Experiment No.2

Date: 30.01.2025

Aim: Implementation of real-world problem based on JSP designing concept

CO Mapping – CO 2

Objective:

1. To develop the JSP based dynamic web pages.
2. To show to and fro of data from database to JSP

Lab Exercise:

To Create a Form Validation Page using JSP.

Code:

**Index.jsp**

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

<%

String user = (String) session.getAttribute("username");

if (user == null) {

response.sendRedirect("register.jsp");

return;

}

%>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Job Portal - Welcome</title>

<style>

body {

font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;

line-height: 1.6;

color: #333;

background-color: #f5f5f5;

padding: 2rem;

text-align: center;

}

.container {

max-width: 600px;

margin: 0 auto;

background: #fff;

padding: 2rem;

border-radius: 8px;

box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);

}

h2 {

color: #2c5282;

}

.btn {

display: inline-block;

background-color: #2c5282;

color: white;

padding: 0.75rem 1.5rem;

text-decoration: none;

border-radius: 4px;

margin-top: 1rem;

}

.btn:hover {

background-color: #2b6cb0;

}

</style>

</head>

<body>

<div class="container">

<h2>Welcome, <%= user %>!</h2>

<p>Welcome to our Job Portal. You can now proceed to submit your job application.</p>

<a href="jobApplication.jsp" class="btn">Apply for Job</a>

</div>

</body>

</html>

**Register.jsp**

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

<%

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

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

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

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

String usernameError = "";

String emailError = "";

String passwordError = "";

String confirmPasswordError = "";

boolean hasErrors = false;

if (request.getMethod().equals("POST")) {

if (username == null || username.trim().isEmpty()) {

hasErrors = true;

usernameError = "Username is required.";

}

if (email == null || !email.matches("^[A-Za-z0-9.\_%+-]+@[A-Za-z0-9.-]+\\.[A-Za-z]{2,}$")) {

hasErrors = true;

emailError = "Valid email is required.";

}

if (password == null || password.length() < 6) {

hasErrors = true;

passwordError = "Password must be at least 6 characters long.";

}

if (confirmPassword == null || !confirmPassword.equals(password)) {

hasErrors = true;

confirmPasswordError = "Passwords do not match.";

}

if (!hasErrors) {

// If validation passes, then forward to processing page

request.getRequestDispatcher("registerProcess.jsp").forward(request, response);

return;

}

}

%>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>User Registration</title>

<style>

body {

font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;

background-color: #f5f5f5;

padding: 2rem;

}

.form-container {

max-width: 600px;

margin: 0 auto;

background: #fff;

padding: 2rem;

border-radius: 8px;

box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);

}

h2 {

color: #2c5282;

text-align: center;

}

label {

font-weight: 600;

display: block;

margin-top: 0.5rem;

}

input {

width: 100%;

padding: 0.75rem;

border: 1px solid #e2e8f0;

border-radius: 4px;

margin-bottom: 0.5rem;

}

.error {

color: #e53e3e;

font-size: 0.875rem;

}

button {

background-color: #2c5282;

color: white;

padding: 0.75rem;

border: none;

border-radius: 4px;

cursor: pointer;

margin-top: 1rem;

width: 100%;

}

button:hover {

background-color: #2b6cb0;

}

</style>

<script>

function validateForm(event) {

event.preventDefault();

let hasErrors = false;

// Clear previous errors

document.querySelectorAll('.error').forEach(error => error.textContent = '');

const username = document.getElementById('username').value.trim();

if (!username) {

document.getElementById('usernameError').textContent = 'Username is required.';

hasErrors = true;

}

const email = document.getElementById('email').value.trim();

const emailRegex = /^[A-Za-z0-9.\_%+-]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,}$/;

if (!email || !emailRegex.test(email)) {

document.getElementById('emailError').textContent = 'Valid email is required.';

hasErrors = true;

}

const password = document.getElementById('password').value;

if (!password || password.length < 6) {

document.getElementById('passwordError').textContent = 'Password must be at least 6 characters long.';

hasErrors = true;

}

const confirmPassword = document.getElementById('confirmPassword').value;

if (password !== confirmPassword) {

document.getElementById('confirmPasswordError').textContent = 'Passwords do not match.';

hasErrors = true;

}

if (!hasErrors) {

event.target.submit();

}

}

</script>

</head>

<body>

<div class="form-container">

<h2>User Registration</h2>

<form action="<%= request.getRequestURI() %>" method="POST" onsubmit="validateForm(event)">

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

<input type="text" id="username" name="username" value="<%= username != null ? username : "" %>" placeholder="Enter username">

<div class="error" id="usernameError"><%= usernameError %></div>

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

<input type="email" id="email" name="email" value="<%= email != null ? email : "" %>" placeholder="Enter your email">

<div class="error" id="emailError"><%= emailError %></div>

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

<input type="password" id="password" name="password" placeholder="Enter password">

<div class="error" id="passwordError"><%= passwordError %></div>

<label for="confirmPassword">Confirm Password:</label>

<input type="password" id="confirmPassword" name="confirmPassword" placeholder="Confirm password">

