

PRACTICAL – 1A

AIM: Create a simple Calculator application using a Servlet.

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Calculator App</title>
</head>
<body>
  <h2>Calculator </h2>
  <p>Name: SHEKHAR SUMAN</p>
  <p>Roll No: 47</p>
  <form action="CalculatorServlet" method="get">
    <label>
      Enter First Number:
      <input type="text" name="txtN1" required>
    </label>
    <br><br>

    <label>
      Enter Second Number:
      <input type="text" name="txtN2" required>
    </label>
    <br><br>

    <p>Select an Operation:</p>
    <label><input type="radio" name="opr" value="+" required> Addition</label><br>
    <label><input type="radio" name="opr" value="-"> Subtraction</label><br>
    <label><input type="radio" name="opr" value="*"> Multiplication</label><br>
    <label><input type="radio" name="opr" value="/"> Division</label><br><br>

    <input type="reset" value="Clear">
    <input type="submit" value="Calculate">
  </form>
</body>
</html>
```

CalculatorServlet.java

```
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.*;

@WebServlet("/CalculatorServlet")
public class CalculatorServlet extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head><title>Calculator Result</title></head><body>");

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

            double result = 0;
            String operation = "";

            if (opr.equals("+")) {
                result = n1 + n2;
                operation = "Addition";
            } else if (opr.equals("-")) {
                result = n1 - n2;
                operation = "Subtraction";
            } else if (opr.equals("*")) {
                result = n1 * n2;
                operation = "Multiplication";
            } else if (opr.equals("/")) {
                if (n2 != 0) {
                    result = n1 / n2;
                    operation = "Division";
                } else {
                    out.println("<h3>Error: Division by zero is not allowed.</h3>");
                    out.println("</body></html>");
                    return;
                }
            }
        }
    }
}
```

```

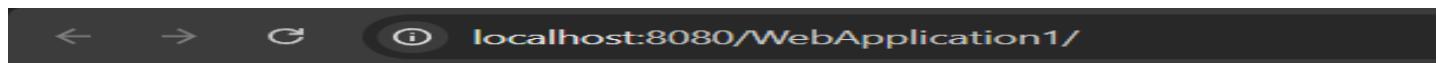
        out.println("<h2>Operation: " + operation + "</h2>");
        out.println("<h2>Result = " + result + "</h2>");

    } catch (NumberFormatException e) {
        out.println("<h3>Error: Please enter valid numbers.</h3>");
    }

    out.println("</body></html>");
}
}

```

OUTPUT



Calculator

Name: SHEKHAR SUMAN

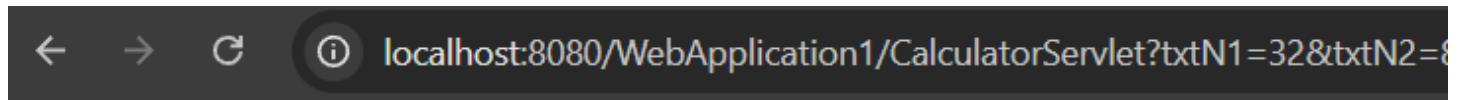
Roll No: 47

Enter First Number:

Enter Second Number:

Select an Operation:

- Addition
- Subtraction
- Multiplication
- Division



Operation: Addition

Result = 118.0

PRACTICAL – 1B

AIM: 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

```
<!DOCTYPE html>
<html>
<head>
<title>Login Form</title>
</head>
<body>
<form action="LoginServlet" method="post">
<label for="txtId">Enter User ID</label>
<input type="text" id="txtId" name="txtId"><br><br>

<label for="txtPass">Enter Password</label>
<input type="password" id="txtPass" name="txtPass"><br><br>

<input type="reset" value="Reset">
<input type="submit" value="Click to Login">
</form>
</body>
</html>
```

LoginServlet.java

```
import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.http.*;
import jakarta.servlet.annotation.WebServlet;

@WebServlet("/LoginServlet")
public class LoginServlet extends HttpServlet {

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        String uname = request.getParameter("txtId"); // user ID
        String upass = request.getParameter("txtPass"); // password

        out.println("<html><head><title>Servlet LoginServlet</title></head>");
```

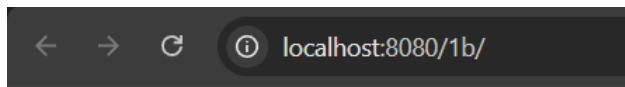
```

if ("Shekhar Suman".equals(uname) && "12345".equals(upass)) {
    out.println("<body bgcolor='blue'>");
    out.println("<h1>Welcome !!! " + uname + "</h1>");
} else {
    out.println("<body bgcolor='red'>");
    out.println("<h1>Login Fail !!!</h1>");
}

out.println("</body></html>");
}
}

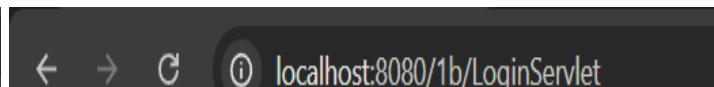
```

OUTPUT

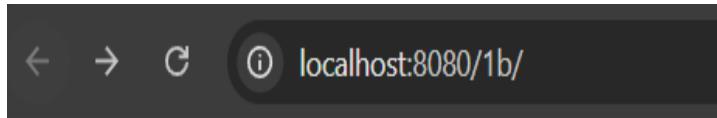


Enter User ID

Enter Password



Welcome !!! Shekhar



Enter User ID

Enter Password



Login Fail !!!

PRACTICAL – 1C

AIM: Create a registration Servlet in Java using JDBC. Accept the details such as Username, Password, Email, and Country from the user using HTML Form and store the registration details in the database.

Index.html

```
<!DOCTYPE html>
<html>
<head>
    <meta charset="UTF-8">
    <title>Registration Page</title>
</head>
<body>
    <h1>Registration Page by SHEKHAR SUMAN</h1>

    <form action="RegisterServlet" method="post">
        <label for="username">Enter User Name:</label>
        <input type="text" id="username" name="username"><br><br>

        <label for="password">Enter Password:</label>
        <input type="password" id="password" name="password"><br><br>

        <label for="email">Enter Email:</label>
        <input type="email" id="email" name="email"><br><br>

        <label for="country">Enter Country:</label>
        <input type="text" id="country" name="country"><br><br>

        <input type="reset" value="Reset">
        <input type="submit" value="REGISTER">
    </form>
</body>
</html>
```

RegisterServlet.java

