Casters and Coders

Team Members

Branden Butler
Brennan Seymour
Edward Dao

Maxton Bromet
Theng Wei Lwe
Wenqin Wu

Faculty Advisor / Client

Professor Mat Wymore

Introduction

We aimed to create a high-fantasy puzzle game to make coding more accessible for beginners without prior knowledge, acknowledging its initial daunting nature

Features
- Coding as main gameplay mechanic
- Teaches basic programming concepts
- Fun to play!

```
lever_pulled(lever_number: number, pulled_right: bool)
   lever_number: number
     The number of the lever that was pulled
   pulled_right: bool
     True if the lever was pulled to the right. False
     if to the left.
   This hook is triggered when a lever is pulled.

lower_bridge(bridge_number: number)
   bridge_number: number
     Which bridge to lower.
   This function will lower one bridge. It will begin
   to raise again after a few seconds.
```

```python
def lever_pulled(lever_number, pulled_right):
    if lever_number == 1:
        print("lowering bridge 1...")
        lower_bridge(1)
    if lever_number == 2:
        print("lowering bridge 2...")
        lower_bridge(2)
```
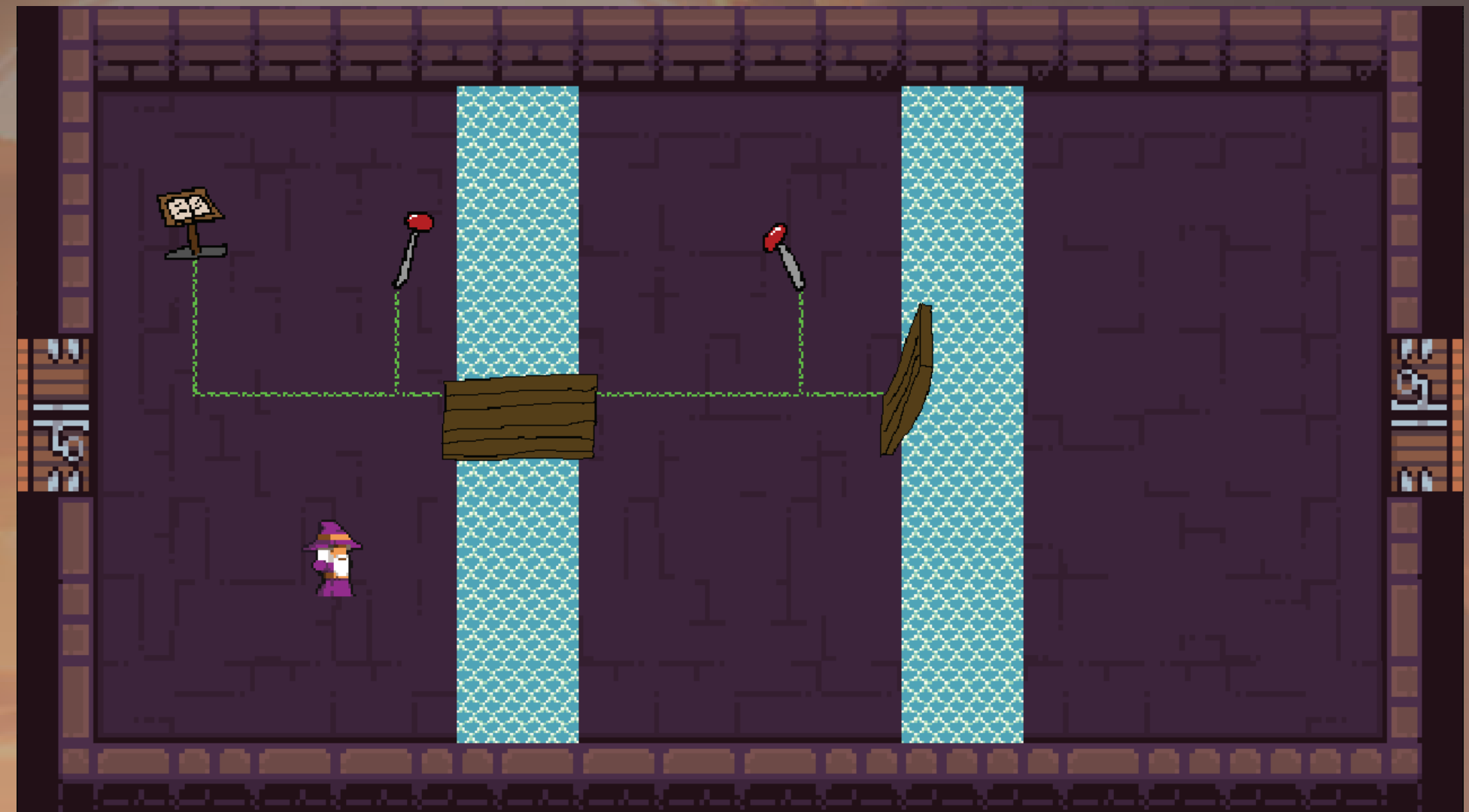

Design Requirements

Functional

- Player shall write scripts to interact with the game
- Player shall advance through the game by solving puzzles
- The game will be playable on OSX, Windows, and Linux-based operating systems
- Scripts will interact with puzzles through a predetermined api

Non-Functional

- The game shall be fun to play
- The game shall achieve at least 60 frames per second when running on the minimum specifications
- There shall be optional puzzles that are more difficult than normal ones

Technical Details

- Godot as the game engine
- Game logic implemented using GDScript
- Python will be the desired scripting language taught in the game
- Godot's built in unit test (Godot Unit Test) tool for majority of unit testing
- Agile methodology / Bi-weekly Sprints / Sprint Boards & User Stories

Intended Users/Uses

- Students who are interested in learning programming
- Teachers who want to use a supplemental tool for introducing coding concepts
- Educational institutions looking for more innovative ways to teach programming

Design Approach