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**Assignment**: Build a Responsive Portfolio Website

**Weight**: 20% of total coursework mark

**Total Marks**: 100

**Due Date**: 13th October 2024

Objective:

The purpose of this assignment is to assess your understanding and application of HTML, CSS, Bootstrap, and JavaScript in building a responsive and interactive website. You are required to create a personal portfolio website showcasing your skills, projects, and contact details.

Requirements:

1. HTML Structure (20 marks)
   1. Create a multi-page website.
   2. Use semantic HTML5 elements for proper document structure.
   3. Include headings, paragraphs, lists, images, and links.
   4. Ensure the navigation menu is present on all pages and functional.
2. Styling (20 marks)
   1. Use external CSS to style your website.
   2. Ensure consistent styling across all pages.
   3. Apply CSS transition or animation.
   4. Ensure proper use of flexbox or grid layout for organizing content.
3. Bootstrap Integration (20 marks)
   1. Utilize Bootstrap to ensure your website is fully responsive.
   2. Implement a responsive navigation bar (navbar) that collapses on smaller screens.
   3. Use at least two Bootstrap components such as cards, carousels, buttons, or modals.
4. JavaScript Functionality (20 marks)
   1. Add JavaScript features to your website.
   2. Implement JavaScript event.
   3. Ensure the JavaScript interacts correctly with the HTML elements.
5. Overall Design & Usability (10 marks)
   1. The website should have a clean, modern design and be easy to navigate.
   2. Ensure the website is fully responsive, works across different devices, and follows accessibility guidelines.
6. Code Quality (10 marks)
   1. Proper use of comments in HTML, CSS, and JavaScript files.
   2. Clean, readable code with proper indentation and naming conventions.

Submission Instructions:

1. Rename your folder to be your Student\_ID ShortName. Example: J21000000\_Syakirah.
2. Submit a zip file containing all your project files (HTML, CSS, JS, images).
3. Ensure all links, images, and scripts work before submission.
4. Your website should be fully functional when opened in a browser.

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Assignment Rubrics: (Student Name: \_\_\_\_\_\_\_JACOB JAYEN PILLAI\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Student ID: \_\_\_\_J22038073\_\_\_\_\_\_\_\_)

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| --- | --- | --- | --- | --- | --- |
| **Criteria** | **Marks** | **Excellent (85-100%)** | **Good (70-84%)** | **Satisfactory (50-69%)** | **Needs Improvement (Below 50%)** |
| **HTML**  **Structure** | 20 | Uses semantic elements throughout, with well-  structured and valid HTML; navigation is fully functional. | Semantic elements used in most parts; minor issues with structure or validation. | Basic HTML structure with some issues in semantic elements or navigation. | Poor structure, invalid  HTML, or missing required pages. |
| **CSS Styling** | 20 | Excellent use of CSS to enhance layout, design, and transitions; styles are consistent and responsive. | Good use of CSS with minor inconsistencies or missing transitions. | Basic CSS applied but lacks consistency or responsiveness. | Minimal or no styling, significant  responsiveness issues. |
| **Bootstrap Integration** | 20 | Excellent use of Bootstrap components and grid system; fully responsive design. | Bootstrap used effectively, with minor responsiveness or design issues. | Basic Bootstrap components applied, with moderate responsiveness issues. | Little to no Bootstrap usage or major  responsiveness problems. |
| **JavaScript Functionality** | 20 | Creative and interactive  JavaScript features implemented flawlessly, no errors in functionality. | Good implementation of  JavaScript features; minor functionality issues. | Basic JavaScript functionality with some errors or missing interaction. | No or poorly implemented  JavaScript functionality. |
| **Overall Design & Usability** | 10 | Clean, modern, and accessible design; easy to navigate and fully responsive. | Good design with minor usability or responsiveness issues. | Satisfactory design, but lacks in either navigation, responsiveness, or usability. | Poor design, hard to navigate, or not responsive. |
| **Code Quality** | 10 | Code is well-organized, well commented, and follows best practices for readability and maintainability. | Code is mostly well-organized and follows best practices,  with minor issues in readability or commenting. | Code is somewhat organized but lacks comments or has readability issues. | Poorly organized code, missing comments, or difficult to read. |

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What should the content be?

For a **portfolio website**, the content should showcase your skills, projects, and personal information. As an example, here's a breakdown of what the portfolio should include:

1. Home Page (Landing Page):

**Introduction or Welcome Message**: A brief introduction to who the student is (e.g., "Hello, I’m [Your Name], a passionate web developer…").

**Personal Branding**: Could include a tagline that reflects the student’s personality or career goals (e.g., "Bringing creativity to code").

**Navigation Menu**: Links to different sections/pages such as About, Projects, and Contact.

**Visuals**: Consider including a hero image, background, or professional photo of the student.

1. About Page:

**Personal Information**: A short bio that introduces the student, their background, and their interests. This can include:

Academic background (e.g., "Currently a student pursuing [degree] at [university/college]").

Skills and expertise (e.g., HTML, CSS, JavaScript, Bootstrap, etc.).

**Hobbies/Interests**: A few sentences about what the student enjoys outside of coding.

**Resume Download**: Optionally, include a button or link to download the student's resume as a PDF.

1. Projects Page:

**Showcase of Projects**: A collection of projects the student has worked on, with the following details for each project:

**Project Title**: Name of the project.

**Short Description**: Brief overview of the project (purpose, technology used, and challenges).

**Technologies Used**: Highlight the tools, frameworks, or languages applied (e.g., HTML, CSS, JavaScript).

**Live Demo**: If possible, link to a live demo of the project (hosted on GitHub Pages, Netlify, etc.).

**Code Repository**: Provide a link to the GitHub repository for the project (if applicable).

**Screenshots**: Include images or screenshots of the project to visually show what was built.

1. Contact Page:

**Contact Form**: A simple form where visitors can submit inquiries (e.g., Name, Email, Message). This form can be interactive with **JavaScript form validation**.

