IWP PROGRAMS

1.JS:

* Name validation
* Email
* Phone number
* URL
* Date[yyyy/mm/dd , dd/mm/yyyy, dd/mm/yy, dd-mm-yyyy]
* Password
* PAN
* Aadhaar

<!DOCTYPE html>

<html lang="en">

<head>

<title>Form Validation</title>

<style>

    #successMessage {

        color: green;

        display: none;

    }

</style>

</head>

<body>

<h2>Form Validation Example</h2>

<form id="myForm" action="#" method="post" onsubmit="return validateForm(event)">

    <label for="name">Name:</label><br>

    <input type="text" id="name" name="name"><br>

    <label for="email">Email:</label><br>

    <input type="email" id="email" name="email"><br>

    <label for="phone">Phone number:</label><br>

    <input type="text" id="phoneNumber" name="phoneNumber"><br>

    <label for="url">Website:</label><br>

    <input type="text" id="url" name="url"><br>

    <label for="password">Password:</label><br>

    <input type="password" id="password" name="password"><br>

    <label for="date">Date (dd/mm/yyyy or dd-mm-yyyy or dd/mm/yy):</label><br>

    <input type="text" id="date" name="date"><br>

    <label for="pan">PAN Card:</label><br>

    <input type="text" id="pan" name="pan"><br>

    <label for="aadhaar">Aadhaar Card:</label><br>

    <input type="text" id="aadhaar" name="aadhaar"><br>

    <input type="submit" value="Submit">

</form>

<p id="successMessage">Your details have been submitted successfully!</p>

<script>

function validateForm(event) {

    event.preventDefault();

    var name = document.getElementById("name").value;

    var email = document.getElementById("email").value;

    var phoneNumber = document.getElementById("phoneNumber").value;

    var password = document.getElementById("password").value;

    var url = document.getElementById("url").value;

    var date = document.getElementById("date").value;

    var pan = document.getElementById("pan").value;

    var aadhaar = document.getElementById("aadhaar").value;

    // Name validation

    if (name == "") {

        alert("Please fill in the name field.");

        return false;

    }

    // Email validation

    const emailPattern = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;

    if (email == "") {

        alert("Please fill in the email field.");

        return false;

    } else if (!emailPattern.test(email)) {

        alert("Please enter a valid email address.");

        return false;

    }

    // Phone number validation

    const phonePattern = /^\d{10}$/;

    if (!phonePattern.test(phoneNumber)) {

        alert("Please enter a valid 10-digit phone number.");

        return false;

    }

    // Password validation

    if (!validatePassword(password)) {

        return false;

    }

    // URL validation

    const urlPattern = /^(https?:\/\/)?([\w-]+(\.[\w-]+)+\.?(:\d+)?(\/[^\s]\*)?)$/i;

    if (url === "") {

        alert("Please fill in the website field.");

        return false;

    } else if (!urlPattern.test(url)) {

        alert("Please enter a valid URL.");

        return false;

    }

    // Date validation

    const datePattern = /^(?:(\d{2})[\/-](\d{2})[\/-](\d{4})|(\d{2})[\/-](\d{2})[\/-](\d{2}))$/;

    if (date === "") {

        alert("Please fill in the date field.");

        return false;

    } else {

        const match = date.match(datePattern);

        if (!match) {

            alert("Please enter a valid date in the format dd/mm/yyyy, dd-mm-yyyy, or dd/mm/yy.");

            return false;

        } else {

            const day = parseInt(match[1] || match[4], 10);

            const month = parseInt(match[2] || match[5], 10);

            const year = parseInt(match[3] || '20' + match[6], 10);

            if (day === 0 || month === 0 || year === 0) {

                alert("Date cannot be 00/00/0000.");

                return false;

            }

        }

    }

    /\*Date validation(yyyy/mm/dd)

    const datePattern = /^(\d{4})\/(\d{2})\/(\d{2})$/;

    if (date === "") {

        alert("Please fill in the date field.");

        return false;

    } else {

        const match = date.match(datePattern);

        if (!match) {

            alert("Please enter a valid date in the format yyyy/mm/dd.");

            return false;

        } else {

            const year = parseInt(match[1], 10);

            const month = parseInt(match[2], 10);

            const day = parseInt(match[3], 10);

            if (year === 0 || month === 0 || day === 0) {

                alert("Date cannot be 0000/00/00.");

                return false;

            }

        }

    } \*/

    // PAN card validation

    const panPattern = /^[A-Z]{5}[0-9]{4}[A-Z]{1}$/;

    if (!panPattern.test(pan)) {

        alert("Please enter a valid PAN card number (e.g., ABCDE1234F).");

        return false;

