

Formula SGI Game User Manual

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Introduction

This user manual provides instructions for using the game interface, controlling the game, and navigating through different states of the program.

1 System Requirements

Before running the Formula SGI game, ensure your system meets the following requirements:

- Operating System: Windows 10 or later, macOS, Linux
- Web Browser: Latest versions of Google Chrome, Mozilla Firefox or Brave
- Internet Connection: Required for getting the THREE.js library and the Google Fonts used

2 Running the Program

To run the Formula SGI game, follow these steps:

1. Open the project in Visual Studio Code (VS Code) or any code editor of your choice.
2. Locate and open the `index.html` file in the project.
3. Once the `index.html` file is open, look for the "Go Live" button typically available in the bottom right corner of VS Code.
4. Click on the "Go Live" button to launch the game in your default web browser.

Please note that these steps assume you have the necessary dependencies and configurations set up in your development environment. Ensure that your system meets the previously mentioned system requirements before running the game.

3 Game Interface

The game interface consists of three main states:

3.1 Initial State

In the initial state, you will see:

- Game title and authors
- Player name input field

- Selection of cars (player's and opponent's)
- Difficulty level options
- Start button to begin the game

Follow these steps to set up the game:

1. **Name Input:** Use the keyboard to input your name in the provided text field.
2. **Difficulty Selection:** Use the mouse to click on the available buttons to select the desired difficulty level for the game.
3. **Car Selection:** Click on the "Select Car" button to proceed to the car selection screen.
4. **Car Selection Screen:** On this screen, use the mouse to select your car and your opponent's car by clicking on the respective options available.

Ensure to complete each step by interacting with the interface elements accordingly to set up your name, select the difficulty level, and choose cars for both yourself and your opponent.

3.2 State: Running Game

During gameplay, follow these guidelines for controlling the game and handling various situations:

- **Car Movement:** Use the **AWS**D keys to maneuver your car within the track.
- **Pause/Resume:** Press the **Space** key to pause the game. While paused, press **Space** again to unpause and resume the game.
- **Off-Track Penalty:** If your car leaves the track, your speed will be reduced by half until you return to the track.
- **Collision with Opponent:** Collision with the opponent will reduce your speed by 50% for 2 seconds.
- **Power-up Interaction:** If you collide with a power-up, you will gain its benefits. The game will pause, prompting you to choose an obstacle from the obstacles park.
- **Placing Obstacle:** Move the selected obstacle to position it on the track using the mouse. Once placed, the game will resume.
- **Obstacle Collision:** Colliding with an obstacle will result in associated penalties or negative effects.
- **Winning Condition:** The first car to complete the targeted laps wins the game.

Ensure to follow these instructions to control your car, handle various in-game events, utilize power-ups, and overcome obstacles while racing to complete the laps and achieve victory.

3.3 Final Results

After completing a race:

- View race results, including difficulty level, cars used, total time, and winner/loser indications.
- Option to return to the menu.