

ISCG6420: Internet and Website Development

Assessment #2 | Semester 1, 2024

Part 2: Wireframe – Interactive Video Game

SafeSwimmer – Parakai Springs

Don Lorenzo | 1567699

Final Submission Date: 4th of June 2025

Website Layout Overview

The game website has four main sections:

- Game Canvas – Occupies the centre as the primary interactive area
- Game Setup Controls – Displayed on the left side of the canvas
- Game Info Display – Displays score and timer
- Game Over/Instructions Overlay – Displayed conditionally

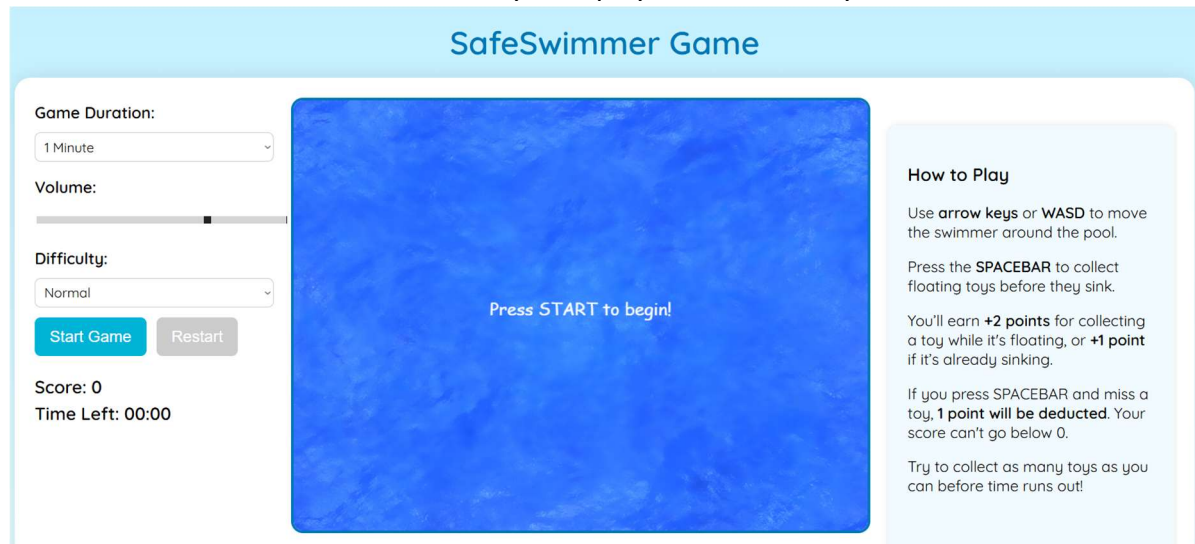


Figure 1: Website Layout

Wireframe Breakdown

Header Section

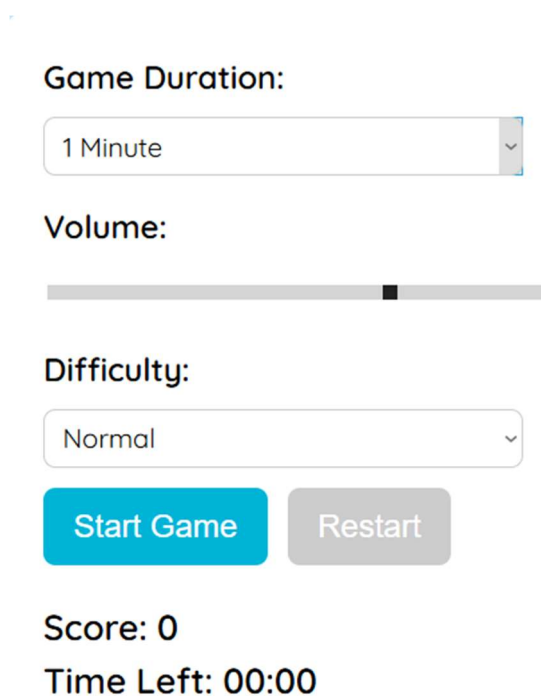
- Contains:
 - o Game Title: "SafeSwimmer Game | Parakai Springs"

Game Setup Controls

- Position: Left side of the game area canvas
- Content:
 - o Game Duration selector (1 or 2 minutes)
 - o Volume slider (0 to 100%)
 - o Difficulty selector (Easy, Normal, Hard)
 - o Start button (Enabled when assets are loaded)
 - o Restart (Initially disabled)

Game Info Display

- Position: Left side of the game area canvas
- Content:
 - o Score Counter: Displays the player's live score
 - (E.g., "Score: 10")
 - o Timer Display: Countdown timer
 - (E.g., "Time Left: 01:23")



The wireframe shows a game setup interface. It includes a 'Game Duration' dropdown menu set to '1 Minute', a 'Volume' slider, a 'Difficulty' dropdown menu set to 'Normal', a blue 'Start Game' button, and a grey 'Restart' button. Below these controls, the 'Score' is displayed as 0, and the 'Time Left' is displayed as 00:00.