```
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.*;
import java.sql.*;

@WebServlet("/RegisterServlet")
public class RegisterServlet extends HttpServlet {
```

```
@Override
public void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {

    response.setContentType("text/html;charset=UTF-8");
    PrintWriter out = response.getWriter();

    // Read form parameters
    String id = request.getParameter("username");
    String ps = request.getParameter("password");
    String em = request.getParameter("email");
    String co = request.getParameter("country");

    try {
        // Load Driver
        Class.forName("com.mysql.cj.jdbc.Driver");

        // Connect to Database
        Connection con = DriverManager.getConnection(
            "jdbc:mysql://localhost:3306/sr", "root", "test");

        // Insert into DB
        PreparedStatement pst = con.prepareStatement("INSERT INTO user VALUES (?,?,?,?,?)");
        pst.setString(1, id);
        pst.setString(2, ps);
        pst.setString(3, em);
        pst.setString(4, co);

        int row = pst.executeUpdate();

        if (row > 0) {
            out.println("<h1>Record Inserted Successfully!</h1>");
        } else {
            out.println("<h1>Failed to Insert Record.</h1>");
        }

        pst.close();
        con.close();
    } catch (Exception e) {
        out.println("<h1>Error: " + e.getMessage() + "</h1>");
    }
}
```

DATABASE

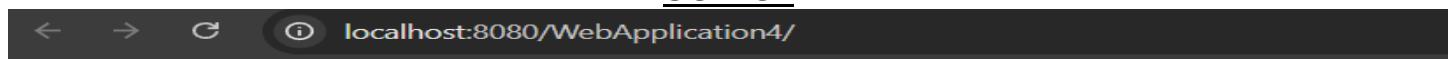
```
-- Create database
CREATE DATABASE sr;

-- Use the database
USE sr;

-- Create user table
CREATE TABLE users (
    Username VARCHAR(20) PRIMARY KEY,
    Password VARCHAR(20),
    Email VARCHAR(50),
    Country VARCHAR(20)
);

INSERT INTO users VALUES ('admin', 'admin', 'admin@admin.com', 'India');
SELECT * FROM users;
```

OUTPUT

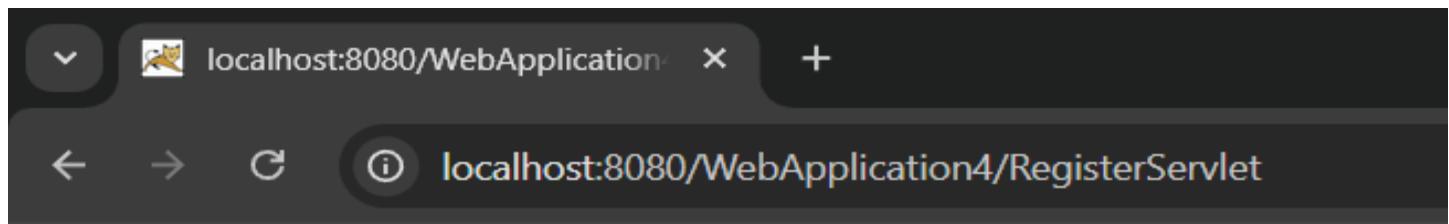


Enter User Name:

Enter Password:

Enter Email:

Enter Country:



Record Inserted Successfully!

Result Grid | Filter Rows: Edit: Export/Import: Wrap Cell Content:

	Username	Password	Email	Country
▶	admin	admin	admin@admin.com	India
*	shekhar ...	12345	shekhar@gmail.com	india
	NULL	NULL	NULL	NULL

Result Grid

Form Editor

Field Types

PRACTICAL – 2A

AIM: 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 be forwarded to Welcome Servlet else the user will stay on the index.html page and an error message will be displayed.

Index.html

```
<!DOCTYPE html>
<html>
<head>
<title>Login Form</title>
</head>
<body>

<form action="LoginServlet" method="get">
<div>
<h2>SHEKHAR SUMAN | 47</h2>
<label for="txtId">Enter User ID</label>
<input type="text" id="txtId" name="txtId">
</div>

<div>
<label for="txtPass">Enter Password</label>
<input type="password" id="txtPass" name="txtPass">
</div>

<input type="reset" value="Clear">
<input type="submit" value="Login">
</form>

</body>
</html>
```

LoginServlet.java

```
import jakarta.servlet.RequestDispatcher;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.io.PrintWriter;

@WebServlet("/LoginServlet")
public class LoginServlet extends HttpServlet {

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }
}
```

```

private void processRequest(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {

    response.setContentType("text/html;charset=UTF-8");
    PrintWriter out = response.getWriter();

    String uname = request.getParameter("txtId");
    String upass = request.getParameter("txtPass");

    if ("admin".equals(uname) && "servlet".equals(upass)) {
        RequestDispatcher rd = request.getRequestDispatcher("WelcomeServlet");
        rd.forward(request, response);
    } else {
        out.println("<body bgcolor='red'>");
        out.println("<h1>Login Failed !!!</h1>");
        out.println("<h2>SHEKHAR SUMAN | 47</h2>");
        RequestDispatcher rd = request.getRequestDispatcher("index.html");
        rd.include(request, response);
        out.println("</body>");
    }
}
}

```

WelcomeServlet.java

```

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.io.PrintWriter;

@WebServlet("/WelcomeServlet")
public class WelcomeServlet extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head>");
        out.println("<title>Welcome</title></head>");
        out.println("<body bgcolor='lightgreen'>");
        out.println("<h1> Welcome SHEKHAR SUMAN | 47 ! Login Successful ✓ </h1>");
        out.println("</body></html>");
    }
}

```

OUTPUT

localhost:8080/2a/

SHEKHAR SUMAN | 47

Enter User ID
Enter Password

localhost:8080/2a/LoginServlet?txtId=admin&txtPass=servlet

Welcome SHEKHAR SUMAN | 47 ! Login Successful ✓

SHEKHAR SUMAN | 47

Enter User ID
Enter Password

localhost:8080/2a/LoginServlet?txtId=shekhar&txtPass=servlet

Login Failed !!!

SHEKHAR SUMAN | 47

SHEKHAR SUMAN | 47

Enter User ID
Enter Password

PRACTICAL – 2B

AIM: Create a Servlet that uses Cookies to store the number of times a user has visited Servlet.

Index.html

