Front-End UI/UX Mini Project

Project Submission

1. Title Page

- **Project Title**: *"Form Validation "*

- **Submitted By**: *Team Members-*

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- **Course**: UI/UX Design Fundamentals

- **Instructor Name**:

- **Institution**: Christ University Kengeri Campus

- **Date of Submission**: 13/08/2025

2. Abstract

This project focuses on building a responsive form with multiple input types such as text, email, and password, along with client-side validation to ensure accurate user input before submission. JavaScript is used to check validation rules, such as proper email format and password strength, while error messages guide users to correct mistakes. Bootstrap enhances the layout and responsiveness, making the form accessible across devices. The final outcome is a user-friendly form that improves data accuracy and provides a better user experience.

3. Objectives

- Design a user-friendly interface using modern UI principles

- Develop a fully responsive layout using only HTML and CSS

- Implement structured HTML5 semantic elements

- Apply CSS styling for branding, layout, and responsive behavior

- Ensure accessibility and readability across devices

4. Scope of the Project

- Focused on front-end design only

- No JavaScript or server-side integration

- Intended for desktop, tablet, and mobile viewports

- Used only open-source tools and pure code (no libraries)

5. Tools & Technologies Used

Tool/Technology	Purpose
HTML5	Markup and content structure
CSS3	Styling and layout management
VS Code	Code editor
Chrome DevTools	Testing and debugging

6. HTML Structure Overview

- Used semantic tags: <header>, <nav>, <main>, <section>, <footer>

- Structured into reusable sections: About, Projects, Contact

- Navigation menu using <ul> and anchor links for smooth scrolling

7. CSS Styling Strategy

- Used external CSS file (style.css) •   Organized with comments

  and sections

- Techniques used:

  o   Flexbox and Grid for layout o

    Media Queries for

  responsiveness o   CSS Variables for

  theme customization o   Hover

  effects and transitions o   Mobile-

  first design approach

8. Key Features

Feature	Description
Responsive Design	Adapts seamlessly to all screen sizes
Smooth Navigation	Fixed top nav with anchor links
Project Cards	Flex-based layout with hover effects
Contact Form (non-functional)	Placeholder layout for inputs and button
Accessible Fonts & Colors	High contrast and readable typography

9. Challenges Faced & Solutions

Challenge	Solution
Overlapping elements on small screens	Used media queries to stack elements
Difficulty aligning items using float	Shifted to Flexbox and Grid
Typography scaling issue	Used relative units (em/rem) instead of px

10. Outcome

- Achieved a clean, consistent, and visually engaging front-end layout
- All key components function as intended using just HTML and CSS
- Learned about layout responsiveness and UI hierarchy in depth

11. Future Enhancements

- Add JavaScript for interactivity (form validation, dynamic content)
- Integrate animations or transitions
- Backend integration for form submission
- Theme toggler (light/dark mode)

