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Portfolio Fusion: AI-Assisted Web Development Where Human Creativity Meets Artificial Intelligence

ISYS3004 Business Web and Mobile Technologies

1. Introduction

1.1 project overview

"My portfolio" is a multipage webpage generated my assignment Portfolio Fusion: AI-Assisted Web Portfolio Fusion: AI-Assisted Web Development. It gathers my web development efforts from week 2 through 5 displaying all together in one unified, available and responsive portfolio. The website was built with HTML, CSS AND with JavaScript. Additionally, with the help of AI tools such as Chatgpt was used to assist some changes such as layout design, template creation and interactive elements.

1.2 Objective

The aim was to show fundamental web development concepts by implementing AI-assisted steps. The webpage is required to meet the interactivity, responsiveness and accessibility criteria. It provided me with a chance to critically assess AI-generated code and record the progress of the work. it also makes me think how AI can solve my problem and make my code much better.

1.3 Scope

- Homepage and 4 pages: Basic webpage, Rock Paper Scissors, Flatland Business Advisor and RSS Reader.
- JavaScript-based interaction and API access
- A responsive design with accessibility features.
- Netlify setup with GitHub version control
- AI interaction logs and before/after implementation examples.

1. Final product

2.1 Link to live website

Netlify: [Deploys | dristheenursing21611027 | Netlify](#)

2.2 GitHub repository

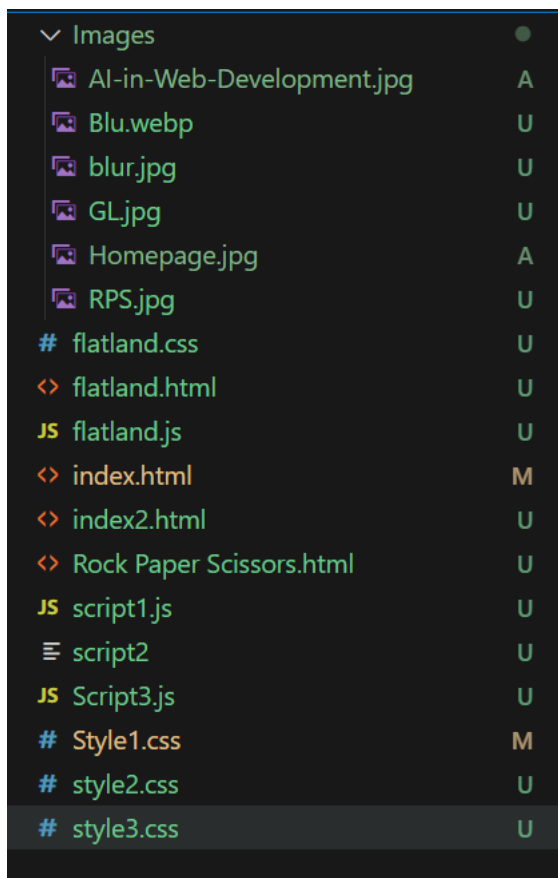
GitHub: <https://github.com/21611027/Dristhee-Nursing-21611027>

2. Technical Implementation

3.1 Project Structure

The website is structured into directory listings for styles, scripts and images. There is a unique HTML file and CSS/JS for each project page.

Here is a screenshot displaying all the information:



3.2 Page Included

- Index.html: Home and Basic webpage content
- Rock Paper Scissors.html: week 3 interactive game
- Flatland.html: week 4 business advisor
- Index2.html: week 5 RSS Reader