```
<!DOCTYPE html>
<html>
<head>
<title>Cookie Demo</title>
</head>
<body>
<form action="Page1" method="get">
Enter Your Name: <input type="text" name="txtName"><br><br>
<input type="submit" value="~~~ Click to Enter ~~~">
</form>
</body>
</html>
```

Page1.java

```
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.Cookie;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.*;
import java.net.URLEncoder;

@WebServlet("/Page1")
public class Page1 extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        String uname = request.getParameter("txtName");

        // If username not provided, use default
        if (uname == null || uname.trim().isEmpty()) {
            uname = "Guest";
        }

        String encodedName = URLEncoder.encode(uname, "UTF-8");

        // Create cookies
        Cookie ck1 = new Cookie("username", encodedName);
        Cookie ck2 = new Cookie("visit", "1");
        response.addCookie(ck1);
        response.addCookie(ck2);

        // HTML output
        out.println("<html>");
        out.println("<head><title>Page1</title></head>");
        out.println("<body bgcolor='pink'>");
        out.println("<h1>~~~ Welcome " + uname + " ~~~</h1>");
        out.println("<h1><a href='Page2'>Click to visit Page 2</a></h1>");
```

```

        out.println("</body>");
        out.println("</html>");
    }
}

```

Page2.java

```

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.Cookie;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.*;
import java.net.URLDecoder;

@WebServlet("/Page2")
public class Page2 extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head><title>Page2</title></head>");
        out.println("<body bgcolor='yellow'>");

        Cookie[] ck = request.getCookies();
        if (ck != null) {
            for (int i = 0; i < ck.length; i++) {
                if (ck[i].getName().equals("visit")) {
                    int count = Integer.parseInt(ck[i].getValue()) + 1;
                    out.println("<h1>Visit No: " + count + "</h1>");
                    ck[i] = new Cookie("visit", count + "");
                    response.addCookie(ck[i]);
                } else if (ck[i].getName().equals("username")) {
                    String decodedName = URLDecoder.decode(ck[i].getValue(), "UTF-8");
                    out.println("<h2>User: " + decodedName + "</h2>");
                }
            }
        }

        out.println("<h1><a href='Page3'>Click to visit Page 3</a></h1>");
        out.println("<h1><a href='Page4'>Click to visit Page 4</a></h1>");
        out.println("<h1><a href='Page5'>Click to visit Page 5</a></h1>");

        out.println("</body></html>");
    }
}

```

Page3.java

```

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.Cookie;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.*;

```

```

import java.net.URLDecoder;

@WebServlet("/Page3")
public class Page3 extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head><title>Page3</title></head>");
        out.println("<body bgcolor='lightgreen'>");

        Cookie[] ck = request.getCookies();
        if (ck != null) {
            for (int i = 0; i < ck.length; i++) {
                if (ck[i].getName().equals("visit")) {
                    int count = Integer.parseInt(ck[i].getValue()) + 1;
                    out.println("<h1>Visit No: " + count + "</h1>");
                    ck[i] = new Cookie("visit", count + "");
                    response.addCookie(ck[i]);
                } else if (ck[i].getName().equals("username")) {
                    String decodedName = URLDecoder.decode(ck[i].getValue(), "UTF-8");
                    out.println("<h2>User: " + decodedName + "</h2>");
                }
            }
        }

        out.println("<h1><a href='Page4'>Click to visit Page 4</a></h1>");
        out.println("<h1><a href='Page5'>Click to visit Page 5</a></h1>");
        out.println("<h1><a href='Page1'>Back to Page 1</a></h1>");

        out.println("</body></html>");
    }
}

```

Page4.java

```

import java.io.IOException;
import java.io.PrintWriter;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.Cookie;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.net.URLDecoder;

@WebServlet("/Page4")
public class Page4 extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head><title>Page4</title></head>");

```

```

out.println("<body bgcolor='orange'>");

Cookie[] ck = request.getCookies();
if (ck != null) {
    for (int i = 0; i < ck.length; i++) {
        if (ck[i].getName().equals("visit")) {
            int count = Integer.parseInt(ck[i].getValue()) + 1;
            out.println("<h1>Visit No: " + count + "</h1>");
            ck[i] = new Cookie("visit", count + "");
            response.addCookie(ck[i]);
        } else if (ck[i].getName().equals("username")) {
            String decodedName = URLDecoder.decode(ck[i].getValue(), "UTF-8");
            out.println("<h2>User: " + decodedName + "</h2>");
        }
    }
}

out.println("<h1><a href='Page5'>Click to visit Page 5</a></h1>");
out.println("<h1><a href='Page1'>Back to Page 1</a></h1>");

out.println("</body></html>");
}
}

```

Page5.java

```

import java.io.IOException;
import java.io.PrintWriter;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.Cookie;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.net.URLDecoder;

@WebServlet("/Page5")
public class Page5 extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head><title>Page5</title></head>");
        out.println("<body bgcolor='lightblue'>");

        Cookie[] ck = request.getCookies();
        if (ck != null) {
            for (int i = 0; i < ck.length; i++) {
                if (ck[i].getName().equals("visit")) {
                    int count = Integer.parseInt(ck[i].getValue()) + 1;
                    out.println("<h1>Visit No: " + count + "</h1>");
                    ck[i] = new Cookie("visit", count + "");
                    response.addCookie(ck[i]);
                } else if (ck[i].getName().equals("username")) {
                    String decodedName = URLDecoder.decode(ck[i].getValue(), "UTF-8");
                    out.println("<h2>User: " + decodedName + "</h2>");
                }
            }
        }
    }
}

```

```

        }

        out.println("<h1><a href='Page1'>Back to Page 1</a></h1>");
        out.println("<h1><a href='Page2'>Back to Page 2</a></h1>");

        out.println("</body></html>");
    }
}

```

OUTPUT

localhost:8080/2b/

Enter Your Name:

