**HomeWork-4**

**Name and Age (Input and Output on Two Pages)**

**nameForm.jsp**

<!DOCTYPE html>

<html>

<head><title>Enter Name and Age</title></head>

<body>

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

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

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

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

</form>

</body>

</html>

**displayNameAge.jsp**

<%@ page language="java" %>

<!DOCTYPE html>

<html>

<head><title>Display</title></head>

<body>

<%

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

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

%>

<h2>Submitted Information:</h2>

<p>Name: <%= name %></p>

<p>Age: <%= age %></p>

</body>

</html>

**Greeting Message Based on Username**

**greeting.jsp**

<%@ page language="java" %>

<!DOCTYPE html>

<html>

<head><title>Greeting</title></head>

<body>

<form method="post">

Username: <input type="text" name="username" required><br><br>

Password: <input type="password" name="password" required><br><br>

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

</form>

<%

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

if (username != null) {

%>

<h3>Welcome, <%= username %>!</h3>

<%

}

%>

</body>

</html>

**Login Check (Success or Failure Message)**

<%@ page language="java" %>

<!DOCTYPE html>

<html>

<head><title>Login</title></head>

<body>

<form method="post">

Username: <input type="text" name="username" required><br><br>

Password: <input type="password" name="password" required><br><br>

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

</form>

<%

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

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

if (username != null && password != null) {

if ("admin".equals(username) && "1234".equals(password)) {

%>

<p style="color:green;">Login successful. Welcome, <%= username %>!</p>

<%

} else {

%>

<p style="color:red;">Login failed. Invalid credentials.</p>

<% } }

%>

</body>

</html>

**Addition of Two Numbers (Two Pages)**

<!DOCTYPE html>

<html>

<head><title>Add Numbers</title></head>

<body>

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

Number 1: <input type="number" name="number1" required><br><br>

Number 2: <input type="number" name="number2" required><br><br>

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

</form>

</body>

</html>

<%@ page language="java" %>

<!DOCTYPE html>

<html>

<head><title>Addition Result</title></head>

<body>

<%

int num1 = Integer.parseInt(request.getParameter("number1"));

int num2 = Integer.parseInt(request.getParameter("number2"));

int sum = num1 + num2;

%>

<h2>Result: <%= num1 %> + <%= num2 %> = <%= sum %></h2>

</body>

</html>

**Armstrong Number**

<%@ page language="java" %>

<!DOCTYPE html>

<html>

<head><title>Armstrong Check</title></head>

<body>

<form method="post">

Enter a number: <input type="number" name="num" required>

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

</form>

<%

String input = request.getParameter("num");

if (input != null) {

int num = Integer.parseInt(input);

int temp = num, sum = 0, digit;

while (temp > 0) {

digit = temp % 10;

sum += digit \* digit \* digit;

temp /= 10;

}

%>

<p><%= num %> is <%= (sum == num ? "" : "not ") %>an Armstrong number.</p>

<%}

%>

</body>

</html>

**Factorial**

<%@ page language="java" %>

<!DOCTYPE html>

<html>

<head><title>Factorial</title></head>

<body>

<form method="post">

Enter a number: <input type="number" name="num" required>

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

</form>

<%

String input = request.getParameter("num");

if (input != null) {

int n = Integer.parseInt(input);

long fact = 1;

for (int i = 1; i <= n; i++) {

fact \*= i;

}

%>

<p>Factorial of <%= n %> is <%= fact %></p>

<%

}

%>

</body>

</html>

**Palindrome Check**

<%@ page language="java" %>

<!DOCTYPE html>

<html>

<head><title>Palindrome</title></head>

<body>

<form method="post">

Enter a number: <input type="number" name="num" required>

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

</form>

<%

String input = request.getParameter("num");

if (input != null) {

String reversed = new StringBuilder(input).reverse().toString();

boolean isPalindrome = input.equals(reversed);

%>

<p><%= input %> is <%= (isPalindrome ? "" : "not ") %>a palindrome.</p>

<%

}

%>

</body>

</html>

**Power Calculation**

<%@ page language="java" %>

<!DOCTYPE html>

<html>

<head><title>Power Calculator</title></head>

<body>

<form method="post">

Base: <input type="number" name="base" required><br><br>

Exponent: <input type="number" name="exp" required><br><br>

<input type="submit" value="Calculate Power">

</form>

<%

String b = request.getParameter("base");

String e = request.getParameter("exp");

if (b != null && e != null) {

int base = Integer.parseInt(b);

int exp = Integer.parseInt(e);

double result = Math.pow(base, exp);

%>

<p><%= base %> ^ <%= exp %> = <%= result %></p>

<%

}

%>

</body>

</html>

**Perfect Number Check**

<%@ page language="java" %>

<!DOCTYPE html>

<html>

<head><title>Perfect Number</title></head>

<body>

<form method="post">

Enter a number: <input type="number" name="num" required>

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

</form>

<%

String input = request.getParameter("num");

if (input != null) {

int num = Integer.parseInt(input);

int sum = 0;

for (int i = 1; i < num; i++) {

if (num % i == 0) sum += i;

}

%>

<p><%= num %> is <%= (sum == num ? "" : "not ") %>a perfect number.</p>

<%

}

%>

</body>

</html>

**Sum of Digits**