

ICE SLIDERS

CITA113 Final Project

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E-Portfolio

- Using Google Sites, created a boring but functional e-portfolio
- There are three primary sections: one for coding projects which is currently empty, one with game projects, and one with other assets (like sprites).
- The game projects is the most complete sections, with pages for games from both CITA113 and CITA212.
- Link: <https://sites.google.com/view/mvalle-eportfolio/games/gamemaker-studio-2/ice-sliders>

Project Summary

- Ice sliders is a puzzle game based on the old top-down Pokemon games, specifically the ice sliding puzzles in the Ice Path and Dark Cave.
- My goal with this original project was to try and implement a game mechanic that we hadn't used in any previous projects.

Features and Gameplay

- The core mechanics of Ice Sliders are the grid-based movement and player sliding.
- When on the ice, if your character starts moving in a direction, they will keep moving in that direction until they collide with a rock or the edge of the map.
- The goal is simple: get from the starting position to a ladder which leads to the next level.
- There are three level difficulties, easy, medium, and hard, and there are 10 levels for each difficulty.

Development Process

- There were five primary stages of development for Ice Sliders
 1. Planning
 2. Programming core gameplay
 3. Programming the levels, menus, and buttons
 4. Adding visuals and sounds
 5. Finishing touches and bug fixes
- The biggest design decision was deciding on what type of game I wanted to make. I had a couple of other ideas including an archery game, and a 2-player strategy game based on the mathematical puzzle “The Tower of Hanoi.”

Development Progress

- I encountered three notable challenges while completing this project.
 1. Programming the sliding
 2. Designing the levels
 3. The 'Level Select' buttons
- The only change I made from the initial proposal isn't really a change; I just didn't get to the additional mechanic where the player also must move rocks into the correct positions for the maze to be solvable.

Lessons Learned

- Most of what I learned while making Ice Sliders were little coding tricks and conventions that create powerful tools for programming different functions.
- Enum states, complex loops, multidimensional lists/arrays, and scripts with custom functions (like classes, methods, and functions in other programming languages) are all examples of programming fundamentals that I will continue to use on future projects.
- If I were to continue work on Ice Sliders, I would add the following:
 1. The mechanic I mentioned above where the player moves the rocks.
 2. A simple pause menu
 3. Procedurally generated levels offering near infinite replay-ability.
 4. Unique levels with custom non-square layouts.