3.3 Technologies Used

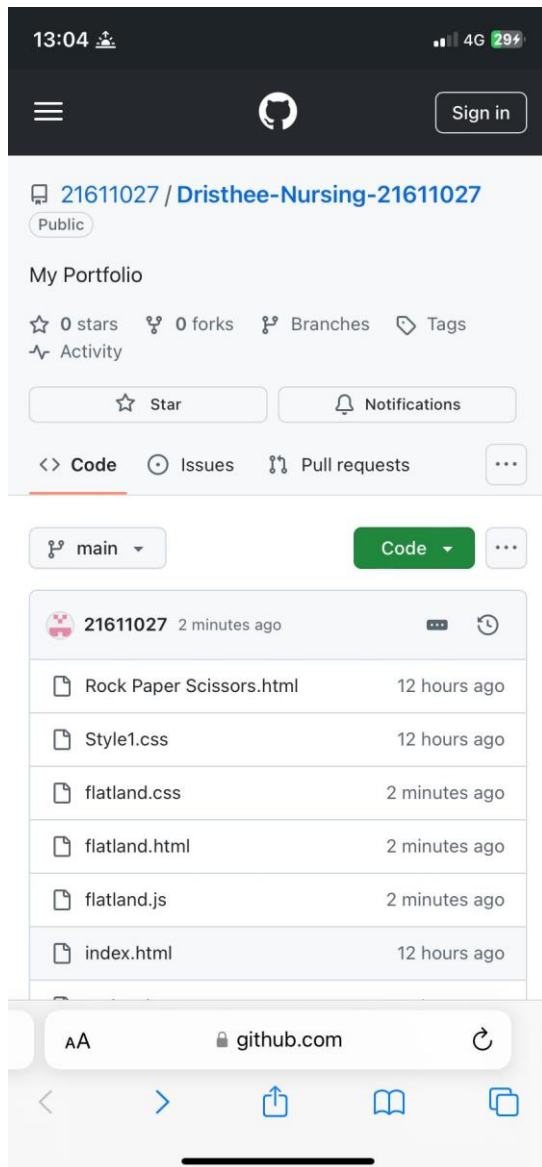
- HTML, CSS, JavaScript
- Flexbox, ARIA, Fetch API
- GitHub, Netlify

3.4 Responsive Design

3.4.1 Mobile-First Approach

I used the link on my Netlify to get access through my mobile.

3.4.2 Screenshots of Design



3.5 JavaScript Interactivity

3.5.1 Features Implemented

Score Tracking, DOM-based advice, Fetch API reader, accessible nav toggle

3.5.2 Screenshots

```
# script1.js > document.addEventListener('DOMContentLoaded') callback
1 // script1.js
2
3 // Toggle mobile navigation menu
4 document.addEventListener('DOMContentLoaded', () => {
5   const toggleButton = document.getElementById('menu-toggle');
6   const navLinks = document.getElementById('nav-links');
7
8   toggleButton.addEventListener('click', () => {
9     navLinks.classList.toggle('active');
10  });
11
12  // Optional: Welcome message in console
13  console.log("Welcome to Dristhee Nursing's Portfolio!");
14
15  // Optional: Simple scroll reveal effect (basic version)
16  const intro = document.querySelector('.intro');
17  window.addEventListener('scroll', () => {
18    if (window.scrollY > 100) {
19      intro.style.opacity = '1';
20      intro.style.transform = 'translateY(0)';
21    }
22  });
23 });
```

Script1.js

```
# script2.js > ...
1 const choices = ['rock', 'paper', 'scissors'];
2 let wins = 0, losses = 0, ties = 0;
3
4 const resultDiv = document.getElementById('result');
5 const winsSpan = document.getElementById('wins');
6 const lossesSpan = document.getElementById('losses');
7 const tiesSpan = document.getElementById('ties');
8 const resetButton = document.getElementById('reset');
9 const buttons = document.querySelectorAll('.choice');
10
11 buttons.forEach(button => {
12   button.addEventListener('click', () => {
13     const playerChoice = button.dataset.choice;
14     const computerChoice = getComputerChoice();
15     const result = getResult(playerChoice, computerChoice);
16     updateScore(result);
17     showResult(result, playerChoice, computerChoice);
18   });
19 });
20
21 resetButton.addEventListener('click', () => {
22   wins = 0;
23   losses = 0;
```

Script2.js

```
24
25
26 // ...
27
28 // ...
29
30 // ...
31
32 // ...
33
34 // ...
35
36 // ...
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38 // ...
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42 // ...
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44 // ...
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94 // ...
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98 // ...
99
100 // ...
```

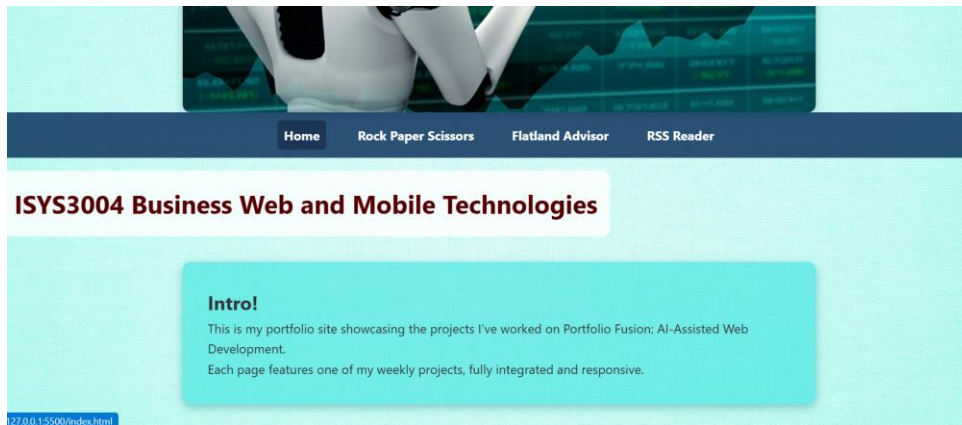
Script3.js

3. Accessibility and semantic HTML

Used of navigation toggle to support screen readers such as “aria-label”