    }

    // Aadhaar card validation

    const aadhaarPattern = /^\d{12}$/;

    if (!aadhaarPattern.test(aadhaar)) {

        alert("Please enter a valid 12-digit Aadhaar card number.");

        return false;

    }

    // Show success message and reset form

    document.getElementById("successMessage").style.display = "block";

    document.getElementById("myForm").reset();

    return true;

}

function validatePassword(password) {

    if (password.length < 8) {

        alert("Password must be at least 8 characters long.");

        return false;

    }

    if (!/[A-Z]/.test(password)) {

        alert("Password must contain at least one uppercase letter.");

        return false;

    }

    if (!/[a-z]/.test(password)) {

        alert("Password must contain at least one lowercase letter.");

        return false;

    }

    if (!/[0-9]/.test(password)) {

        alert("Password must contain at least one number.");

        return false;

    }

    if (!/[!@#$%^&\*(),.?":{}|<>]/.test(password)) {

        alert("Password must contain at least one special character.");

        return false;

    }

    return true;

}

</script>

</body>

</html>

2.Number range within 1-999:

<!DOCTYPE html>

<html lang="en">

<head>

<title>Number Range Check</title>

</head>

<body>

<h2>Number Range Check Example</h2>

<label for="number">Enter a number:</label><br>

<input type="text" id="number" name="number"><br>

<button onclick="checkNumberRange()">Check</button>

<p id="resultMessage"></p>

<script>

function checkNumberRange() {

    var number = document.getElementById("number").value;

    var resultMessage = document.getElementById("resultMessage");

    // Convert the input to a number

    number = Number(number);

    // Check if the number is within the range 1 to 999

    if (number >= 1 && number <= 999) {

        resultMessage.textContent = "The number is within the range 1 to 999.";

        resultMessage.style.color = "green";

    } else {

        resultMessage.textContent = "The number is not within the range 1 to 999.";

        resultMessage.style.color = "red";

    }

}

</script>

</body>

</html>

JSP and Servlet:

1.addition of two numbers:

**index.html:**

<!DOCTYPE html>

<html>

    <head>

        <title>Display</title>

        <meta charset="UTF-8">

        <meta name="viewport" content="width=device-width, initial-scale=1.0">

        <style>

            table,th,td{

                border-collapse:collapse;}</style>

    </head>

    <body>

        <form action="register.jsp

              " method="post">

            <table width="250" border="1">

                <tr>

                    <td> Number 1</td>

                    <td><input type="number" id="num1" name="num1"></td>

                </tr>

                <tr>

                    <td> Number 2</td>

                    <td><input type="number" id="num2" name="num2"></td>

                </tr>

                <tr>

                    <td rowspan="2"><input type="submit" value="Submit"></td>

                </tr>

            </table>

        </form>

    </body>

</html>

**add.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("/add")

public class add extends HttpServlet {

    public void doPost(HttpServletRequest req, HttpServletResponse res) throws IOException, ServletException {

        PrintWriter out = res.getWriter();

        int num1 = Integer.parseInt(req.getParameter("num1"));

        int num2 = Integer.parseInt(req.getParameter("num2"));

        int total=num1+num2;

        out.println("Your total is" + total);

    }

}

**add.jsp:**

<%@ page language="java" contentType="text/html; charset=UTF-8"

    pageEncoding="UTF-8"%>

<!DOCTYPE html>

<html>

<head>

    <title>Registration Status</title>

</head>

<body>

    <%

        int num1 = Integer.parseInt(request.getParameter("num1"));

        int num2 = Integer.parseInt(request.getParameter("num2"));

        int total=num1+num2;

    %>

    <p>Total: <%= total %></p>

</body>

</html>

**2.Register:**

**index.html:**

<!DOCTYPE html>

<html>

<head>

    <title>User Registration</title>

</head>

<body>

    <h2>User Registration Form</h2>

    <form action="register.jsp" method="post">

        <label for="firstName">First Name:</label>

        <input type="text" id="firstName" name="firstName" required><br><br>

        <label for="lastName">Last Name:</label>

        <input type="text" id="lastName" name="lastName" required><br><br>

        <label for="age">Age:</label>

        <input type="number" id="age" name="age" required><br><br>

        <label for="gender">Gender:</label>

        <select id="gender" name="gender" required>

            <option value="male">Male</option>

            <option value="female">Female</option>

            <option value="other">Other</option>

        </select><br><br>

        <label for="address">Address:</label>

        <textarea id="address" name="address" required></textarea><br><br>

        <label for="email">Email:</label>

        <input type="email" id="email" name="email" required><br><br>

        <label for="password">Password:</label>

        <input type="password" id="password" name="password" required><br><br>

        <label for="confirm\_password">Confirm Password:</label>

        <input type="password" id="confirm\_password" name="confirm\_password" required><br><br>