12. Sample Code

```html
index.html > ...
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4    <meta charset="UTF-8">
5    <meta name="viewport" content="width=device-width, initial-scale=1.0">
6    <title>Form Validation Example</title>
7    <!-- Bootstrap CSS -->
8    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">
9    <!-- Custom CSS -->
10   <link rel="stylesheet" href="style.css">
11 </head>
12 <body class="bg-light">
13
14 <div class="container mt-5">
15   <div class="row justify-content-center">
16     <div class="col-md-6">
17       <div class="card shadow-lg p-4">
18         <h3 class="text-center mb-4">Registration Form</h3>
19         <form id="myForm" novalidate>
20           <!-- Name -->
21           <div class="mb-3">
22             <label for="name" class="form-label">Full Name</label>
23             <input type="text" id="name" name="name" class="form-control" placeholder="Enter your name">
24             <span id="nameError" class="error"></span>
25           </div>
26
```
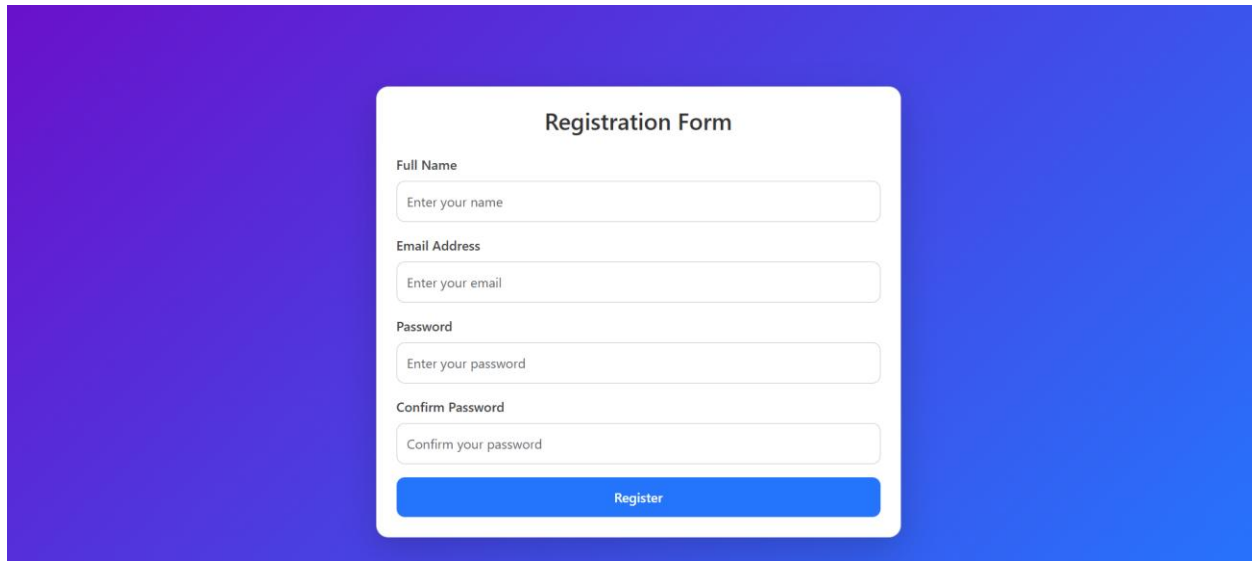
```js
script.js > ...
1  $(document).ready(function(){
2    $("#myForm").on("submit", function(e){
3      e.preventDefault();
4      let isValid = true;
5
6      // Reset error messages
7      $(".error").text("");
8
9      // Name validation
10     const name = $("#name").val().trim();
11     if(name === ""){
12       $("#nameError").text("Full Name is required");
13       isValid = false;
14     }
15
16     // Email validation
17     const email = $("#email").val().trim();
18     const emailPattern = /^[^ ]+@[^ ]+\.[a-z]{2,3}$/;
19     if(email === ""){
20       $("#emailError").text("Email is required");
21       isValid = false;
22     } else if(!emailPattern.test(email)){
23       $("#emailError").text("Enter a valid email address");
24       isValid = false;
25     }
```

```css
 1    /* Background */
 2    body {
 3      background: linear-gradient(135deg, ■#6a11cb, ■#2575fc);
 4      font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
 5      min-height: 100vh;
 6      display: flex;
 7      justify-content: center;
 8      align-items: center;
 9    }
10
11    /* Card Style */
12    .card {
13      border-radius: 15px;
14      background: □#fff;
15      padding: 30px;
16      box-shadow: 0 8px 20px □rgba(0,0,0,0.15);
17      transition: transform 0.2s ease-in-out;
18    }
19
20    .card:hover {
21      transform: translateY(-5px);
22    }
23
24    /* Heading */
25    .card h3 {
26      font-weight: 600;
27      color: □#333;
28    }
29
```

13. Screenshots of Final Output

11. Conclusion

The Form Validation project successfully demonstrates how client-side validation improves data reliability and user interaction. By combining HTML, CSS, JavaScript, and Bootstrap, the form ensures accurate inputs, displays helpful error messages, and adapts to different screen sizes. Overall, it achieves its goal of creating a responsive and efficient validation system.

12. References

- L&T LMS : https://learn.lntedutech.com/Landing/MyCourse