Semantic HTML used of <header>, <nav>, <footer> to properly understand

4.1 Screenshots of Accessibility Features



```
</main>
<footer>
  <h1 class="logo">My Portfolio</h1>
  <p> Name:Dristhee Nursing</p>
  <p> Student ID: 21611027</p>
  <p> ISYS3004 Business Web and Mobile Technologies 2025</p>
</footer>

<meta charset="UTF-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<title>
  My Portfolio
</title>

<div class="AI-in-Web-Development">
  
```

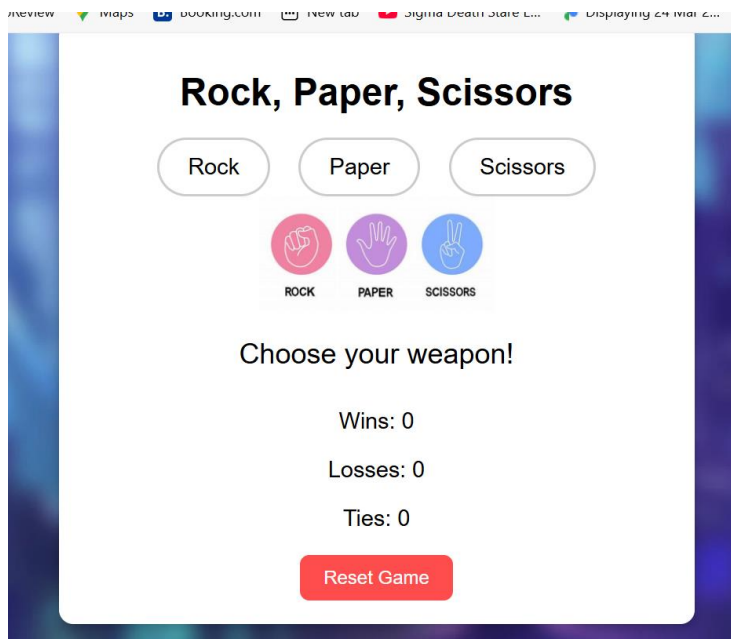
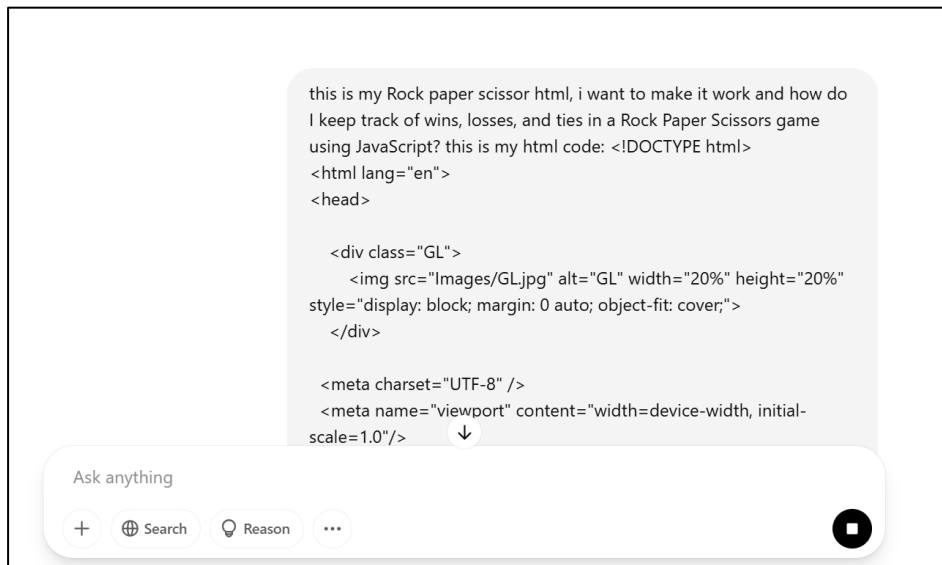
```
</head>
<body>
  <header>
    <nav class="navbar" role="navigation" aria-label="main navigation">

      <button id="menu-toggle" aria-label="Toggle Menu">☰</button>

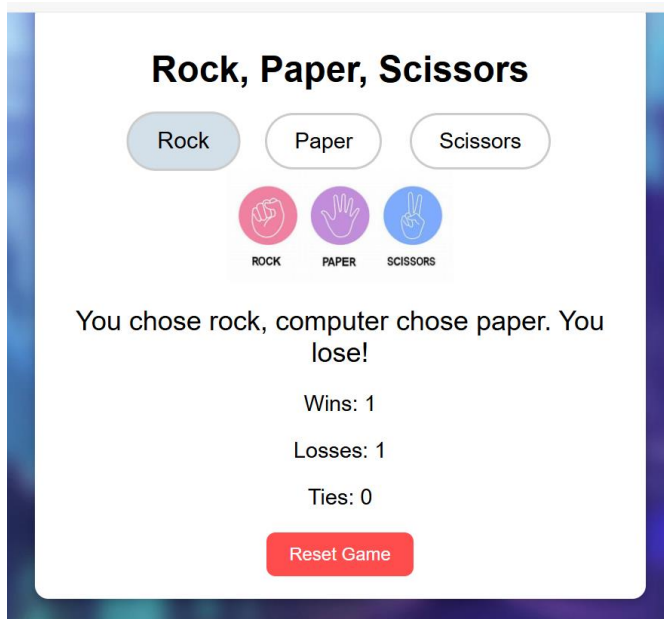
      <ul id="nav-links">
        <li><a href="index.html">Home</a></li>
        <li><a href="Rock Paper Scissors.html">Rock Paper Scissors</a></li>
        <li><a href="flatland.html">Flatland Advisor</a></li>
        <li><a href="index2.html">RSS Reader</a></li>
      </ul>
    </nav>
  </header>
```