Game Duration:

1 Minute

Volume:

Difficulty:

Normal

Start Game Restart

Score: 0

Time Left: 00:00

Figure 2: Game Setup Controls & Info Display

Game Canvas Area

- Position: Centred on the page
- Size: 800x600 px <canvas> element
- Content:
 - o Background image (`water.jpg`)
 - o Sprite-based animated swimmer character
 - o Dynamic toy circles (radial gradients with animation stages)



Figure 3: Game Canvas Area

In-Game Instructions Overlay

- Position: Right side of the game area canvas
- Content:
 - o Movement instructions (WASD/arrow keys)
 - o Spacebar action: Collect the toy
 - o Objective summary (collect as many toys as possible before they sink)

How to Play

Use **arrow keys** or **WASD** to move the swimmer around the pool.

Press the **SPACEBAR** to collect floating toys before they sink.

You'll earn **+2 points** for collecting a toy while it's floating, or **+1 point** if it's already sinking.

If you press SPACEBAR and miss a toy, **1 point will be deducted**. Your score can't go below 0.

Try to collect as many toys as you can before time runs out!

Figure 4: In-Game Instructions

Game Over Screen

- Position: Centre overlay (shown on timeout)
- Content:
 - o "Game Over!" title
 - o Final score summary
 - o "Play Again" button (restarts the game and resets all the states)

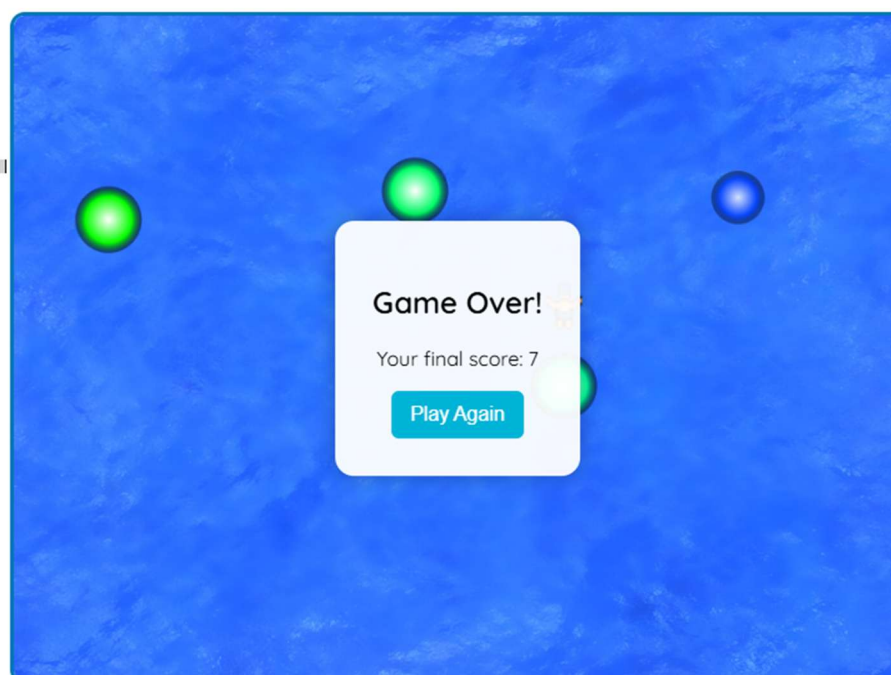


Figure 5: Game Over Screen

Final Frame & Links:

- Replay Function: Via “Restart” or “Play Again” buttons
- All game content: Runs through `index.html` and `script.js`
- Game state logic and DOM updates: Controlled using event listeners in JavaScript
- Game Assets: Stored in `/assets/images` and `/assets/sounds`
 - `assets/images`: (Got it from an open-based source: <https://opengameart.org>)
 - `swimmer.png`:
 - Sprite sheet containing animated swimmer frames. Used for directional character movement and swimming animation.
 - `water.jpg`:
 - Background image of a calm water surface. Provides visual context and aesthetic appeal to the swimming environment.
 - `assets/sounds`: (Got it from an open-based source: <https://freesound.org>)
 - `countdown.wav`:
 - Played at the beginning of the game to indicate the start countdown.
 - `point.wav`:
 - Played when a toy is successfully collected. Provides positive audio feedback.
 - `lose.flac`:
 - Played when the player attempts to collect a toy unsuccessfully.
 - `gameover.wav`:
 - Played when the game ends due to the timer running out.