~~~ Click to Enter ~~~

localhost:8080/2b/Page1?txtName=SHEKHAR+SUMAN

~~~ Welcome SHEKHAR SUMAN ~~~

[Click to visit Page 2](#)

localhost:8080/2b/Page2

User: SHEKHAR SUMAN

Visit No: 2

[Click to visit Page 3](#)

[Click to visit Page 4](#)

[Click to visit Page 5](#)

localhost:8080/2b/Page3

User: SHEKHAR SUMAN

Visit No: 3

[Click to visit Page 4](#)

[Click to visit Page 5](#)

[Back to Page 1](#)

localhost:8080/2b/Page4

User: SHEKHAR SUMAN

Visit No: 4

[Click to visit Page 5](#)

[Back to Page 1](#)

PRACTICAL – 2C

AIM: Create a Servlet demonstrating the use of session creation and destruction. Also check whether the user has visited this page first time or has visited earlier also using Sessions.

Index.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Session Demo</title>
</head>
<body bgcolor="lightgrey">
    <h1>Session Tracking Demo</h1>
    <form action="Page1" method="get">
        Enter User ID: <input type="text" name="txtName" required><br><br>
        <input type="reset" value="Reset">
        <input type="submit" value="Submit">
    </form>
</body>
</html>
```

LogoutServlet.java

```
import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.*;

@WebServlet("/LogoutServlet")
public class LogoutServlet extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head><title>Logout</title></head>");
        out.println("<body bgcolor='lightgrey'>");

        // Get the session; if exists, invalidate
        HttpSession hs = request.getSession(false);
        if (hs != null) {
            hs.invalidate();
        }

        out.println("<h1>You are logged out successfully.</h1>");
        out.println("<h2><a href='index.html'>Go back to Login Page</a></h2>");

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

Page1.java

```
import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.*;

@WebServlet("/Page1")
public class Page1 extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head><title>Servlet Page1</title></head>");
        out.println("<body bgcolor='yellow'>");

        HttpSession hs = request.getSession(true);

        if (hs.isNew()) {
            String name = request.getParameter("txtName");
            hs.setAttribute("uname", name);
            hs.setAttribute("visit", "1");

            out.println("<h1>Welcome First Time, " + name + "</h1>");
        } else {
            out.println("<h1>Welcome Again</h1>");
            int visit = Integer.parseInt((String) hs.getAttribute("visit")) + 1;
            hs.setAttribute("visit", String.valueOf(visit));
            out.println("<h1>You Visited " + visit + " Times</h1>");
        }

        out.println("<h2><a href='Page2'>Go to Page 2</a></h2>");
        out.println("<h2><a href='LogoutServlet'>Terminate Session</a></h2>");
        out.println("</body></html>");
    }
}
```

Page2.java

```
import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.*;

@WebServlet("/Page2")
public class Page2 extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head><title>Servlet Page2</title></head>");
        out.println("<body bgcolor='lightblue'>");
```

```

HttpSession hs = request.getSession(false);

if (hs == null) {
    out.println("<h1>No active session. Please <a href='index.html'>login again</a>.</h1>");
} else {
    int visit = Integer.parseInt((String) hs.getAttribute("visit")) + 1;
    hs.setAttribute("visit", String.valueOf(visit));

    out.println("<h1>Welcome Again, " + hs.getAttribute("uname") + "</h1>");
    out.println("<h1>You Visited " + visit + " Times</h1>");
    out.println("<h1>Your Session ID: " + hs.getId() + "</h1>");
    out.println("<h1>You Logged in at: " + new java.util.Date(hs.getCreationTime()) + "</h1>");
}

out.println("<h2><a href='Page1'>Back to Page 1</a></h2>");
out.println("<h2><a href='Page3'>Go to Page 3</a></h2>");
out.println("<h2><a href='Page4'>Go to Page 4</a></h2>");
out.println("<h2><a href='LogoutServlet'>Terminate Session</a></h2>");

out.println("</body></html>");
}
}

```

Page3.java

```

import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.*;

@WebServlet("/Page3")
public class Page3 extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head><title>Servlet Page3</title></head>");
        out.println("<body bgcolor='lightgreen'>");

        HttpSession hs = request.getSession(false);

        if (hs == null) {
            out.println("<h1>No active session. Please <a href='index.html'>login again</a>.</h1>");
        } else {
            int visit = Integer.parseInt((String) hs.getAttribute("visit")) + 1;
            hs.setAttribute("visit", String.valueOf(visit));
            String uname = (String) hs.getAttribute("uname");

            out.println("<h1>Welcome " + uname + " to Page 3</h1>");
            out.println("<h1>You Visited " + visit + " Times</h1>");
            out.println("<h1>Session ID: " + hs.getId() + "</h1>");
            out.println("<h1>Session Created At: " + new java.util.Date(hs.getCreationTime()) + "</h1>");

            out.println("<h2><a href='Page1'>Go to Page 1</a></h2>");
            out.println("<h2><a href='Page2'>Go to Page 2</a></h2>");
            out.println("<h2><a href='Page4'>Go to Page 4</a></h2>");
            out.println("<h2><a href='Page5'>Go to Page 5</a></h2>");

        }
    }
}

```

```

        out.println("<h2><a href='LogoutServlet'>Terminate Session</a></h2>");
        out.println("</body></html>");
    }
}

```

Page4.java

```

import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.*;

@WebServlet("/Page4")
public class Page4 extends HttpServlet {

    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<html><head><title>Servlet Page4</title></head>");
        out.println("<body bgcolor=orange>");

        HttpSession hs = request.getSession(false);

        if (hs == null) {
            out.println("<h1>No active session. Please <a href=index.html>login again</a>.</h1>");
        } else {
            int visit = Integer.parseInt((String) hs.getAttribute("visit")) + 1;
            hs.setAttribute("visit", String.valueOf(visit));
            String uname = (String) hs.getAttribute("uname");

            out.println("<h1>Welcome " + uname + " to Page 4</h1>");
            out.println("<h1>You Visited " + visit + " Times</h1>");
            out.println("<h1>Session ID: " + hs.getId() + "</h1>");
        }

        out.println("<h2><a href=Page1>Go to Page 1</a></h2>");
        out.println("<h2><a href=Page2>Go to Page 2</a></h2>");
        out.println("<h2><a href=Page3>Go to Page 3</a></h2>");
        out.println("<h2><a href=Page5>Go to Page 5</a></h2>");
        out.println("<h2><a href=LogoutServlet>Terminate Session</a></h2>");

        out.println("</body></html>");
    }
}

```

Page5.java

```

import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.*;

@WebServlet("/Page5")
public class Page5 extends HttpServlet {

    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");

```

```

PrintWriter out = response.getWriter();

out.println("<html><head><title>Servlet Page5</title></head>");
out.println("<body bgcolor=lightblue>");

