



SNAKE WARS

Game Type: Battle Royale / Multiplayer Snake

Platform: HTML5 / LED Floor

Players: 2-4 Players

Grid Size: 50 x 30 (Game) + 6 x 10 (LED Controller)

Duration: 2 minutes (120 seconds)

Respawn: Yes (1.5 second delay)

1. Game Overview

Snake Wars is a competitive multiplayer snake game where 2-4 players battle for the highest score. Unlike classic snake, players respawn after death! Eat food, hunt special items, and crash into opponents to score points. The player with the highest score when time runs out wins!

2. Flow: How to Start the Game

Step 1: Open the game (Snake War.html)

Step 2: Select number of players (2, 3, or 4)

Step 3: Click "START GAME" button

Step 4: Countdown 3-2-1-GO! begins

Step 5: 2-minute battle begins!

3. Controls

3.1 Keyboard Controls

Player 1 (Red): W A S D

Player 2 (Cyan): I J K L

Player 3 (Green): Arrow Keys ($\uparrow \downarrow \leftarrow \rightarrow$)

Player 4 (Yellow): Numpad 8 4 5 6

3.2 LED Floor Controller

The game includes a 6x10 LED Floor Controller with directional buttons for each player. Click or step on the arrows to control your snake!

4. Scoring System

Item	Icon	Points
Regular Food	🍎 (Pink)	+2 points

Special Food (Star)	 (Gold)	+5 points
Kill Enemy Snake		+10 points

5. Game Mechanics

5.1 Snake Growth

- Eat food = Snake grows longer
- Automatic growth every 5 seconds
- Longer snake = More risk of crashing!

5.2 Death & Respawn

- **Hit wall:** You die
- **Hit your own body:** You die
- **Hit another snake's body:** You die, they get +10 points
- **Head-to-head collision:** Both die, no points
- **Respawn:** After 1.5 seconds at your start position
- **Invincibility:** 2 seconds after respawning

5.3 Special Food

- Gold star appears every 10 seconds
- Worth +5 points (more than regular food)
- Disappears after 5 seconds if not eaten
- Adds +2 length to your snake

6. Timer & Warnings

Time Left	Display Color
>30 seconds	Green (normal)

10-30 seconds	Yellow (warning)
<10 seconds	Red (danger, pulsing)

7. Win Condition

When the 2-minute timer ends, the player with the **highest score** wins! If tied, the first to reach that score wins.

8. Game End Screen

Display: "TIME'S UP!" header

Display: Winner announcement with crown 🏆

Display: Final rankings (1st 🥇, 2nd 🥈, 3rd 🥉, 4th)

Display: Each player's final score

Options: "PLAY AGAIN" or "MENU"

9. In-Game UI

- **Timer:** Countdown from 2:00
- **Scoreboard:** All players' scores, sorted by rank
- **Leading indicator:** Gold glow on highest score
- **Dead indicator:** Faded score when dead
- **Pause button:** Pause/Resume game
- **Quit button:** Return to player select

Battle Strategies

- **Aggressive:** Hunt other snakes for +10 kill points
- **Defensive:** Focus on food, avoid confrontation
- **Star Hunter:** Prioritize special food for bonus points
- **Stay short:** Shorter snake = easier to maneuver
- **Use invincibility:** After respawn, 2 seconds of safety!
- **Corner trap:** Guide enemies into walls