<div class="error" id="confirmPasswordError"><%= confirmPasswordError %></div>

<button type="submit">Register</button>

</form>

</div>

</body>

</html>

**registerProcess.jsp**

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

<%

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

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

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

if (username == null || username.trim().isEmpty() ||

password == null || password.trim().isEmpty() ||

email == null || email.trim().isEmpty()) {

response.sendRedirect("register.jsp?error=Please fill all fields");

return;

}

// Store user session

session.setAttribute("username", username);

response.sendRedirect("homePage.jsp");

%>

homePage.jsp

<!-- home.jsp -->

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

<%

String username = (String) session.getAttribute("username");

if (username == null) {

response.sendRedirect("register.jsp");

return;

}

%>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Home Page</title>

<style>

body {

font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;

line-height: 1.6;

color: #333;

background-color: #f5f5f5;

padding: 2rem;

text-align: center;

}

.container {

max-width: 600px;

margin: 0 auto;

background: #fff;

padding: 2rem;

border-radius: 8px;

box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);

}

h2 {

color: #2c5282;

}

.btn {

display: inline-block;

background-color: #2c5282;

color: white;

padding: 0.75rem 1.5rem;

text-decoration: none;

border-radius: 4px;

margin-top: 1rem;

}

.btn:hover {

background-color: #2b6cb0;

}

</style>

</head>

<body>

<div class="container">

<h2>Welcome, <%= username %>!</h2>

<p>You have successfully registered.</p>

<a href="jobApplication.jsp" class="btn">Apply for Job</a>

</div>

</body>

</html>

**jobApplication.jsp**

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

<%

// Check if user is logged in

String username = (String) session.getAttribute("username");

if (username == null) {

response.sendRedirect("register.jsp");

return;

}

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

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

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

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

String nameError = "";

String emailError = "";

String phoneError = "";

String jobError = "";

boolean hasErrors = false;

if (request.getMethod().equals("POST")) {

if (name == null || name.trim().isEmpty()) {

hasErrors = true;

nameError = "Name is required.";

}

if (email == null || !email.matches("^[A-Za-z0-9.\_%+-]+@[A-Za-z0-9.-]+\\.[A-Za-z]{2,}$")) {

hasErrors = true;

emailError = "Valid email is required.";

}

if (phone == null || !phone.matches("^\\d{10}$")) {

hasErrors = true;

phoneError = "Valid 10-digit phone number is required.";

}

if (job == null || job.trim().isEmpty()) {

hasErrors = true;

jobError = "Job role is required.";

}

}

if (!hasErrors && request.getMethod().equals("POST")) {

%>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Application Successful</title>

<style>

body {

font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;

line-height: 1.6;

color: #333;

background-color: #f5f5f5;

padding: 2rem;

text-align: center;

}

.container {

max-width: 600px;

margin: 0 auto;

background: #fff;

padding: 2rem;

border-radius: 8px;

box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);

}

h2 {

color: #2c5282;

}

</style>

</head>

<body>

<div class="container">

<h2>Application Submitted Successfully!</h2>

<p>Thank you, <%= name %>. We will contact you at <%= email %> soon.</p>

</div>

</body>

</html>

<%

return;

}

%>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Job Application Form</title>

<style>

body {

font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;

line-height: 1.6;

color: #333;

background-color: #f5f5f5;

padding: 2rem;

}

.form-container {

max-width: 600px;

margin: 0 auto;

background: #fff;

padding: 2rem;

border-radius: 8px;

box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);

}

h2 {

color: #2c5282;

text-align: center;

margin-bottom: 1.5rem;

}

label {

font-weight: 600;

display: block;

margin-top: 0.5rem;

}

input {

width: 100%;

padding: 0.75rem;

border: 1px solid #e2e8f0;

border-radius: 4px;

margin-bottom: 0.5rem;

}

.error {

color: #e53e3e;

font-size: 0.875rem;

}

button {

background-color: #2c5282;

color: white;

padding: 0.75rem;

border: none;

border-radius: 4px;

cursor: pointer;

margin-top: 1rem;

width: 100%;

}

button:hover {

background-color: #2b6cb0;

}

</style>

</head>

<body>

<div class="form-container">

<h2>Job Application</h2>

<form action="jobApplication.jsp" method="POST">

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

<input type="text" id="name" name="name" value="<%= name != null ? name : "" %>" placeholder="Enter your full name">

<div class="error"><%= nameError %></div>

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

<input type="email" id="email" name="email" value="<%= email != null ? email : "" %>" placeholder="Enter your email">

<div class="error"><%= emailError %></div>

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

<input type="text" id="phone" name="phone" value="<%= phone != null ? phone : "" %>" placeholder="Enter your phone number">

<div class="error"><%= phoneError %></div>

<label for="job">Job Role:</label>

<input type="text" id="job" name="job" value="<%= job != null ? job : "" %>" placeholder="Enter the job role">

