Snake Game Project Documentation

1. Introduction

The Snake Game is a classic arcade game developed using HTML5, CSS3, and JavaScript. This version is responsive, browser-compatible, and allows users to customize board size and difficulty levels. The game is designed as a fun interactive experience and a showcase of DOM manipulation, canvas rendering, and basic game logic.

2. Objective

The objective of the game is to control the snake, consume food, and grow longer while avoiding collisions with the wall or itself.

3. Features

- Customizable board size (10x10 to 50x50)

- Difficulty levels (Slow, Medium, Hard)

- Responsive canvas using aspect ratio

- Smooth animations and colored snake segments

- Game over screen with restart and back to menu options

- Score tracking and real-time updates

- SEO optimized with meta tags

4. Game Rules

- Use arrow keys to move the snake (Up, Down, Left, Right).

- The snake must eat the food (green dot) to grow.

- Avoid running into walls or the snake's own body.

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- The game ends when the snake collides with itself or the wall.

5. Technology Stack

- HTML5 for structure

- CSS3 for styling and responsiveness

- JavaScript for game logic and user interactions

- Canvas API for rendering game visuals

6. Project Structure

- index.html: Contains the full HTML, CSS, and JS logic in one file.

- assets/: (Optional) Can include images like preview thumbnails.

- README.md: Project overview and usage instructions.

- snake-game.pdf: Project documentation.