HttpSession hs = request.getSession(false);

if (hs == null) {
    out.println("<h1>No active session. Please <a href=index.html>login again</a>.</h1>");
} else {
    int visit = Integer.parseInt((String) hs.getAttribute("visit")) + 1;
    hs.setAttribute("visit", String.valueOf(visit));
    String uname = (String) hs.getAttribute("uname");

    out.println("<h1>Welcome " + uname + " to Page 5</h1>");
    out.println("<h1>You Visited " + visit + " Times</h1>");
    out.println("<h1>Session ID: " + hs.getId() + "</h1>");
}

out.println("<h2><a href=Page1>Go to Page 1</a></h2>");
out.println("<h2><a href=Page2>Go to Page 2</a></h2>");
out.println("<h2><a href=Page3>Go to Page 3</a></h2>");
out.println("<h2><a href=Page4>Go to Page 4</a></h2>");
out.println("<h2><a href=LogoutServlet>Terminate Session</a></h2>");
out.println("</body></html>");

}
}

```

OUTPUT

localhost:8080/2c/

Session Tracking Demo

Enter User ID:

localhost:8080/2c/Page1?txtName=shekhar

Welcome First Time, shekhar

[Go to Page 2](#)

[Logout](#)

[Terminate Session](#)

Welcome Again, shekhar

You Visited 2 Times

Your Session ID: 1C961D73C16FC9CEB13FFE8BA556BFB5

You Logged in at: Sun Sep 28 20:42:03 IST 2025

[Back to Page 1](#)

[Go to Page 3](#)

[Go to Page 4](#)

[Terminate Session](#)

← → C ⓘ localhost:8080/2c/LogoutServlet

You are logged out successfully.

[Go back to Login Page](#)

PRACTICAL – 3B

AIM: Develop Simple Servlet Question Answer Application using Database.

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Quiz Application</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            text-align: center;
            margin-top: 100px;
        }
        h1 {
            color: #333;
        }
        a {
            display: inline-block;
            padding: 12px 24px;
            background-color: #007BFF;
            color: white;
            text-decoration: none;
            font-size: 18px;
            border-radius: 6px;
        }
        a:hover {
            background-color: #0056b3;
        }
    </style>
</head>
<body>
    <h1>Welcome to Quiz Servlet by SHEKHAR SUMAN</h1>
    <a href="QuizServlet">CLICK TO START QUIZ</a>
</body>
</html>
```

QuizServlet.java

```
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;

@WebServlet("/QuizServlet")
public class QuizServlet extends HttpServlet {
```

```

@Override
public void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {

    response.setContentType("text/html;charset=UTF-8");
    PrintWriter out = response.getWriter();

    out.println("<html><head><title>Quiz</title></head><body>");
    out.println("<h1>Welcome to the Quiz!</h1>");
    out.println("<form action='ShowResult' method='post'>"); // Use POST for form submission

    try {
        // Load MySQL Driver
        Class.forName("com.mysql.cj.jdbc.Driver");

        // Connect to Database (replace password if needed)
        Connection con = DriverManager.getConnection(
            "jdbc:mysql://localhost:3306/qadb", "root", "test");

        Statement stmt = con.createStatement();
        ResultSet res = stmt.executeQuery("SELECT * FROM quiz");

        out.println("<table border='1' cellpadding='10'>");

        int qno = 0;
        while (res.next()) {
            qno++;

            // Question
            out.println("<tr><td colspan='2'><b>Q" + qno + ". " + res.getString("Question") + "</b></td></tr>");

            // Options
            out.println("<tr><td><input type='radio' name='" + qno + "' value='"
                + res.getString("Op1") + "'></td><td>" + res.getString("Op1") + "</td></tr>");

            out.println("<tr><td><input type='radio' name='" + qno + "' value='"
                + res.getString("Op2") + "'></td><td>" + res.getString("Op2") + "</td></tr>");

            out.println("<tr><td><input type='radio' name='" + qno + "' value='"
                + res.getString("Op3") + "'></td><td>" + res.getString("Op3") + "</td></tr>");

            out.println("<tr><td><input type='radio' name='" + qno + "' value='"
                + res.getString("Op4") + "'></td><td>" + res.getString("Op4") + "</td></tr>");

        }
        out.println("</table>");
        out.println("<br><input type='reset'>");
        out.println("<input type='submit' value='SUBMIT'>");

    }
}

```

```

stmt.close();
con.close();

} catch (Exception e) {
    out.println("<h1>Error: " + e.getMessage() + "</h1>");
}

out.println("</form></body></html>");
}
}

```

ShowResult.java

```

import java.io.*;
import java.sql.*;
import jakarta.servlet.*;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.*;

@WebServlet("/QuizServlet")
public class QuizServlet extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<form action='ShowResult' method='post'>");

        try {
            // Load MySQL Driver
            Class.forName("com.mysql.cj.jdbc.Driver");

            // Connect to Database
            Connection con = DriverManager.getConnection(
                "jdbc:mysql://localhost:3306/qadb", "root", "test");

            Statement stmt = con.createStatement();
            ResultSet res = stmt.executeQuery("SELECT * FROM quiz");

            out.println("<table border='1' cellpadding='10'>");

            int qno = 0;
            while (res.next()) {
                qno++;

```

```

// Question
out.println("<tr><td colspan='2'><b>Q" + qno + ". " + res.getString("question") + "</b></td></tr>");

// Options
out.println("<tr><td><input type='radio' name='" + qno + "' value='"
+ res.getString("op1") + "'></td><td>" + res.getString("op1") + "</td></tr>");

out.println("<tr><td><input type='radio' name='" + qno + "' value='"
+ res.getString("op2") + "'></td><td>" + res.getString("op2") + "</td></tr>");

out.println("<tr><td><input type='radio' name='" + qno + "' value='"
+ res.getString("op3") + "'></td><td>" + res.getString("op3") + "</td></tr>");

out.println("<tr><td><input type='radio' name='" + qno + "' value='"
+ res.getString("op4") + "'></td><td>" + res.getString("op4") + "</td></tr>");

}

out.println("</table>");
out.println("<br><input type='reset'>");
out.println("<input type='submit' value='SUBMIT'>");

stmt.close();
con.close();

} catch (Exception e) {
    out.println("<h1>Error: " + e.getMessage() + "</h1>");
}

out.println("</form>");

}
}

```

DATABASE

CREATE DATABASE qadb;