<div class="error"><%= jobError %></div>

<button type="submit">Apply</button>

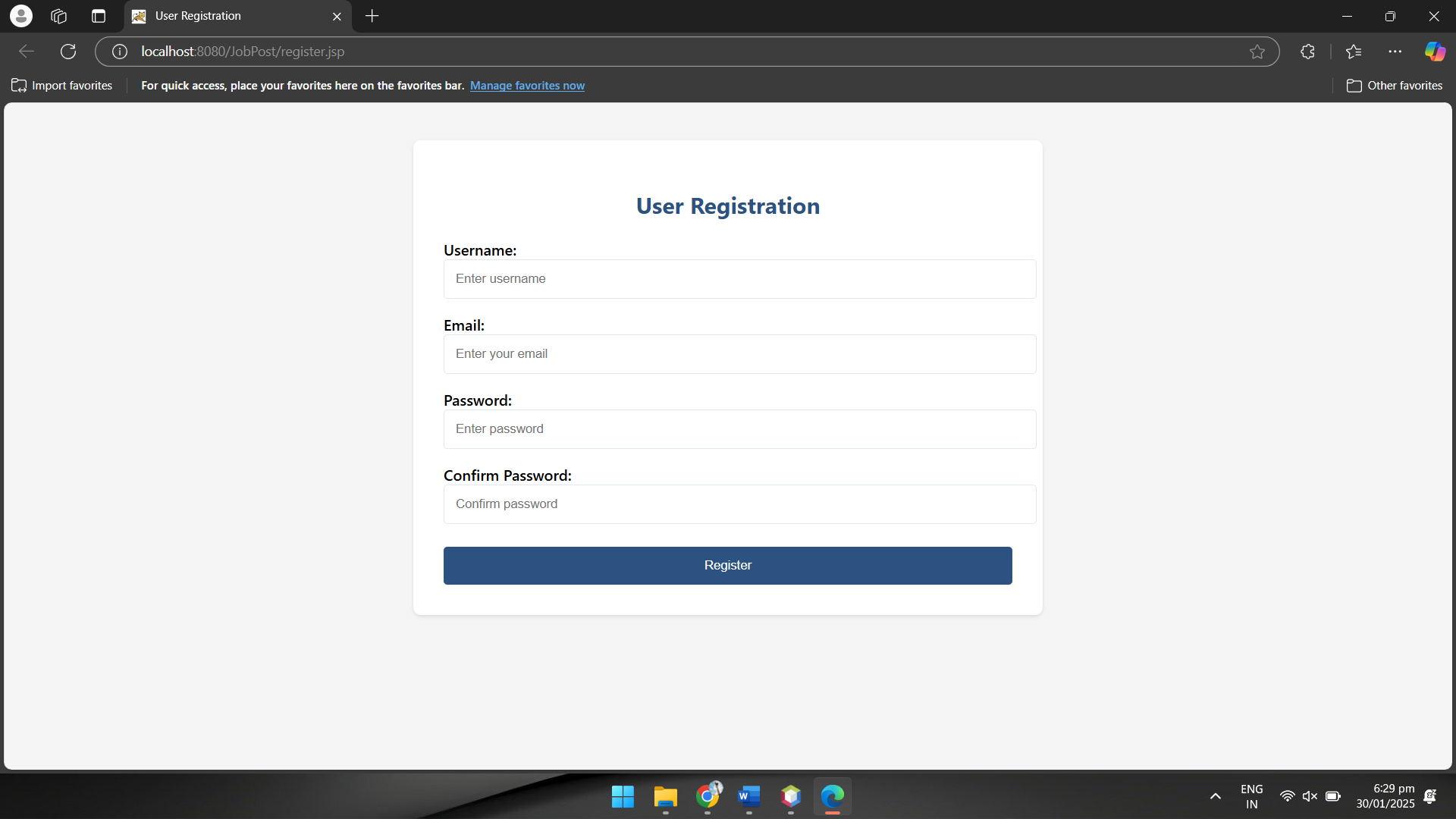
</form>

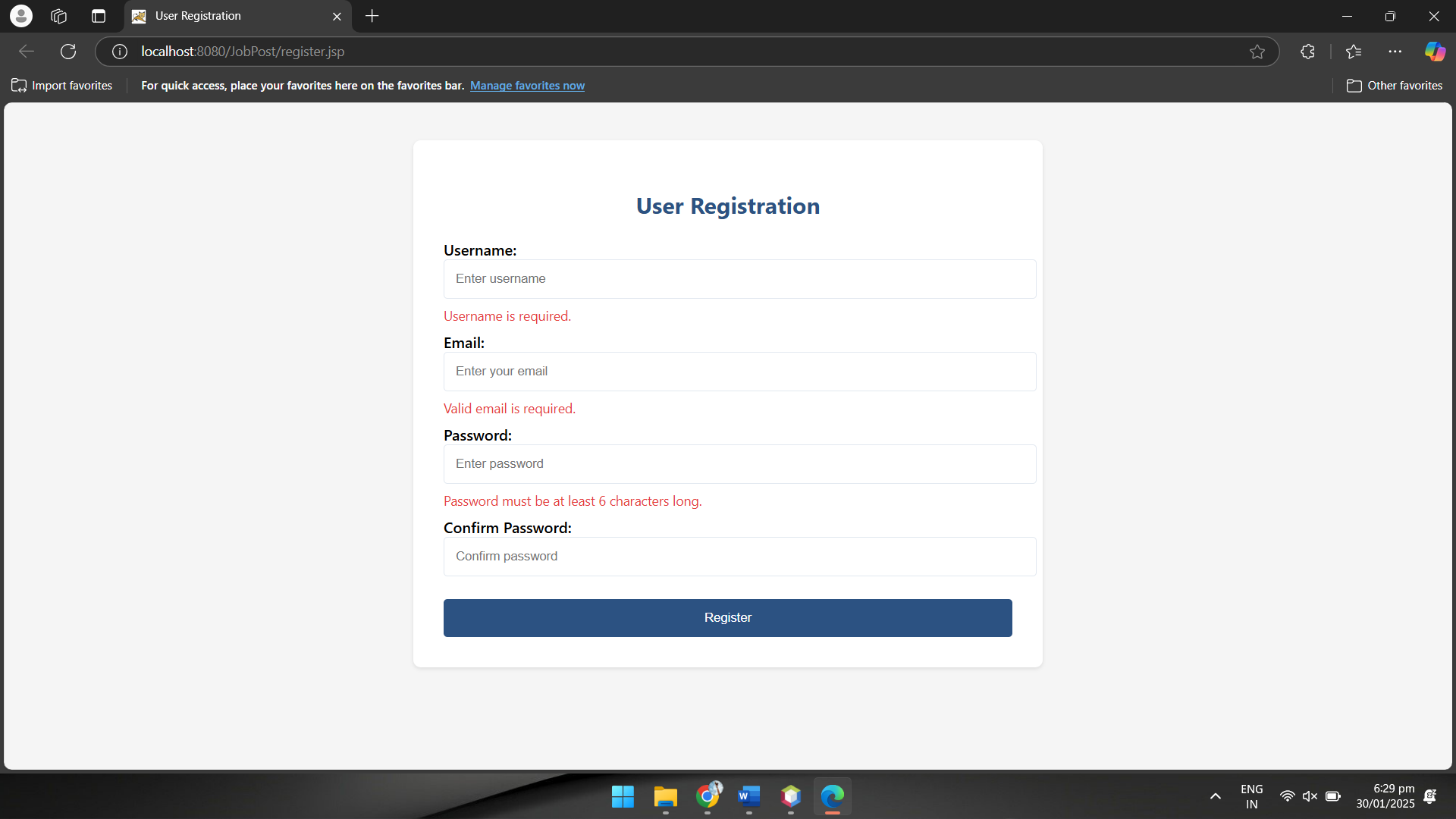
