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*Full Stack Developments - LAB 2*

*Responsive Form*

**Problem**:

Create a fully responsive webpage for a registration form using HTML and CSS. The design should prioritize user experience on various devices and screen sizes. Additionally, implement, form validation to ensure accurate user input.

Include fields for the following information:

* Full Name (First Name, Last Name)
* Email Address
* Password
* Confirm Password
* Date of Birth
* Gender (Radio buttons or dropdown)
* Country (Dropdown menu)
* Profile Picture Upload (Include a file input)

Apply appropriate input types and validation attributes in HTML.

Style form elements for a cohesive and user-friendly appearance.

Form Validation: Implement client-side validation using HTML5 validation attributes. Provide clear and concise error messages for incorrect user input.

Responsive Design: Ensure the webpage is fully responsive for different devices (mobile, tablet, desktop).

**Objective**:

The objective of this experiment is to design and implement a fully responsive registration form webpage using HTML and CSS. The primary goals include prioritizing user experience across various devices and screen sizes, implementing form validation to ensure accurate user input, and creating a visually appealing and cohesive design.

**Expected Output:**

A screenshot of a computer

Description automatically generated

**Code:**

<html>

    <head>

        <title>Responsive Form - Lab 2</title>

        <style>

            body{

                font-family: Arial, Helvetica, sans-serif;

                display: flex;

                justify-content: center;

                align-items: center;

                height: 100vh ;

                background-color: #f9f9f9;

            }

            form{

                max-width: 600px;

                width: 100%;

                background-color: #fff;

                padding: 20px;

                box-shadow: 0 0 10px 0 rgba(0,0,0,.5);

                border-radius: 8px;

            }

            label{

                display: block;

                margin-bottom: 8px;

                font-weight:bold ;

            }

            input,select{

                width: 100%;

                padding: 8px;

                border-radius: 4px;

                margin-bottom: 15px;

                border: 1px solid #ccc;

                box-sizing: border-box;

            }

            input[*type*=submit]{

                background-color: #45a049;

                color: white;

            }

            input[*type*=submit]*:hover*{

                background-color: green;

                color: white;

            }

            input[*type*=radio]{

                margin-right: 5px;

            }

*.group* {

                display: flex;

                gap: 10px;

            }

        </style>

    </head>

    <body>

        <form>

            <center>

                <h1>Registration Form</h1>

            </center>

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

            <input *type*="text" *name* = "fname" >

            <label *for* = "lname">Last Name :</label>

            <input *type*="text" *name* = "lname" >

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

            <input *type*="text" *name* = "email" >

            <label *for* = "pwd">Password :</label>

            <input *type*="password" *name* = "pwd" >

            <label *for* = "cpwd">Confirm Password :</label>

            <input *type*="password" *name* = "cpwd" >

            <label *for* = "date">Date of Birth :</label>

            <input *type*="date" *name* = "date" >

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

            <div *class*="group">

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

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

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

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

                <input *type*="radio" *id*="other" *name*="gender">

                <label *for*="other">Other</label>

            </div>

            <label *for* = "country">Country :</label>

            <select *name*="country" >

                <option *value*="India">India</option>

                <option *value*="USA">USA</option>

                <option *value*="UK">UK</option>

                <option *value*="Canada">Canada</option>

                <option *value*="Australia">Australia</option>

            </select>

            <label *for* = "profile">Profile Picture :</label>

            <input *type*="file" *name* = "profile" >

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

        </form>

    </body>

</html>

**Output:**

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

**Design Choices:**

* **HTML Structure:** I structured the HTML document with semantic tags to enhance readability and accessibility. I used <form> to encapsulate the registration form and <label> for labeling input fields.
* **CSS Styling:** CSS styles were applied to enhance the visual appearance and usability of the form. I focused on creating a clean and modern interface using a combination of font styles, background colors, padding, and border-radius for elements.
* **Responsive Design:** The webpage is designed to be fully responsive across different devices and screen sizes. I used flexbox layout and percentage-based widths to ensure elements adapt well to various viewport dimensions.
* **Input Types and Validation:** I utilized appropriate input types such as text, password, date, and file for different form fields. Additionally, HTML5 validation attributes were incorporated for client-side validation to ensure accurate user input.

**Challenges Faced:**

* **Styling Consistency:** Maintaining consistent styling across different elements and ensuring they align properly posed a challenge, especially when dealing with form elements like radio buttons and select dropdowns.
* **Responsive Design:** Ensuring that the form layout remains user-friendly and accessible on various devices required careful consideration of spacing, font sizes, and element positioning.

