

Down the Hill

Project Overview

Down the Hill is a video game project developed as part of COMP 2659 - Machinery II, Section 001, under the supervision of Instructor Paul Pospisil. The game simulates a downhill skiing experience with various gameplay mechanics including player movement, collision detection, scoring, and sound effects.

Features

- **Player Movement:** Control the snowboarder using keyboard inputs to navigate left or right.
- **Collision Detection:** The game includes collision mechanics with trees and other skiers, affecting the player's score and lives.
- **Score and Lives Tracking:** Tracks the player's score and remaining lives throughout the game.
- **Sound Effects and Music:** Includes custom sound effects and background music inspired by tracks like "Jump" by Van Halen and "Reptilia" by The Strokes.

File Structure

- `dth.c` : Contains the main game loop and core logic for "Down the Hill".
- `effects.c` : Implements the sound effects used in the game.
- `events.c` : Handles both synchronous and asynchronous events within the game.
- `input.c` : Manages keyboard input and interaction with the game.
- `model.c` : Defines the game's model, including the initialization and state management of game objects.
- `music.c` : Handles the background music for the game.
- `Makefile` : Script for compiling the project and generating the executable.

Compilation

To compile the project, use the following command:

```
make
```

This will generate the `DownHill.tos` executable file.

How to Play

- **Controls:**
 - Use the **left arrow key** (←) to move left.
 - Use the **right arrow key** (→) to move right.

- Press **SPACE** to start the game or respawn after game over.
- Press **ESC** to exit the game.
- **Objective:** Avoid obstacles and hit skiers to earn more, the longer you play, the more points you collect. The game ends when the player loses all lives.

Authors

- Juan Diego Serrato
- Diego Gonzalez
- Course: COMP 2659
- Instructor: Paul Pospisil

License

This project is for educational purposes under the supervision of the instructor Paul Pospisil as part of COMP 2659 at Mount Royal University.