USE qadb;

```

CREATE TABLE quiz (
    Qno VARCHAR(5) PRIMARY KEY,
    Question VARCHAR(150),
    Op1 VARCHAR(50),
    Op2 VARCHAR(50),
    Op3 VARCHAR(50),
    Op4 VARCHAR(50),
    Ans VARCHAR(50)
);

```

INSERT INTO quiz VALUES

('001', 'What is the capital of India?', 'New Delhi', 'Kolkata', 'Chennai', 'Mumbai', 'New Delhi'),
('002', 'Who was the First President of India?', 'Dr. Rajendra Prasad', 'Dr. S. Radhakrishnan', 'Ram Nath Kovind',
'V. V. Giri', 'Dr. Rajendra Prasad'),
('003', 'What is ORM?', 'Object Ratio Mean', 'Object Rotation Measure', 'Object Relation Mapping', 'Oracle
Management', 'Object Relation Mapping'),
('004', 'The unit of Energy is __', 'Dozen', 'Kilometer', 'Joule', 'Hertz', 'Joule'),
('005', '____ is the smallest memory unit.', 'Bit', 'Byte', 'Kilobyte', 'Gigabyte', 'Bit');

OUTPUT

Welcome to Quiz Servlet by Shekhar Suman

CLICK TO START QUIZ

| Q1. What is the capital of India? | |
|---|-------------------------|
| <input checked="" type="radio"/> | New Delhi |
| <input type="radio"/> | Kolkata |
| <input type="radio"/> | Chennai |
| <input type="radio"/> | Mumbai |
| Q2. Who was the First President of India? | |
| <input checked="" type="radio"/> | Dr. Rajendra Prasad |
| <input type="radio"/> | Dr. S. Radhakrishnan |
| <input type="radio"/> | Ram Nath Kovind |
| <input type="radio"/> | V. V. Giri |
| Q3. What is ORM? | |
| <input type="radio"/> | Object Ratio Mean |
| <input type="radio"/> | Object Rotation Measure |
| <input type="radio"/> | Object Relation Mapping |
| <input checked="" type="radio"/> | Oracle Management |

Q1 : Correct

Q2 : Correct

Q3 : Incorrect

Q4 : Incorrect

Q5 : Incorrect

Your Score: 2/5

Percentage: 40.00%

PRACTICAL – 4B

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

Index.html

```
<html>
<head>
<title>User Information Page</title>
</head>
<body>
    <h2>Shekhar Suman </h2>
<form action="Validate.jsp">
Enter Your Name<input type="text" name="name" ><br>
Enter Your Age<input type="text" name="age" ><br>
Select Hobbies<input type="checkbox" name="hob" value="Singing">Singing
<input type="checkbox" name="hob" value="Reading">Reading Books
<input type="checkbox" name="hob" value="Football">Playing Football<br>
Enter E-mail<input type="text" name="email" ><br>
Select Gender<input type="radio" name="gender" value="male">Male
<input type="radio" name="gender" value="female">Female
<input type="radio" name="gender" value="other">Other<br>
<input type="hidden" name="error" value="">
<input type="submit" value="Submit Form">
</form> </body> </html>
```

Validate.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8" import="myPackage.*" %>
<!DOCTYPE html>
<html>
<head>
    <title>Validation Page</title>
</head>
<body>
    <jsp:useBean id="obj" scope="request" class="myPackage.CheckerBean" />
    <jsp:setProperty name="obj" property="*" />

    <% if (obj.validate()) { %>
        <h2 style="color: green;">Validation Successful!</h2>
        <p><strong>Name:</strong> <%= obj.getName() %></p>
        <p><strong>Age:</strong> <%= obj.getAge() %></p>
        <p><strong>Hobby:</strong> <%= obj.getHob() %></p>
        <p><strong>Email:</strong> <%= obj.getEmail() %></p>
        <p><strong>Gender:</strong> <%= obj.getGender() %></p>
    <% } else { %>
        <h2 style="color: red;">Validation Failed!</h2>
        <div style="color: red; font-weight: bold;">
            <%= obj.getError() %>
    <% } %>
```

```
</div>
<br>
<a href="javascript:history.back()">Go Back</a>
<% } %>
</body>
</html>
```

CheckerBeam.java

```
package myPackage;
public class CheckerBean {
    private String name, age, hob, email, gender, error;
    public CheckerBean() {
        error = "";
    }
    public void setName(String n) {
        name = n;
    }
    public void setAge(String a) {
        age = a;
    }
    public void setHob(String h) {
        hob = h;
    }
    public void setEmail(String e) {
        email = e;
    }
    public void setGender(String g) {
        gender = g;
    }
    public void setError(String e) {
        error = e;
    }
    public String getName() {
        return name;
    }
    public String getAge() {
        return age;
    }
    public String getHob() {
        return hob;
    }
    public String getEmail() {
        return email;
    }
    public String getGender() {
        return gender;
    }
    public String getError() {
```

```
    return error;
}

public boolean validate() {
    boolean res = true
```

Shekhar Suman

Enter Your Name

Enter Your Age

Select Hobbies Singing Reading Books Playing Football

Enter E-mail

Select Gender Male Female Other

Validation Successful!

Name: Shekhar Suman

Age: 20

Hobby: Singing

Email: shekharsuman3266@gmail.com

Gender: male

PRACTICAL – 4B

AIM: Create a registration and login JSP application to register and authenticate the user based on username and password using JDBC.

Index.html

```
<!DOCTYPE html>
<html>
<head>
<title>Authentication System</title>
</head>
<body>
<h2>Shekhar suman</h2>
<a href="Register.html"><u>New User Register Here</u></a>
<br><br>
<a href="Login.html"><u>Click Here to Login</u></a>
</body>
</html>
```

Register.html

```
<html>
<head>
<title>New User Registration Page</title>
</head>
<body>
<form action="Register.jsp" >
<h1> New User Registration Page</h1>
Enter User Name <input type="text" name="txtName" ><br>
Enter Password <input type="password" name="txtPass1" ><br>
Re-Enter Password<input type="password" name="txtPass2" ><br>
Enter Email<input type="text" name="txtEmail" ><br>
Enter Country Name <input type="text" name="txtCon" ><br>
<input type="reset" ><input type="submit" value="REGISTER" >
</form> </body> </html>
```

Login.html

```
<html><body>

<h1>Login Page</h1>
<form action="Login.jsp" >
Enter User Name <input type="text" name="txtName" ><br>
Enter Password <input type="password" name="txtPass" ><br>
<input type="reset" ><input type="submit" value="~~~LOGIN~~" >
</form></body></html>
```

Register.jsp