**HTML Tags used:**

1. **<html>: Defines the root element of an HTML document.**

<html>

*<!-- HTML content goes here -->*

</html>

1. **<head>: Contains meta-information about the HTML document, such as title, links to stylesheets, and scripts.**

<head>

    <title>My Page Title</title>

*<!-- Other meta-information goes here -->*

</head>

1. **<title>: Sets the title of the HTML document displayed in the browser's title bar or tab.**

<title>My Page Title</title>

1. **<style>: Defines CSS styles that apply to elements within the document.**

<style>

    body {

        font-family: Arial, sans-serif;

    }

</style>

1. **<body>: Contains the content of the HTML document that is displayed in the browser window.**

<body>

    <h1>Hello, World!</h1>

    <p>This is a paragraph.</p>

</body>

1. **<input>: Defines an input control that allows.**

* **<input type="text">: Creates a single-line text input field.**
* **<input type="checkbox">: Creates a checkbox input field.**
* **<input type="radio">: Creates a radio button input field.**
* **<input type="submit">: Creates a submit button.**
* **<input type="reset">: Creates a reset button.**

<input *type*="text" *name*="username" *placeholder*="Enter your username">

1. **<select>: Defines a dropdown list.**

<select *name*="country" >

  <option *value*="India">India</option>

      <option *value*="USA">USA</option>

      <option *value*="UK">UK</option>

      <option *value*="Canada">Canada</option>

</select>

1. **<option>: Defines an option in a dropdown list.**

<option *value*="volvo">Volvo</option>

1. **<label>: Defines a label for an <input> element.**

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

<input *type*="text" *id*="username" *name*="username">

1. **<textarea>: Defines a multiline input control (text area).**

<textarea *name*="message" *rows*="4" *cols*="50"></textarea>

1. **<radio>: Defines a radio button input control.**

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

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

1. **<submit>: Defines a submit button for submitting a form.**

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

**CSS Styles used:**

1. **Body Styles:**

body{

    font-family: Arial, Helvetica, sans-serif;

    display: flex;

    justify-content: center;

    align-items: center;

    height: 100vh ;

    background-color: #f9f9f9;

    }

**font-family:** Sets the font for the entire document to Arial, Helvetica, or sans-serif as fallback.

**display, justify-content, align-items**: These properties together center the content vertically and horizontally within the viewport.

**height:** Sets the height of the body to 100% of the viewport height.

**background-color:** Sets the background colour of the body to a light gray (#f9f9f9).

1. **Form Styles:**

form {

     max-width: 600px;

     width: 100%;

     background-color: #fff;

    padding: 20px;

     box-shadow: 0 0 10px 0 rgba(0,0,0,.5);

     border-radius: 8px;

      }

**max-width:** Limits the maximum width of the form to 600 pixels.

**width:** Makes the form occupy 100% of the available width.

**background-color:** Sets the background colour of the form to white.

**padding:** Adds 20 pixels of padding inside the form.

**box-shadow:** Adds a shadow effect to the form, giving it a raised appearance.

**border-radius:** Rounds the corners of the form, making it visually appealing.

1. **Label and Input Styles:**

label{

     display: block;

     margin-bottom: 8px;

     font-weight:bold ;

     }

input,select{

     width: 100%;

     padding: 8px;

     border-radius: 4px;

    margin-bottom: 15px;

    border: 1px solid #ccc;

     box-sizing: border-box;

     }

**label:** Sets the labels to be displayed as blocks with bold font-weight and a margin at the bottom for spacing.

**input, select:** Applies consistent styling to input fields and select dropdowns.

**width:** Makes the inputs and selects occupy the full width of their container.

**padding:** Adds 8 pixels of padding inside the inputs and selects.

**border-radius:** Rounds the corners of the inputs and selects.

**margin-bottom:** Adds spacing between input fields.

**border:** Adds a 1-pixel solid border around the inputs and selects.

**box-sizing:** Ensures that padding and border are included in the specified width and height.

1. **Submit Button Styles:**

input[*type*=submit]{

       background-color: #45a049;

       color: white;

        }

input[*type*=submit]*:hover*{

       background-color: green;

       color: white;

            }

**input[type=submit]:** Styles the submit button with a green background and white text.

**input[type=submit]: hover:** Specifies the hover effect of the submit button, changing its background colour to green on hover.

1. **Radio Button Group Styles:**

input[*type*=radio]{

margin-right: 5px;

           }

*.group* {

      display: flex;

      gap: 10px;

       }

**input[type=radio]:** Adds a 5-pixel margin to the right of radio buttons for spacing.

**.group:** Defines a flex container for radio buttons to ensure they are displayed in a row with a gap of 10 pixels between them.