4. AI Integration & Critical Interaction

5.1 So chatGPT help me to add the missing quotation mark and semicolon as now the line are properly sets and give me a track of wins, losses and ties in the game.

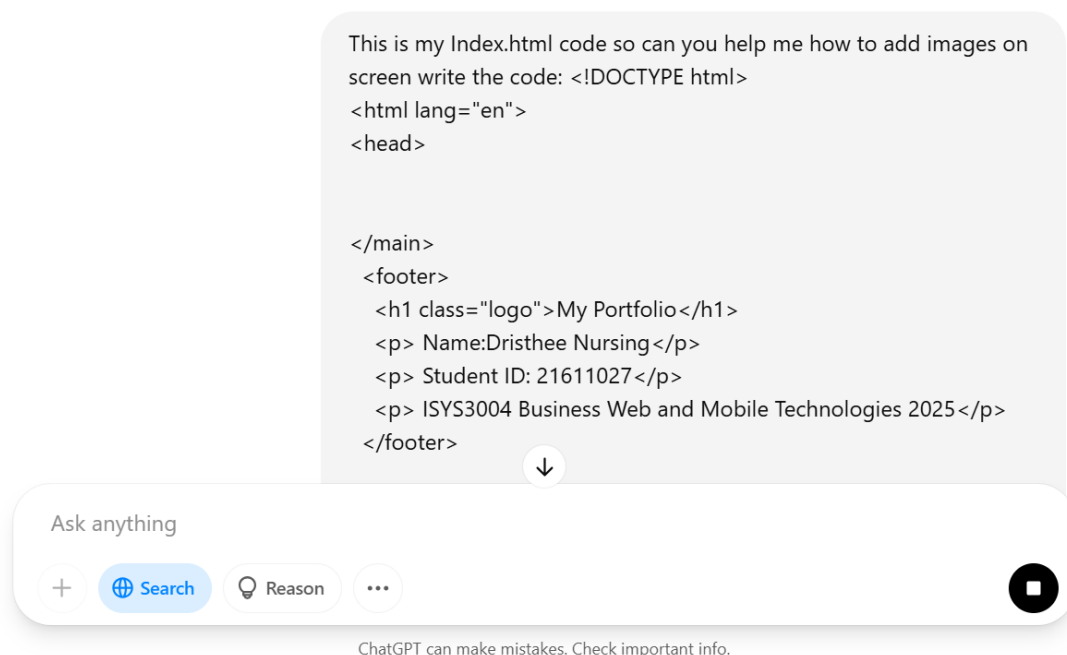


Before



With the help of AI am i now able to click on the option which i want to play and give me a result either i-win, loss or it is tie.

