**Day 2: HTML Forms and Input Elements**

Knowledge:

* **Form Creation:**
  + Understand the structure of an HTML form.
  + Learn about the **<form>** element and its attributes.
  + Explore various form elements like text inputs, radio buttons, checkboxes, and buttons.
* **Input Types:**
  + Gain familiarity with different input types such as text, radio, and checkbox.
  + Understand how each input type is used in capturing different types of user input.
* **Form Validation:**
  + Explore basic form validation using HTML attributes.
  + Understand the **required** attribute for mandatory fields.

Task:

1. **Form Creation:**
   * Set up a new HTML file and create a professional-looking form to collect user information.
   * Use proper labels, input types, and structure within the **<form>** element.
2. **Input Types:**
   * Include various input types such as text input, radio buttons, and checkboxes in your form.
   * Experiment with different attributes for these input types.
3. **Form Validation:**
   * Implement basic form validation by using the **required** attribute for the text input field.
   * Explore other validation attributes and try incorporating them into your form.
4. **JavaScript Interaction:**
   * Intercept the form submission using JavaScript.
   * Instead of submitting the form to a server, display an alert with a customized message.

Example HTML Code:

**<!DOCTYPE html>**

**<html lang="en">**

**<head>**

**<meta charset="UTF-8">**

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

**<title>HTML Forms and Input Elements</title>**

**</head>**

**<body>**

**<h1>HTML Forms and Input Elements</h1>**

**<p>Let's create a professional-looking form to collect user information:</p>**

**<!-- Start of the Form -->**

**<form onsubmit="showSubmittedMessage(); return false;">**

**<!-- Text Input -->**

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

**<input type="text" id="firstName" name="firstName" placeholder="Enter your first name" required>**

**<!-- Radio Buttons -->**

**<p>Gender:</p>**

**<label for="male">**

**<input type="radio" id="male" name="gender" value="male"> Male**

**</label>**

**<label for="female">**

**<input type="radio" id="female" name="gender" value="female"> Female**

**</label>**

**<!-- Checkbox -->**

**<p>Interests:</p>**

**<label for="coding">**

**<input type="checkbox" id="coding" name="interests" value="coding"> Coding**

**</label>**

**<label for="design">**

**<input type="checkbox" id="design" name="interests" value="design"> Design**

**</label>**

**<label for="gaming">**

**<input type="checkbox" id="gaming" name="interests" value="gaming"> Gaming**

**</label>**

**<!-- Submit Button -->**

**<button type="submit">Submit</button>**

**</form>**

**<!-- End of the Form -->**

**<script>**

**function showSubmittedMessage() {**

**// Display an alert when the form is submitted**

**alert('Form submitted successfully!');**

**}**

**</script>**

**</body>**

**</html>**

**Additional Challenge (Optional):**

* Explore and implement more advanced form features such as **<select>** dropdowns and **<textarea>** for larger text inputs.
* Research and apply CSS styles to enhance the visual presentation of the form.