Software Engineering

Project Milestone 2 - Interactive Website

Overview

In this milestone project, you will demonstrate your JavaScript skills by creating a landing page for a fictional gaming company. The landing page will showcase and host simple JavaScript-based games that you develop. This project will challenge your ability to structure content, implement interactive features, and apply JavaScript logic effectively.

Goals

The goal of this project is to evaluate your ability to:

- Design and implement a functional landing page using HTML, CSS, and JavaScript.
- Develop and integrate multiple simple JavaScript games within a single website.
- Utilize JavaScript for DOM manipulation, event handling, and game logic.
- Apply best practices for usability and accessibility in web development.

Expected Output

Your application should be similar in functionality and design to:

- https://agate.id/
- https://thatgamecompany.com/
- https://amberstudio.com/

Important Notice!

The assignments are designed to enhance your problem-solving abilities and reinforce your foundational knowledge in JavaScript development. While you may use AI tools for exploration and ideation, ensure you understand the logic and implementation

behind your code. Misuse or unethical use of AI, such as plagiarism or blindly copying solutions, will have consequences. Engage actively with the material to ensure that your submissions reflect your own learning and comprehension.

Your journey as a developer is about both the **process** and the **final product**. Embrace challenges and take the time to learn!

✅ Module 3 Assignment

(Deadline: Friday, 18 April 2025 at 23:59 WIB)

🎥 **Recorded Brief**

📜 Scenario

You have been hired as a web developer for a **new gaming company named RevoFun** looking to establish an online presence. Your task is to create a landing page that not only introduces the company but also provides access to various **simple JavaScript games**. This project is your chance to showcase your JavaScript skills while delivering an engaging user experience.

Audience: Your website is intended for casual gamers who want to enjoy simple yet entertaining browser-based games. The goal is to create a visually appealing and interactive platform where users can play games seamlessly.

Purpose:

- **Showcase the Gaming Company**: Introduce the fictional company with branding and an engaging design.
- **Host Simple Games**: Implement multiple JavaScript-based games that users can play directly on the site.
- **Enhance User Experience**: Design a fun and interactive experience with intuitive navigation and smooth gameplay.

📁 Requirements

You are required to develop a **gaming company landing page** that includes the following sections:

1. **Home Page:**
    - A visually appealing introduction to the gaming company.
    - A brief overview of the available games.

- Navigation menu with links to individual game pages.

2. **Game Pages:**
   Each game must have a dedicated page with its own interactive JavaScript implementation. Choose at least **three (3) out of five (5) game options**:
   - **Number Guessing Game**
     Concept:
     - The computer randomly selects a number (e.g., between 1-100).
     - The player tries to guess the number.
     - The game provides hints: “Too high” or “Too low.”
     - Limit the number of attempts (e.g., 5 tries).
   - **Rock, Paper, Scissors**
     Concept:
     - The player chooses Rock, Paper, or Scissors.
     - The computer randomly selects one as well.
     - The game determines the winner based on classic rules.
     - Optional: Keep track of scores.
   - **Clicker Game**
     Concept:
     - A big button appears on the screen.
     - Every time the player clicks it, the score increases.
     - After a certain time limit, the game ends and displays the final score.
   - **Memory Card Game**
     Concept:
     - A set of cards with hidden images appears on the screen.
     - The player flips two cards per turn.
     - If they match, the cards stay open; if not, they flip back.
     - The goal is to match all pairs.
   - **Avoid the Falling Objects**
     Concept:
     - The player controls a small character at the bottom of the screen.
     - Random objects fall from the top.
     - The player must move left/right to avoid them.
     - The longer they survive, the higher the score.

   Each game should include:
   - Game instructions.
   - Interactive gameplay using JavaScript.
   - A "Back to Home" button.
3. **(Optional) Leaderboard & User Profiles:**
   - Store high scores using `localStorage`.
   - Allow users to enter a nickname before playing.

🚀 Deliverables

For this checkpoint, you are required to submit:

1. **Deployed Website**: A hosted version of your gaming company landing page (on GitHub Pages, Netlify, or similar platforms).
2. **Source Code Repository**: The complete codebase uploaded to GitHub, with well-structured files.
3. **Project Documentation**: A README file that includes:
    - Overview of the project
    - Features implemented
    - Technologies used
    - Screenshots or demo links

🔍 Grading Component

Your project will be evaluated based on the following criteria:

✅ JavaScript Problem-Solving

- Uses basic conditional statements and loops correctly.
- Implements simple functions to structure code effectively.
- Uses arrays and objects to store and manipulate game data.
- Uses template literals for dynamic string construction.
- Implements simple mathematical operations for game mechanics.
- Uses logical operators correctly in decision-making.
- Applies switch statements where appropriate instead of multiple if-else.

✅ DOM Manipulation & Event Handling

- Uses `querySelector` or `getElementById` to access elements.
- Adds event listeners (e.g., click, input) to handle user interactions.
- Updates text or styles dynamically using JavaScript.
- Changes element visibility dynamically (e.g., hiding/showing elements).
- Uses class toggling for styling changes dynamically.
- Uses innerHTML and textContent appropriately for modifying elements.
- Handles form inputs and retrieves values correctly.

✅ Code Readability & Organization

- Uses meaningful variable and function names.
- Maintains proper indentation and consistent formatting.
- Avoids unnecessary repetition by reusing code effectively.

- Groups related functions together for better organization.
- Uses comments to explain complex sections of code.
- Organizes script files logically and avoids excessive inline JavaScript.