</div>

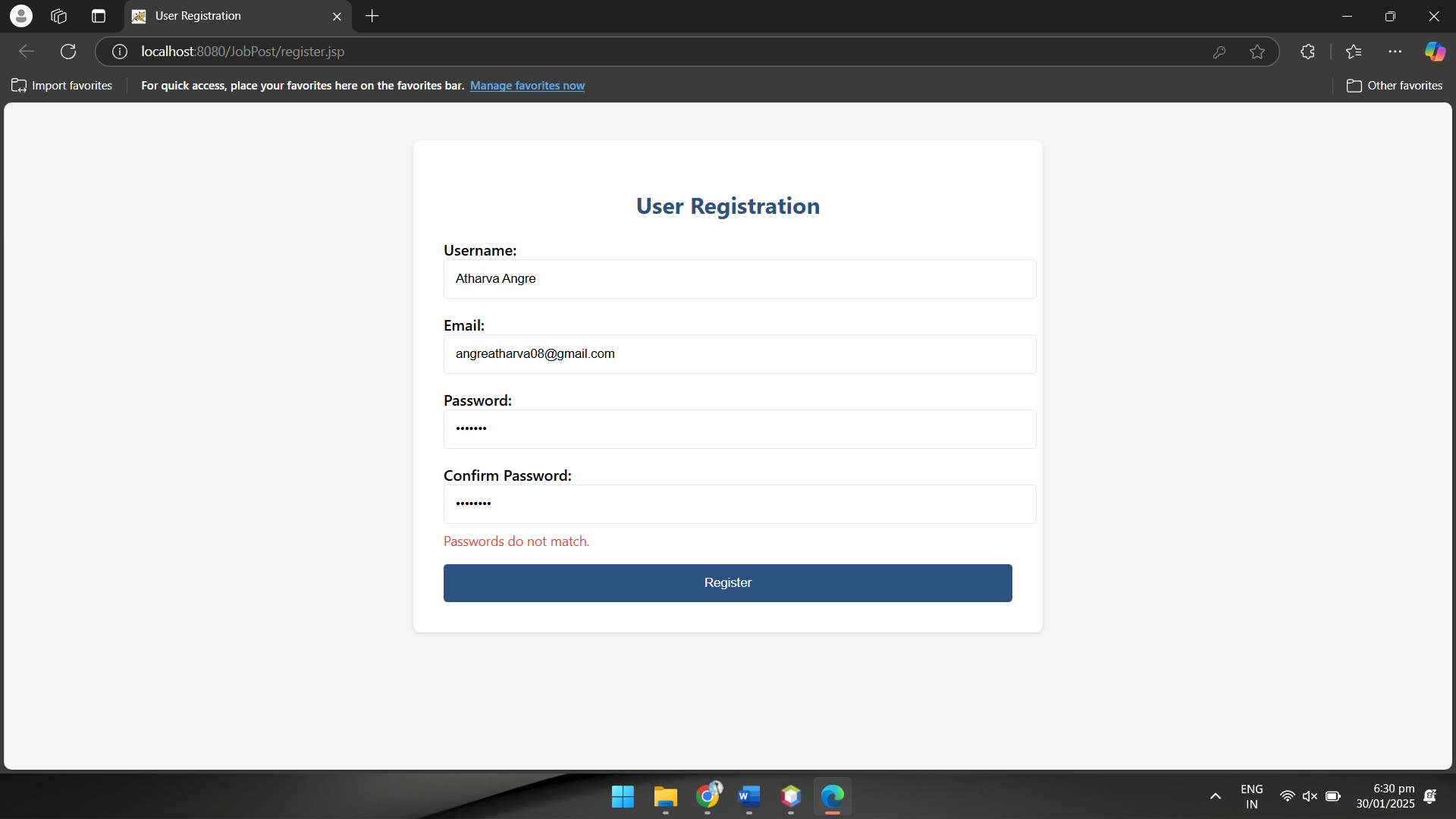
</body>

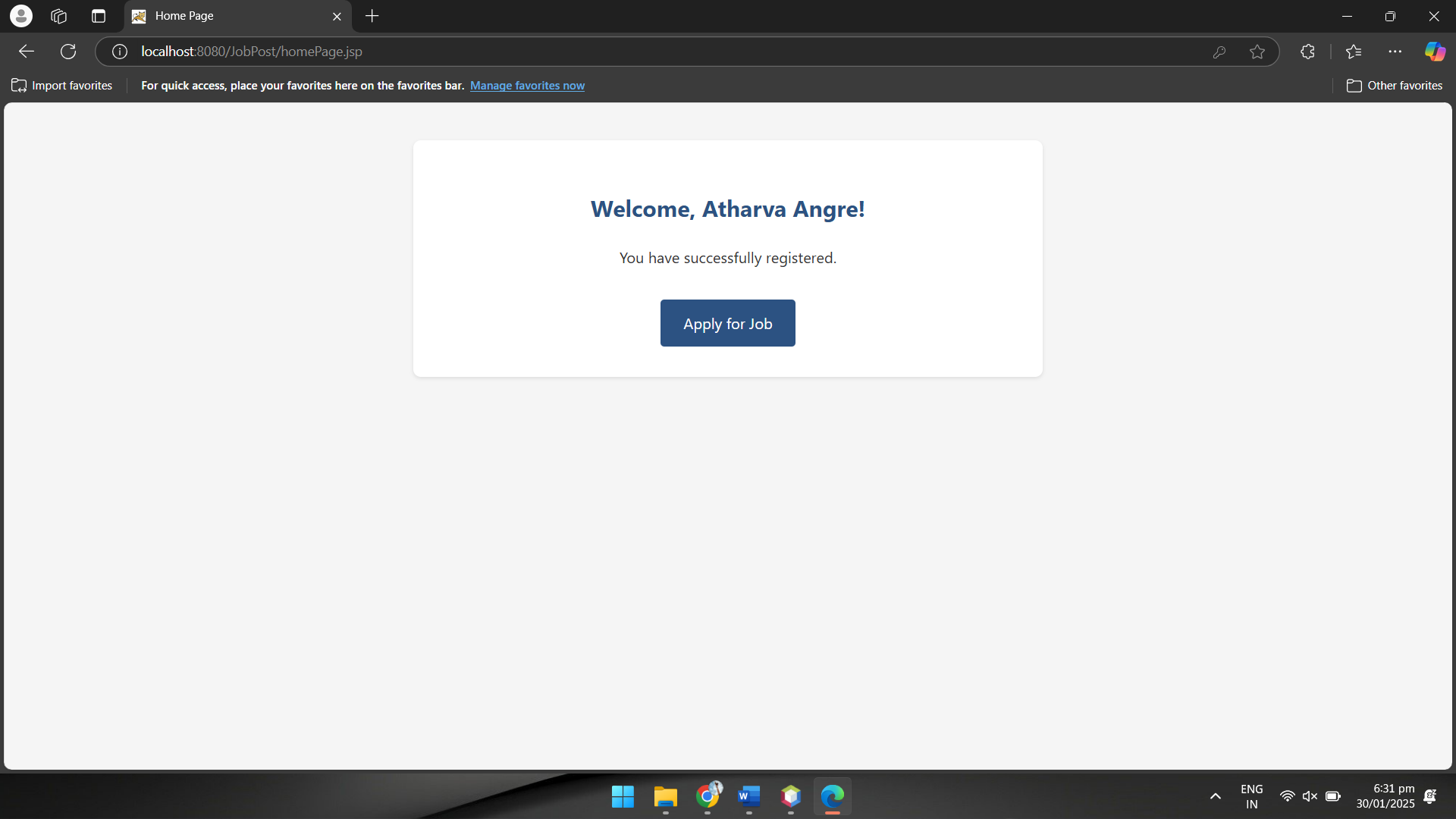
</html>

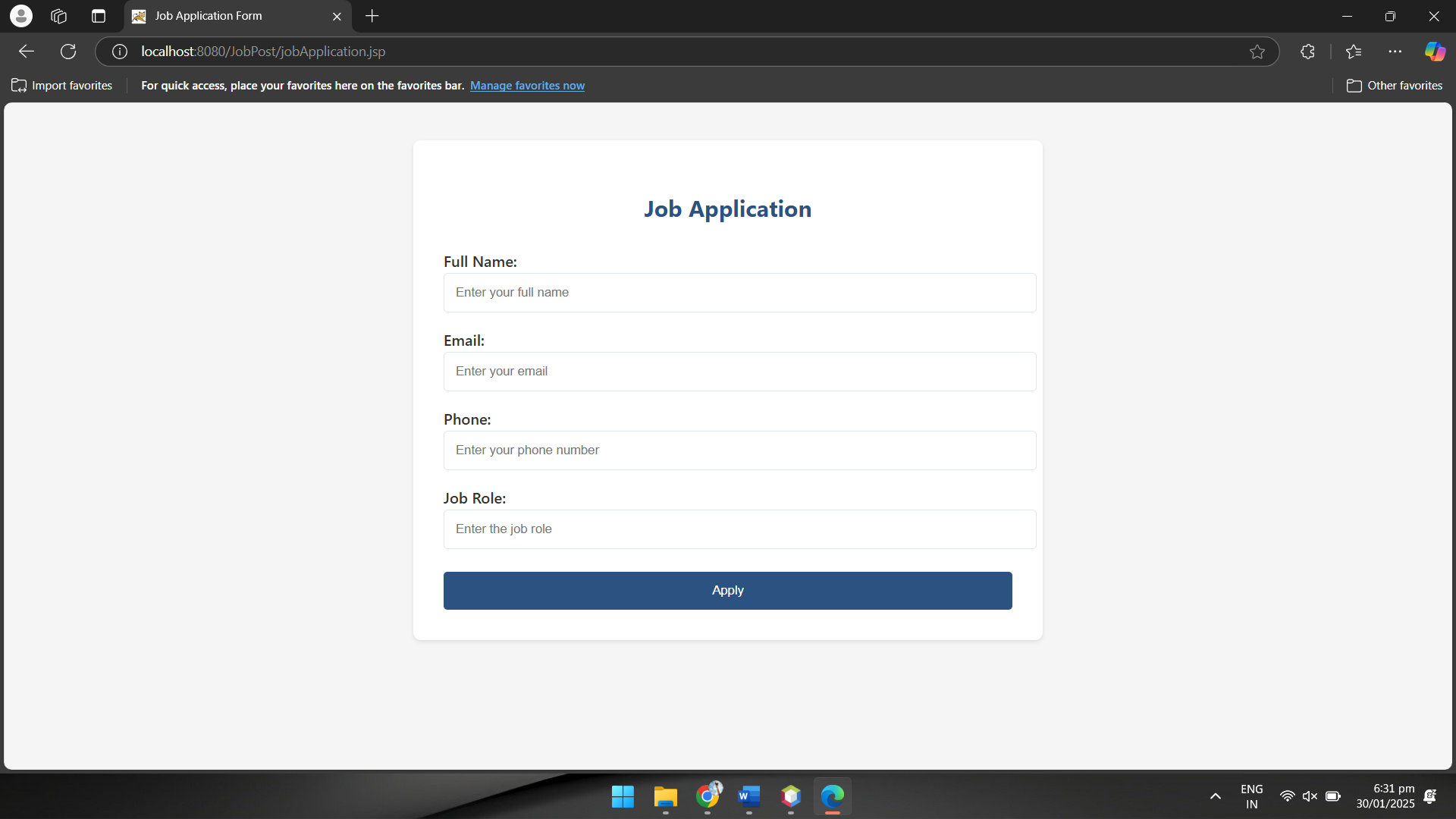