        <input type="submit" value="Register">

    </form>

</body>

</html>

**register.jsp:**

<%@ page language="java" contentType="text/html; charset=UTF-8"

    pageEncoding="UTF-8"%>

<!DOCTYPE html>

<html>

<head>

    <title>Registration Status</title>

</head>

<body>

    <h2>Registration Status</h2>

    <%

        String firstName = request.getParameter("firstName");

        String lastName = request.getParameter("lastName");

        int age = Integer.parseInt(request.getParameter("age"));

        String gender = request.getParameter("gender");

        String address = request.getParameter("address");

        String email = request.getParameter("email");

        String password = request.getParameter("password");

        String confirm\_password = request.getParameter("confirm\_password");

    %>

    <p>First Name: <%= firstName %></p>

    <p>Last Name: <%= lastName %></p>

    <p>Age: <%= age %></p>

    <p>Gender: <%= gender %></p>

    <p>Address: <%= address %></p>

    <p>Email: <%= email %></p>

    <p>Password: <%= password %></p>

</body>

</html>

3.Current date:

**index.html:**

<!DOCTYPE html>

<html>

<head>

    <title>User Registration</title>

</head>

<body>

    <form action="date.jsp" method="post">

        <label for="Currentdate">Current date:</label>

        <input type="submit" value="Submit">

    </form>

</body>

</html>

**date.jsp:**

<%--

    Document   : date

    Created on : 13-Jun-2024, 9:14:44 pm

    Author     : anish

--%>

<%@page contentType="text/html" pageEncoding="UTF-8" import="java.util.\*"%>

<!DOCTYPE html>

<html>

    <head>

        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">

        <title>JSP Page</title>

    </head>

    <body>

        <%

            Date date = new Date();

        %>

        <h1>Current Time is: <%= date %> </h1>

    </body>

</html>

**date.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.text.SimpleDateFormat;

import java.util.Date;

@WebServlet("/add")

public class AddServlet extends HttpServlet {

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

        response.setContentType("text/html");

        PrintWriter out = response.getWriter();

        // Get the current date and time

        Date currentDate = new Date();

        // Format the date using SimpleDateFormat

        SimpleDateFormat dateFormat = new SimpleDateFormat("yyyy-MM-dd HH:mm:ss");

        String formattedDate = dateFormat.format(currentDate);

        // Output the formatted date as part of an HTML response

        out.println("<html><body>");

        out.println("<h2>Current Time is: " + formattedDate + "</h2>");

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

    }

}

**Login page using xml and xslt:**

**users.xml:**

<?xml version="1.0" encoding="UTF-8"?>

<?xml-stylesheet type="text/xsl" href="login.xsl"?>

<users>

    <user>

        <username>admin</username>

        <password>password</password>

    </user>

</users>

**login.xsl:**

<?xml version="1.0" encoding="UTF-8"?>

<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">

<!-- Match root node -->

<xsl:template match="/">

  <html>

    <head>

      <meta charset="UTF-8"/>

      <title>Login</title>

      <style>

        body {

          font-family: Arial, sans-serif;

          text-align: center;

          margin-top: 50px;

        }

        form {

          width: 300px;

          margin: 0 auto;

          border: 1px solid #ccc;

          padding: 20px;

        }

        label {

          display: block;

          margin-bottom: 10px;

          text-align: left;

        }

        input[type="text"],

        input[type="password"] {

          width: calc(100% - 20px);

          padding: 8px;

          margin-bottom: 10px;

        }

        input[type="submit"] {

          background-color: #4CAF50;

          color: white;

          padding: 10px 20px;

          border: none;

          cursor: pointer;

        }

        input[type="submit"]:hover {

          background-color: #45a049;

        }

        .error {

          color: red;

          margin-top: 10px;

        }

      </style>

    </head>

    <body>

      <h2>Login</h2>

      <!-- Apply templates to users -->

      <xsl:apply-templates select="users/user"/>

    </body>

  </html>

</xsl:template>

<!-- Template to match each user node -->

<xsl:template match="user">

  <form action="valid" method="post">

    <!-- Error message handling -->

    <xsl:if test="/users/error">

      <p class="error">Invalid credentials, please try again.</p>

    </xsl:if>

    <label for="username">Username:</label><br/>

    <input type="text" id="username" name="username"/><br/>

    <label for="password">Password:</label><br/>

    <input type="password" id="password" name="password"/><br/><br/>

    <input type="submit" value="Login"/>

  </form>

  <script>

  function valid()

  {

    alert("Login successful");

  }</script>

</xsl:template>

</xsl:stylesheet>