

NORAIZ RANA

**Task #7**

Topic

Detailed Report of  
My Portfolio Website

Date:

9 July 2025

SUBMITTED TO:

**APPVERSE TECHNOLOGIES**



## Portfolio Website Assignment – Detailed Report

**Name:** Noraiz Rana

**Project Title:** Personal Portfolio Website

**Technologies Used:** HTML5, CSS3, JavaScript

**Submitted On:** [12 July 2025]

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### ◇ 1. Overview of the Assignment

The main objective of this assignment was to design and develop a **personal portfolio website** that showcases my profile, skills, projects, and contact information in a professional and visually appealing manner. This website serves as a digital resume, reflecting both **technical proficiency** and **design sensibility**.

The goals were:

- Build a responsive and accessible website using **HTML, CSS, and JavaScript** only (no frameworks)
  - Demonstrate front-end development skills
  - Include sections such as **Home, About, Skills, Projects, and Contact**
  - Apply modern UI/UX practices, animation, and interactivity
  - Host the portfolio locally and prepare it for future deployment
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### ◇ 2. Detailed Technical Implementation

#### □ HTML (Structure & Semantics)

The website structure is composed using **semantic HTML5** elements to ensure readability and SEO optimization.

- **<header>**: Contains logo and a navigation bar with links to other sections.
- **<main>**: Includes content-heavy sections like About, Skills, Projects.
- **<section>**: Each section (e.g., Skills, Projects) is wrapped in `<section>` tags for semantic clarity.
- **<footer>**: Contains copyright.

#### Notable Points:

- Used `<a href="#section-id">` for internal navigation.
  - Ensured semantic layout for better accessibility and screen reader support.
  - Used appropriate heading levels (`<h1>` to `<h3>`) for content hierarchy.
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#### □ CSS (Styling, Responsiveness, UI)

The site uses a dedicated `style.css` file that defines a **modern, dark-themed visual style**. It utilizes **CSS variables, flexbox, grid, media queries, and custom animations**.

#### Key Features:

- **CSS Variables** defined in `:root` for color schemes and easy theming
- **Responsive Layout:**
  - Flexbox used for the nav bar and section layouts
  - CSS Grid applied to display skill cards and project tiles
  - Media queries (`@media`) used to handle responsiveness for tablets and mobile phones

- **Interactive Styles:**
  - Buttons have gradient backgrounds and hover animations
  - Cards scale slightly on hover using `transform: scale()`
  - Smooth transitions applied for user-friendly animations

Example:

```
.card:hover {  
    transform: scale(1.05);  
    box-shadow: 0 8px 16px rgba(0,0,0,0.2);  
    transition: all 0.3s ease-in-out;  
}
```

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## ● **JavaScript (Functionality, Interaction)**

JavaScript was used to add dynamic interaction to the static HTML elements. The primary use cases were:

### 1. **Theme Toggle (Dark/Light Mode)**

Users can switch themes using a toggle button, implemented with `classList.toggle()` and CSS variable changes.

### 2. **Navigation Highlight / Active Section Detection**

(Optional enhancement) You can add this using scroll position tracking, although the current version is static.

### 3. **Mobile Navigation Toggle (if applicable)**

Used basic DOM manipulation to show/hide the menu on smaller devices.

Sample Code:

```
const toggleTheme = () => {  
    document.body.classList.toggle("dark-theme");
```

```
};  
document.getElementById("themeSwitch").addEventListener("click", toggleTheme);
```

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## ◇ 3. Section-by-Section Breakdown

### Home Section:

- A hero section with a brief introduction and CTA (Call to Action)
- Background gradient and animated text effect for a lively impression

### About Me:

- A detailed description of my background, education, goals, and experience
- Uses a two-column layout on desktop and a stacked layout on mobile

### Skills:

- Grid layout displaying cards for each technical skill (HTML, CSS, JS, Git, etc.)
- Each card includes icons, a brief description, and hover effects

### Projects:

- A portfolio of recent work with images, titles, and GitHub or Live Demo links
- Interactive cards with a zoom effect and shadow transition

### Contact:

- Displays email, and (optionally) a contact form
  - Social media icons (LinkedIn, GitHub, etc.) link to my profiles
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## ◇ 4. Challenges Faced & Solutions Implemented

<b>Challenge</b>	<b>Description</b>	<b>Solution</b>
<b>Layout Breaking on Small Screens</b>	Sections were misaligned or overlapping	Implemented media queries and adjusted flex/grid settings
<b>Hover Effects Affecting Layout</b>	Button/text shifted other elements	Fixed dimensions and used <code>overflow: hidden</code> with transition
<b>Theme Switch Flash</b>	Switching between dark and light mode caused flicker	Used <code>transition-delay</code> and <code>prefers-color-scheme</code> for smoother experience
<b>Content Overflow on Mobile</b>	Cards went out of bounds	Used <code>flex-wrap</code> , <code>max-width</code> , and padding/margin adjustments
<b>CSS Variable Overwrites</b>	Conflicts with color theming	Separated light/dark variables using CSS class toggling

Challenge	Description	Solution
<b>Project Images</b>	Some images distorted or didn't fit grid	Used <code>object-fit: cover</code> and set fixed aspect ratios
<b>Not Scaling Properly</b>		

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## ◇ 5. Learning Outcomes & Reflections

This project enhanced my understanding of:

- Building **modular, clean HTML structures**
- Writing efficient and responsive **CSS using modern layout systems**
- Implementing **interactivity with Vanilla JavaScript**
- **Debugging CSS issues** across screen sizes
- Applying **best practices in accessibility, performance, and UX**

It gave me hands-on experience of building a real-world project from scratch, simulating what front-end developers do in a professional environment. I also learned the importance of **code organization, reusability, and design consistency**.

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Developing this portfolio project gave me a deeper appreciation of front-end development, especially in creating engaging user experiences. It helped me consolidate my understanding of core web technologies and encouraged me to explore areas like UI animation and accessibility. This project serves as both a learning milestone and a foundation for future professional work.