'. The page content includes a heading 'A Welcome Web Application' and a form with the label 'Enter your name:' followed by an empty text input field and a 'Submit' button.

Practical No. 1(b)

index.html

CalculatorServlet.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 CalculatorServlet extends HttpServlet {

    @Override
    protected void doGet(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 CalculatorServlet</title>");
            out.println("</head>");
            out.println("<body>");

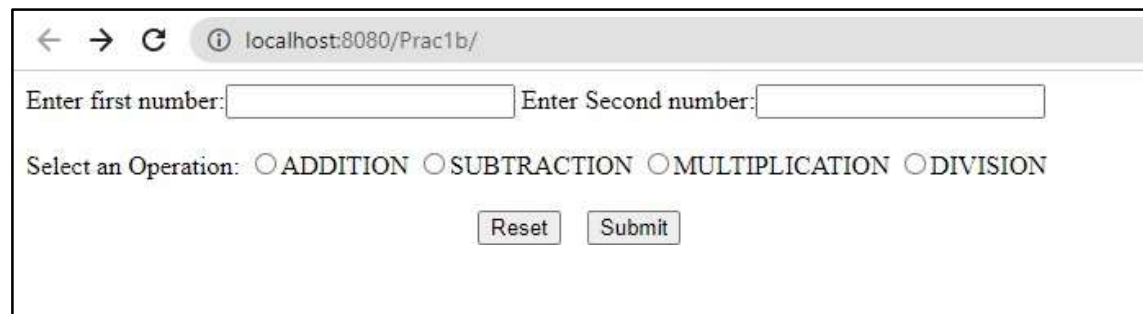
            double n1=Double.parseDouble(request.getParameter("txtN1"));
            double n2=Double.parseDouble(request.getParameter("txtN2"));
            double result=0;
            String opr=request.getParameter("opr");

            if(opr.equals("+"))
                result=n1+n2;
            if(opr.equals("-"))
                result=n1-n2;
            if(opr.equals("*"))
                result=n1*n2;
            if(opr.equals("/"))
                result=n1/n2;

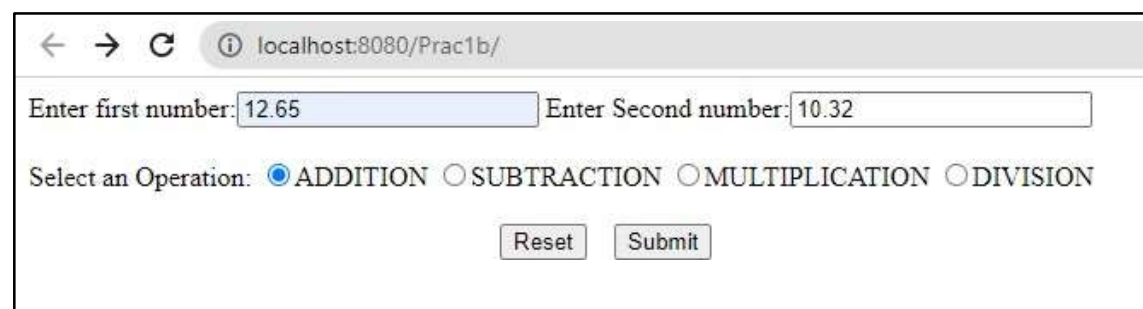
            out.println("<h1>"+ n1 + opr + n2 + "=" + result + "</h1>");
            out.println("</body>");
            out.println("</html>");
        }
    }
}

```

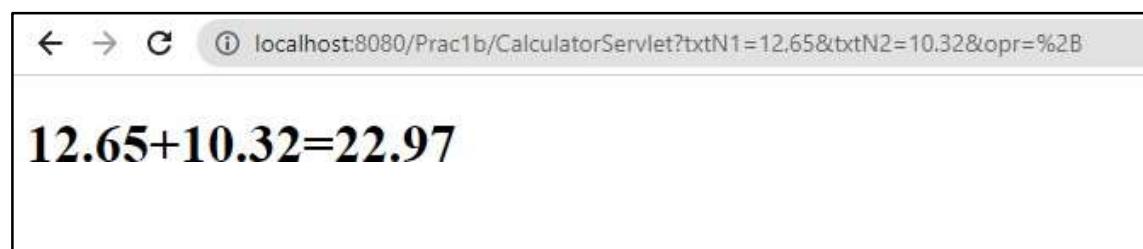
Output:



A screenshot of a web browser window. The address bar shows 'localhost:8080/Prac1b/'. The page contains two input fields: 'Enter first number:' and 'Enter Second number:'. Below them is a label 'Select an Operation:' followed by four radio buttons: 'ADDITION', 'SUBTRACTION', 'MULTIPLICATION', and 'DIVISION'. At the bottom are two buttons: 'Reset' and 'Submit'.



A screenshot of the same web browser window. The 'Enter first number:' field now contains '12.65' and the 'Enter Second number:' field contains '10.32'. The 'ADDITION' radio button is selected. The 'Reset' and 'Submit' buttons remain at the bottom.



A screenshot of the web browser window showing the result of the calculation. The address bar now shows 'localhost:8080/Prac1b/CalculatorServlet?txtN1=12.65&txtN2=10.32&opr=%2B'. The main content area displays the equation **12.65+10.32=22.97**.

Practical No. 1(c)

Q. Create a servlet for a login page. If the username and password are correct, then it says message “Hello <username>” else a message “login failed”.

index.html

