ICE SLIDING PUZZLE

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https://fivekoi.github.io/ITU_IceSlidingPuzzle

My Three Mechanics

I wanted to create mechanics that worked well together, such that each new mechanic would allow the previous ones to be used in new/more difficult scenarios. The central new mechanic I added was buttons (Figure 1). You need to press down all the buttons in the level to 'unlock' the target/goal. However, these buttons only stay pressed until you hit a wall/stop. So you need to be able to reach the target in the same movement input that you press the button in.

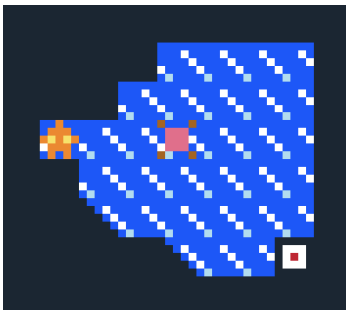

Figure 1: Level 2/5 - Introducing the button

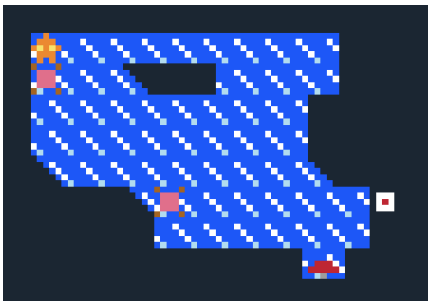

Figure 2: Level 4/5 - Introducing the spring

The two supporting mechanics I added were corners that you bounce off of (also shown in Figure 1), and springs that reverse your direction (Figure 2). Both of these supporting mechanics allow the player to move in a longer path and press more buttons before stopping. These mechanics all combine together in the final level in which the last movement to reach the goal is highlighted in yellow below (Figure 3).

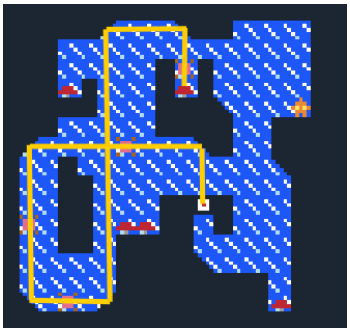

Figure 3: Level 5/5 - Putting it all together

Level Design

We were given quite a small level count of five. As I was pretty set on adding three different mechanics, my main goal with the difficulty curve was to have three (relatively) easy levels for each new mechanic, and two more challenging levels for combining mechanics. I landed on having levels 3 and 5 be the challenging ones, so the 4th level could be a nice refreshment (with a new mechanic) after a potential struggle on the 3rd.

On an individual level basis, a lot of them were designed to have an 'obvious' but wrong first move. For example, in the button introduction (Figure 1), if the player expects the button to stay down forever, they will go [Right, Down]. This will fail, as the button will be released and the target locked when the player hits the right wall. Hopefully, the next conclusion will be that they have to approach the button from the top, which does work (the player will go down through the button, then bounce off of the bottom corner moving right into the target).