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**Social Media Links**: Links to relevant professional networks such as LinkedIn, GitHub, or a coding blog.

**Email Address**: Optional, a direct email for professional contact.

**Location (Optional)**: If relevant, mention where the student is based.

Optional Content:

**Blog Section**: If the student enjoys writing, they could include a blog to showcase articles about coding, learning experiences, or industry topics.

**Testimonials or Endorsements**: If applicable, include quotes from classmates, teachers, or collaborators about the student’s work or skills.

Additional Features (Advanced):

**Interactive Elements**: Use JavaScript to add interactive features, such as:

A dynamic project filter (to sort projects by technology).

A photo gallery slider or lightbox.

Scroll animations (using Bootstrap or custom JavaScript).

**Responsive Design**: Ensure the portfolio works across devices (desktops, tablets, and mobile).

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# Design and Development Process of a Responsive Portfolio Website

The creation of a responsive portfolio website involves several crucial steps, from initial design to final development. The primary objective of the website is to provide a platform that showcases an individual's projects, skills, and contact information in an aesthetically pleasing and easily navigable format. The overall thought process behind its design and development emphasizes a minimalist yet effective approach, ensuring accessibility across all device types. In this essay, we will explore the key design principles, development techniques, and features that shaped the creation of this responsive portfolio website.

At the core of the website's design is **responsiveness**, a concept that ensures the website functions seamlessly on all screen sizes, whether on a desktop computer or a mobile device. The importance of responsiveness stems from the need to offer users an optimal viewing experience regardless of the device they are using. The website’s layout automatically adapts to the screen dimensions using CSS media queries and flexible grid systems. The design approach adopted is mobile-first, meaning that the layout is initially tailored for smaller screens and then scaled upwards to suit larger displays.

# Minimalism mindset

Another critical design principle is **minimalism**. A minimalist design is essential for keeping the website’s interface clean, visually appealing, and free of unnecessary distractions. The focus is on showcasing project images and essential information while using a simple colour palette and typography. This design choice helps draw attention to the portfolio elements without overwhelming the user with excessive text or complicated navigation. Minimalism ensures a smooth and straightforward browsing experience, making the website professional and easy to use.

# User Interface(UI) Design

The **user interface (UI) design** of the website is inspired by the vCard concept, where the individual’s profile picture, name, and social media links are prominently displayed. This design choice enhances user engagement by offering quick access to essential information. The website is structured in a single-page format with smooth scrolling capabilities, allowing users to navigate between sections such as “About,” “Projects,” and “Contact” with ease. The intuitive UI ensures that users can access all relevant content within a few clicks or scrolls, improving overall user satisfaction.

# Typography and colour scheme

The choice of **typography and colour scheme** plays a significant role in the website’s visual appeal. The website uses a simple and clean font that enhances readability while contributing to the overall minimalist design. The colour scheme is subtle and professional, complementing the content without overpowering it. This careful attention to typography and colour ensures that the user’s attention is focused on the showcased projects and important details.

# Development process

The **development process** involves several stages, beginning with the structuring of the HTML code. The website’s HTML is well-organized, with clear divisions for different sections such as the header, portfolio items, and contact information. The use of semantic HTML tags improves both accessibility and search engine optimization (SEO), making the website more discoverable and user-friendly.

# Styling consideration

For the **styling** of the website, custom CSS is used to create a dynamic and responsive layout. Instead of relying on frameworks like Bootstrap, the development process emphasizes the use of CSS properties such as grid and flexbox, providing the designer with greater control over the website’s look and feel. This decision allows for more fine-tuned customization, ensuring that the website maintains a unique and personalized aesthetic.

# Integration of JavaScript

The integration of **JavaScript** adds interactivity and enhances user experience. JavaScript is used to implement smooth scrolling, responsive navigation menus, and other interactive features that contribute to a seamless browsing experience. Importantly, the JavaScript code is optimized to prevent any performance slowdowns, ensuring that the website remains fast and responsive even on slower devices or networks.

# Image handling capabilities

One key aspect of the development process is **image handling**. Since the website relies heavily on visual elements such as project images, it is crucial to ensure that these images are optimized for performance. The images are compressed to reduce file sizes without compromising quality, ensuring fast load times. Additionally, lazy loading techniques may be employed to load images only, when necessary, further improving performance on mobile devices.

# Deployment possibilities

In terms of **deployment**, the website is designed to be easily hosted and shared using platforms like GitHub Pages. This makes the portfolio accessible to a wide audience and allows developers to easily modify or extend the website by following simple Git-based instructions. The deployment process ensures that the website is available online with minimal effort, making it convenient for both developers and users.

# Key Features

The website incorporates several **features** that enhance its functionality and user engagement. These include responsive design, a visually engaging portfolio display, social media integration, and a contact section. The responsive design ensures that the website looks and functions well on all devices, while the portfolio section allows the user to showcase their projects in an attractive manner. Social media links are easily accessible, enabling visitors to connect with the individual across different platforms. Lastly, the contact section provides an easy way for users to get in touch, either through email or social media.

# Summary

In **conclusion**, the design and development of the responsive portfolio website focus on creating a professional and visually appealing platform that is easy to navigate and accessible on all devices. By prioritizing responsive design, minimalism, and a clean user interface, the website effectively showcases an individual's work and skills. The use of modern web development techniques such as CSS media queries, JavaScript interactivity, and image optimization ensures that the website performs well and provides a positive user experience. This portfolio website serves as a strong representation of professionalism and modern web design principles, making it a valuable tool for individuals seeking to display their projects and achievements online.