```
<html>
  <head>
    <title>Login Page</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form method="get" action="LoginServlet">
      Enter User ID: <input type="text" name="txtId"><br><br>
      Enter Password: <input type="password" name="txtPass"><br><br>
      <input type="reset">
      <input type="submit" value="Click to Login">
    </form>
  </body>
</html>
```

LoginServlet.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;

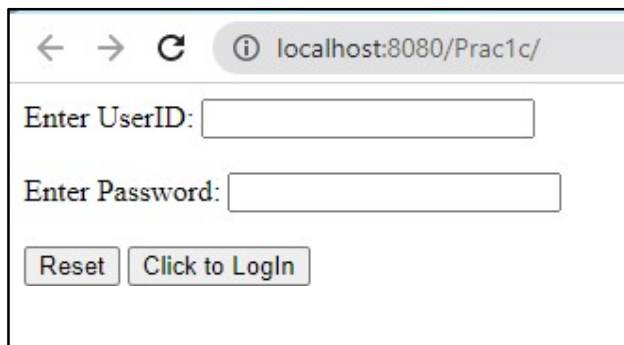
public class LoginServlet extends HttpServlet {

    @Override
    protected void doGet(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
LoginServlet</title>");
```


```
out.println("</head>");
out.println("<body>");

String uname=request.getParameter("txtId");
String upass=request.getParameter("txtPass");
if(uname.equals("Harsh") && upass.equals("12345"))
{
    out.println("<body bgcolor=pink>");
    out.println("<h1>Welcome !!! "+uname+"</h1>");
}
else
{
    out.println("<body bgcolor=cyan>");
    out.println("<h1>Login Fail!!!</h1>");
}
out.println("</body>");
out.println("</html>");
}
}
```

Output:



A screenshot of a web browser window. The address bar shows 'localhost:8080/Prac1c/'. The page contains two text input fields: 'Enter UserID:' and 'Enter Password:'. Below these fields are two buttons: 'Reset' and 'Click to Login'.



A screenshot of the same web browser window after a successful login. The 'Enter UserID:' field now contains the text 'Harsh'. The 'Enter Password:' field is filled with dots. The 'Click to Login' button is highlighted in blue, indicating it was just clicked. The 'Reset' button remains unchanged.



A screenshot of a web browser window showing a login form. The address bar shows the URL `localhost:8080/Prac1c/`. The form contains two input fields: "Enter UserID:" with the text "admer" entered, and "Enter Password:" with masked characters ".....". Below the fields are two buttons: "Reset" and "Click to Login".