```
<%@page contentType="text/html" import="java.sql.*"%>
<html>
<body>
<h1>Registration JSP Page</h1>
<%
String uname = request.getParameter("txtName");
String pass1 = request.getParameter("txtPass1");
String pass2 = request.getParameter("txtPass2");
String email = request.getParameter("txtEmail");
String ctry = request.getParameter("txtCon");
```

```

if (pass1 != null && pass1.equals(pass2)) {
    Connection con = null;
    PreparedStatement stmt = null;
    try {
        Class.forName("com.mysql.cj.jdbc.Driver");
        con = DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb", "root", "test");

        // Better: mention column names
        stmt = con.prepareStatement("INSERT INTO user (Username, Password, Email, Country) VALUES (?, ?, ?, ?)");
        stmt.setString(1, uname);
        stmt.setString(2, pass1);
        stmt.setString(3, email);
        stmt.setString(4, ctry);

        int row = stmt.executeUpdate();
        if (row == 1) {
            out.println("<h2>Registration Successful</h2>");
        } else {
            out.println("<h2>Registration Failed</h2>");
            %><jsp:include page="Register.html" /><%
        }
    } catch (Exception e) {
        out.println("Error: " + e.getMessage());
    } finally {
        try { if (stmt != null) stmt.close(); } catch(Exception ex){}
        try { if (con != null) con.close(); } catch(Exception ex){}
    }
} else {
    out.println("<h2>Password Mismatch</h2>");
    %><jsp:include page="Register.html" /><%
}
%>
</body>
</html>

```

Login.jsp

```

<%@page contentType="text/html" import="java.sql.*"%>
<html>
<body>
<h1>Login JSP Page</h1>
<%
    String uname = request.getParameter("txtName");
    String pass = request.getParameter("txtPass");

    Connection con = null;
    PreparedStatement stmt = null;
    ResultSet rs = null;

    try {
        Class.forName("com.mysql.cj.jdbc.Driver");
        con = DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb", "root", "test");

        stmt = con.prepareStatement("SELECT Password FROM user WHERE Username=?");
        stmt.setString(1, uname);
        rs = stmt.executeQuery();

        if (rs.next()) {
            String dbPass = rs.getString("Password");
            if (pass.equals(dbPass)) {

```

```

        out.println("<h1>~~~ LOGIN SUCCESSFUL ~~~</h1>");
    } else {
        out.println("<h1>Incorrect Password!</h1>");
    }
} else {
    out.println("<h1>User does not exist!</h1>");
%><jsp:include page="Register.html" /><%
}

} catch (Exception e) {
    out.println("Error: " + e.getMessage());
} finally {
    try { if (rs != null) rs.close(); } catch(Exception ex) {}
    try { if (stmt != null) stmt.close(); } catch(Exception ex) {}
    try { if (con != null) con.close(); } catch(Exception ex) {}
}
%>
</body>
</html>

```

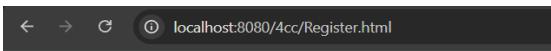
OUTPUT



Shekhar suman

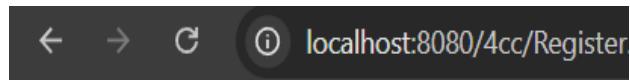
[New User Register Here](#)

[Click Here to Login](#)



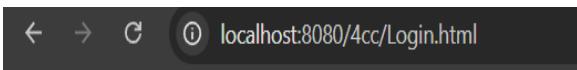
New User Registration Page

Enter User Name
 Enter Password
 Re-Enter Password
 Enter Email
 Enter Country Name



Registration JSP Page

Registration Successful



Login Page

Enter User Name
 Enter Password



Login JSP Page

~~~ LOGIN SUCCESSFUL ~~~

PRACTICAL – 5A

AIM: Create an html page with fields, eno, name, age, desg, salary. Now on submit this data to a JSP page which will update the employee table of database with matching eno.

Index.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Update Employee</title>
</head>
<body>
    <h2>Update Employee Record by SHEKHAR SUMAN</h2>
    <form action="updateEmployee.jsp" method="post">
        <label>Employee No:</label>
        <input type="text" name="eno" required><br><br>

        <label>Name:</label>
        <input type="text" name="name" required><br><br>

        <label>Age:</label>
        <input type="number" name="age" required><br><br>

        <label>Designation:</label>
        <input type="text" name="desg" required><br><br>

        <label>Salary:</label>
        <input type="number" name="salary" required><br><br>

        <input type="submit" value="Update Employee">
    </form>
</body>
</html>
```

updateEmployee.jsp

```
<%--
 Document : updateEmployee
 Created on : Sep 29, 2025, 8:33:29 PM
 Author   : SHEKHAR SUMAN
--%>

<%@ page contentType="text/html;charset=UTF-8" import="java.sql.*" %>
<html>
<head>
    <title>Employee Update</title>
</head>
<body>
<%
    String eno = request.getParameter("eno");
    String name = request.getParameter("name");
    String age = request.getParameter("age");
    String desg = request.getParameter("desg");
    String salary = request.getParameter("salary");
%
```

```

Connection con = null;
PreparedStatement ps = null;

try {
    Class.forName("com.mysql.cj.jdbc.Driver");
    con = DriverManager.getConnection("jdbc:mysql://localhost:3306/empinfo", "root", "test");

    String sql = "UPDATE employee SET name=?, age=?, desg=?, salary=? WHERE eno=?";
    ps = con.prepareStatement(sql);
    ps.setString(1, name);
    ps.setString(2, age);
    ps.setString(3, desg);
    ps.setString(4, salary);
    ps.setString(5, eno);

    int rows = ps.executeUpdate();

    if (rows > 0) {
        out.println("<h3>Employee record updated successfully!</h3>");
    } else {
        out.println("<h3>No employee found with ENO: " + eno + "</h3>");
    }
} catch (Exception e) {
    out.println("<h3>Error: " + e.getMessage() + "</h3>");
} finally {
    if (ps != null) try { ps.close(); } catch (Exception ex) {}
    if (con != null) try { con.close(); } catch (Exception ex) {}
}
%>
</body>
</html>

```

DATABASE