**Output:**

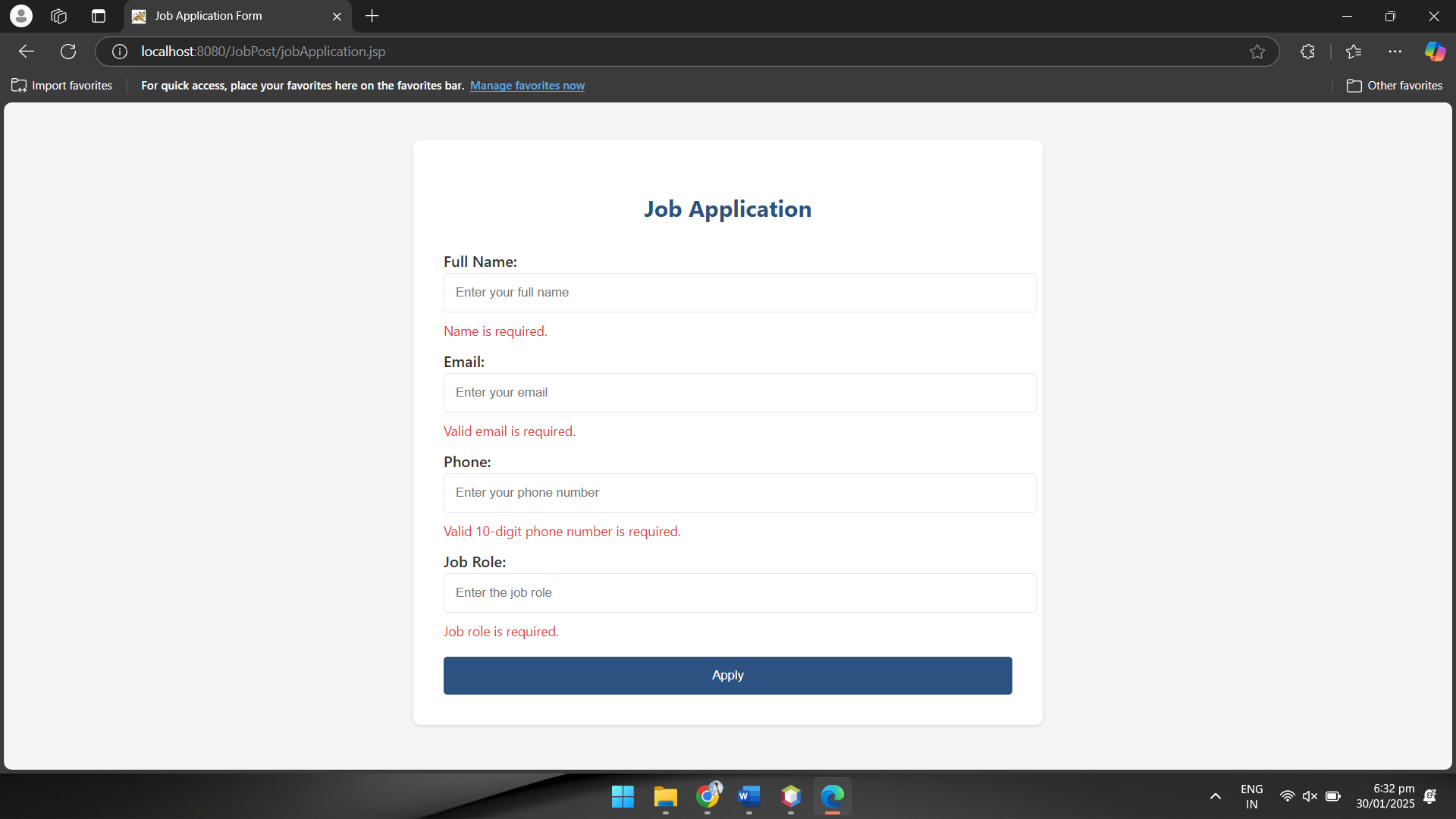
****

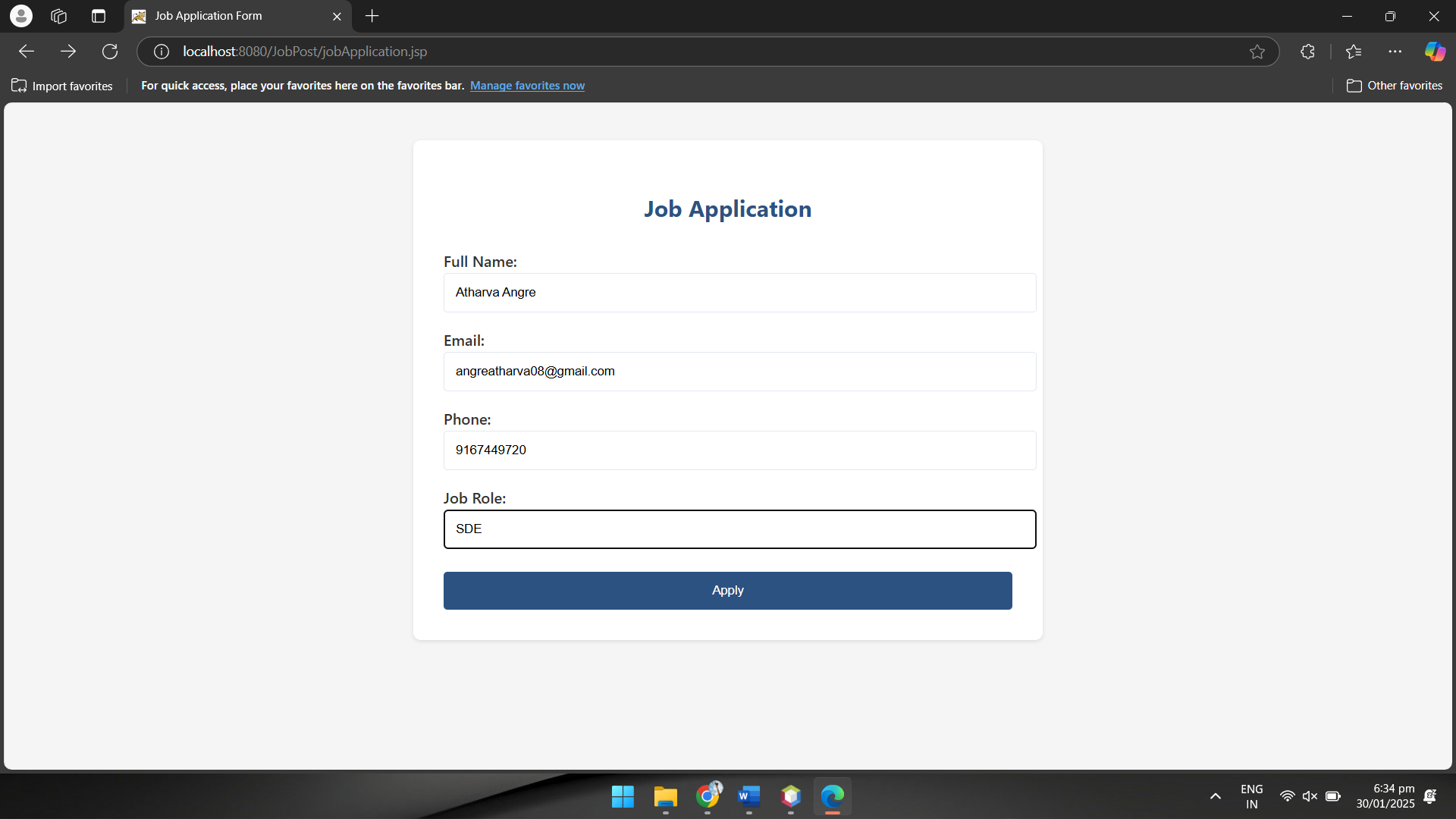
****

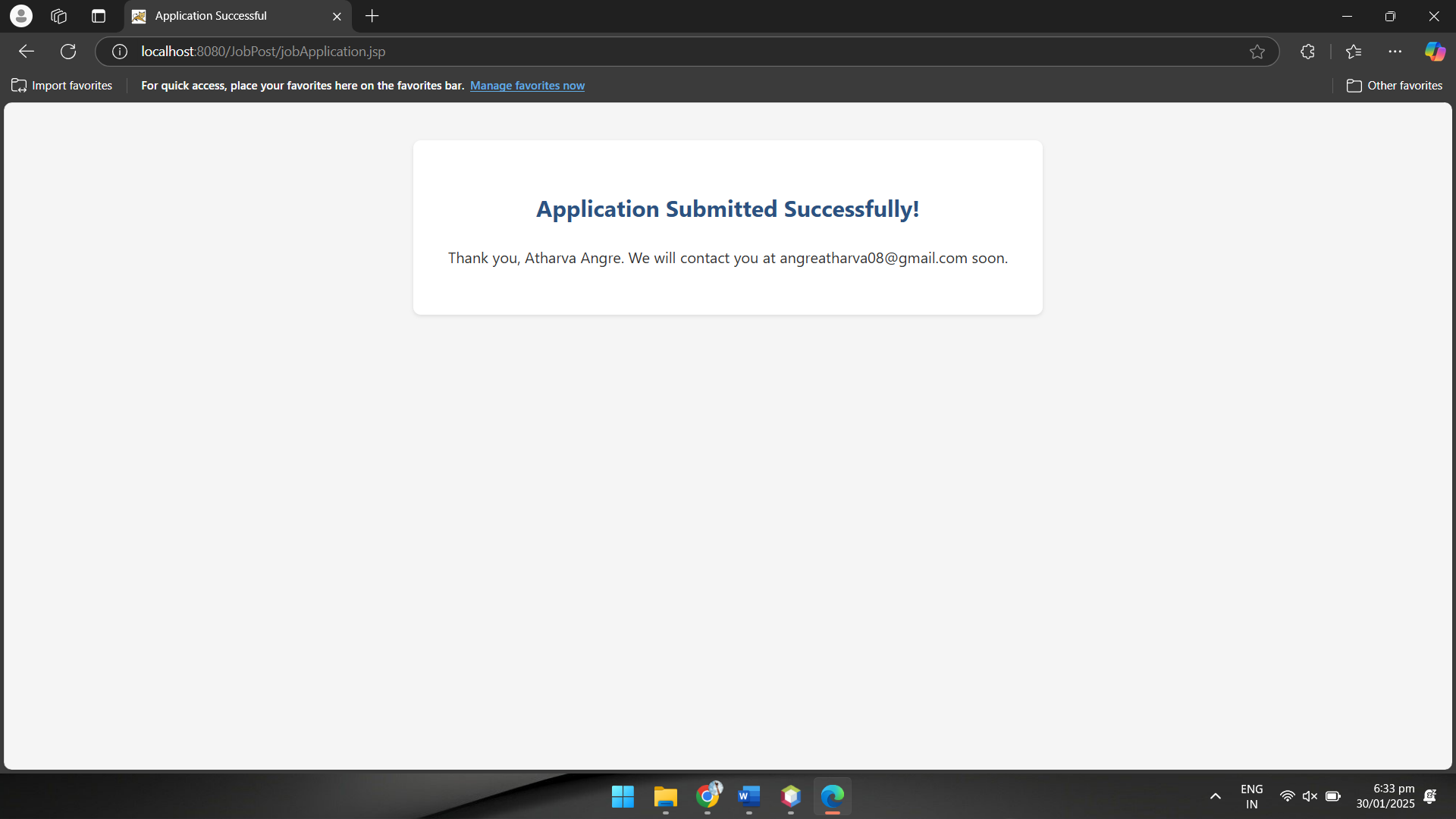
****

****

****

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****

****

**Observation:**

The experiment shows how to check form details using JSP before they are submitted, ensuring the data is correct. It also makes the job application page available only to registered users, adding security. Clear error messages help users fix mistakes easily. This makes the process smooth and user-friendly. Overall, it provides a simple way to create secure web pages with JSP.