5.2 Through the help of Chatgpt to add images




```

<!-- lang= en -->
</div>
</body>
</html>
<p> Name:Dristnee Nursing</p>
<p> Student ID: 21611027</p>
<p> ISYS3004 Business Web and Mobile Technologies 2025</p>
</body>
</html>

<meta charset="UTF-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<title>
  My Portfolio
</title>

<div class="AI-in-Web-Development">
  
</div>

<link rel="stylesheet" href="Style1.css" />
</head>

```

Add Background:

can you assist me how to add Background on my screen

Certainly! To set a background image for your webpage, you can use CSS to apply the image to the `<body>` element or any specific HTML element you choose. Here's how you can do it:

1. Setting a Background Image for the Entire Page

To apply a background image to the entire webpage, you can add the following CSS to your `<style>` section or external CSS file:



```

body {
  font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
  background: url("../Images/Hompage.jpg") no-repeat center center fixed;
  background-size: cover;
  color: #333;
  line-height: 1.6;
}

```

5.3 Navigation Accessibility

How can I create a responsive navigation menu with toggle?

Creating a responsive navigation menu with a toggle feature enhances user experience across various devices by adapting the menu's layout and functionality. Here's a step-by-step guide to building such a menu:

1. HTML Structure

```
</head>
<body>
  <header>
    <nav class="navbar" role="navigation" aria-label="main navigation">
      <button id="menu-toggle" aria-label="Toggle Menu">☰</button>
      <ul id="nav-links">
        <li><a href="index.html">Home</a></li>
        <li><a href="Rock Paper Scissors.html">Rock Paper Scissors</a></li>
        <li><a href="flatland.html">Flatland Advisor</a></li>
        <li><a href="index2.html">RSS Reader</a></li>
      </ul>
    </nav>
  </header>
```

5.4 With the help of chatgpt i was allowed to create my website for RSS Reader

am unable to run Multi-Feed RSS Reader code and it is not working so can you assist me to make it work, and how to open the website for mozilla hacks or bbs news: this is my code: <!DOCTYPE html>

```
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <meta name="viewport" content="width=device-width, initial-
scale=1.0" />
  <title>RSS Reader – Week 5</title>
  <link rel="stylesheet" href="style3.css" />
</head>
<body>
```



```
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>RSS Reader – Week 5</title>
7   <link rel="stylesheet" href="style3.css" />
8 </head>
9 <body>
10   <div class="container">
11     <h1>Multi-Feed RSS Reader</h1>
12
13     <label for="feed-selector">Choose a feed:</label>
14     <select id="feed-selector" aria-label="RSS Feed Selector">
15       <option value="https://hacks.mozilla.org/rss">Mozilla Hacks</option>
16       <option value="http://feeds.bbc.co.uk/news/world/rss.xml">BBC World News</option>
17     </select>
18
19     <div id="content" aria-live="polite"></div>
20   </div>
21
22   <script src="Script3.js"></script>
23 </body>
24 /k+m1\
```

Reflection:

Working on my portfolio helped me to improve my technical skills and problem-solving approaches. My design methodology emphasizes accessibility, responsiveness and clarity. I utilized Flexbox and semantic HTML to keep the layout consistent across all pages. While working on this assignment, i became more creative. Content was organised into parts that were significant to both users and assistive technology(<header>, <main>, <footer>).

I personally think using all the previous weekly activities from week 2-5 was a difficult issue to deal with as it needed to operate according to an organised design. For example, the Rock Paper Scissors game required additional accessibility features such as aria-live zones. The flatland required to enhance input-label relationships. Another problem was troubleshooting the RSS feed capability which required how browser security settings prevent direct RSS access and was also having problem to run the code.

To overcome these issues, i used repeated testing and AI engagement. ChatGPT assisted me in developing my code such as guide me, correct the errors and resolving logic concerns. But i always carefully examined and improved the result.

My problem-solving strategy is to generate specific issues, test responds and then modify on depending on the HTML structure or design objectives. This iterative method makes the design procedure easier.

Lesson learned About Working with AI

- AI help to develop the idea more in code and make it more attractive

- AI is most effective when combined with human understanding, testing and creativity.
- I need to write my problem well and how i want AI to solve.

Non-compliant issues

The "Basic Webpage" project from Week 2 is built into the homepage rather than on its own page. However, the content and structure are complete and functioning.

Conclusion

To conclude this assignment was a fulfilling experience that allowed me to put all my knowledge i studied in this unit. I was able to update the weekly work using responsive design and accessibility and build a professional portfolio that represents my progress as a web developer.

The AI tool such as ChatGPT was very helpful by providing ideas and code snippets. However, the real worth was created by evaluating the comments, implementing modifications, and ensuring that the final work exceeded professionalism.

This project has increased my confidence regarding both my technical talents and my ability to work independently and strategically, especially when AI is used as part of the development process.