```

CREATE DATABASE empinfo;
USE empinfo;
CREATE TABLE employee (
    eno VARCHAR(10) PRIMARY KEY,
    name VARCHAR(50),
    age INT,
    desg VARCHAR(50),
    salary DECIMAL(10,2)
);
INSERT INTO employee VALUES
('1', 'Shekhar', 23, 'Developer', 45000.00),
('2', 'Suman', 25, 'Tester', 38000.00),
('3', 'Shreyansh', 27, 'Manager', 60000.00),
('4', 'Alister', 29, 'Designer', 50000.00),
('5', 'Devraj', 26, 'Developer', 47000.00),
('6', 'Kirti', 24, 'Analyst', 42000.00);

```

DATABASE

← → C i localhost:8080/5a/

Update Employee Record by SHEKHAR SUMAN

Employee No:

Name:

Age:

Designation:

Salary: ↴

← → C i

localhost:8080/5a/updateEmployee.jsp

Employee record updated successfully!

PRACTICAL – 6A

AIM: Create a Currency Converter application using EJB

Index.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Currency Converter</title>
</head>
<body>
    index.html
    <h2> Shekhar Suman </h2>
    <form action="CCServlet">
        Enter Amount <input type="text" name="amt"><br>
        Select Conversion Type
        <input type="radio" name="type" value="r2d" checked> Rupees to Dollar
        <input type="radio" name="type" value="d2r"> Dollar to Rupees<br>
        <input type="reset">
        <input type="submit" value="CONVERT">
    </form>
</body>
</html>
```

CCServlet.java

```
package mypack;

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import javax.ejb.EJB;
import mybeans.CCBean;

public class CCServlet extends HttpServlet {

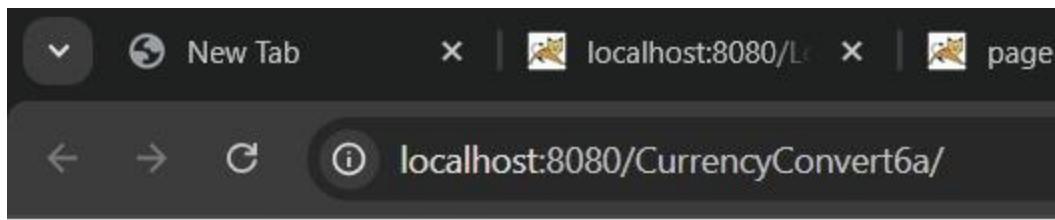
    @EJB
    CCBean obj;

    public void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();

        double amt = Double.parseDouble(request.getParameter("amt"));

        if (request.getParameter("type").equals("r2d")) {
            out.println("<h1>" + amt + " Rupees = " + obj.r2Dollar(amt) + " Dollars</h1>");
        }
        if (request.getParameter("type").equals("d2r")) {
            out.println("<h1>" + amt + " Dollars = " + obj.d2Rupees(amt) + " Rupees</h1>");
        }
    }
}
```

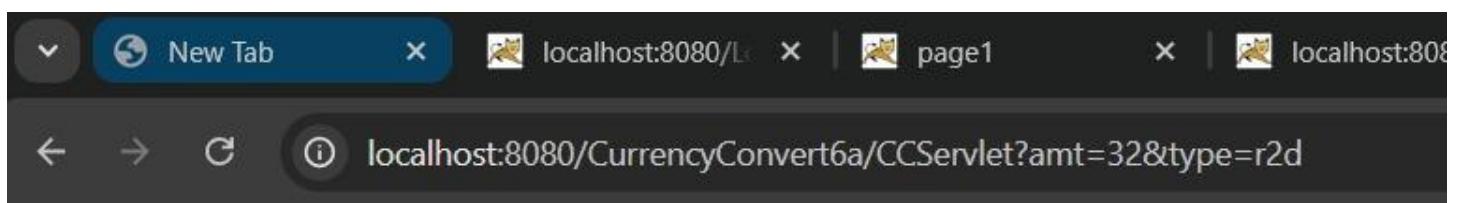
OUTPUT



Enter Amount

Select Conversion Type

Rupees to Dollar Dollar to Rupees



32.0 Rupees = 0.4874333587204874 Dollars

CERTIFICATE

Class: **T.Y.B.Sc.I.T.**

Year: **2025 - 2026**

This is to certify that work entered in this Journal is the work of

Shri / Kumari: **SHEKHAR SUMAN**.

of **T.Y.B.Sc.I.T** division _____ Roll No. **47**.

Uni. Exam No. _____ has satisfactorily completed the

Required number of practical and worked for the **5TH** Semester

Of the year **2025 - 2026** in the college laboratory as laid down

By the university.

Head of the
Department

External
Examiner

Internal Examiner
Subject teacher

Date:

| | | |
|---|--------------------|--------------|
| NAME: SHEKHAR SUMAN | | INDEX |
| CLASS: T.Y.B.Sc.I.T. | ROLL No: 47 | |
| SUBJECT: ENTERPRISE JAVA | | |
| COLLEGE: ST. ROCK'S DEGREE COLLEGE | | |

| PR No: | TITLE | DATE | SIGN |
|-----------|--|------------|------|
| <u>1A</u> | Create a simple calculator application using servlet. | 03/07/2025 | |
| <u>1B</u> | 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". | 17/07/2025 | |
| <u>1C</u> | Create a registration Servlet in Java using JDBC. Accept the details such as Username, Password, Email, and Country from the user using HTML Form and store the registration details in the database. | 31/07/2025 | |
| <u>2A</u> | 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 be forwarded to Welcome Servlet else the user will stay on the index.html page and an error message will be displayed. | 07/08/2025 | |
| <u>2B</u> | Create a Servlet that uses Cookies to store the number of times a user has visited Servlet. | 13/08/2025 | |
| <u>2C</u> | Create a Servlet demonstrating the use of session creation and destruction. Also check whether the user has visited this page first time or has visited earlier also using Sessions. | 21/08/2025 | |
| <u>3B</u> | Develop Simple Servlet Question Answer Application using Database. | 25/08/2025 | |
| <u>4B</u> | Develop a simple JSP application to pass values from one page to another with validations. | 04/09/2025 | |
| <u>4C</u> | Create a registration and login JSP application to register and authenticate the user based on username and password using JDBC. | 11/09/2025 | |
| <u>5A</u> | Create an html page with fields, eno, name, age, desg, salary. Now on submit this data to a JSP page which will update the employee table of database with matching eno. | 17/09/2025 | |
| <u>6A</u> | Create a Currency Converter application using EJB. | 25/09/2025 | |
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