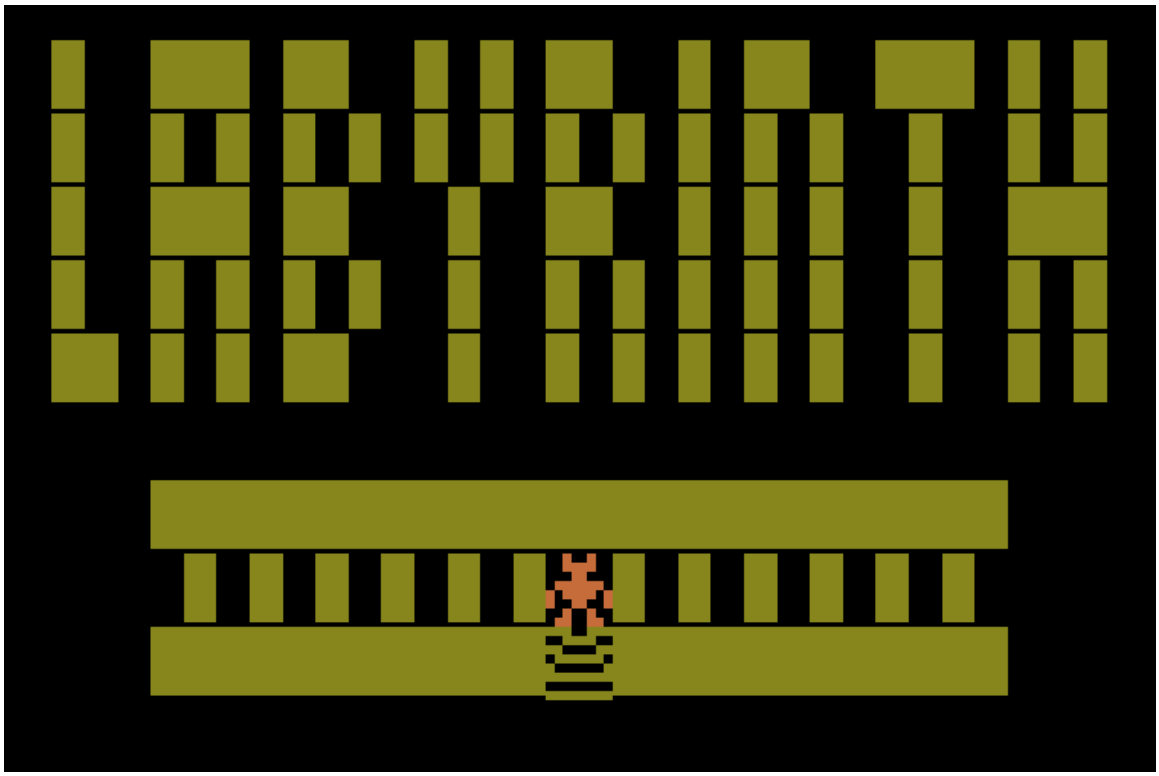


Labyrinth

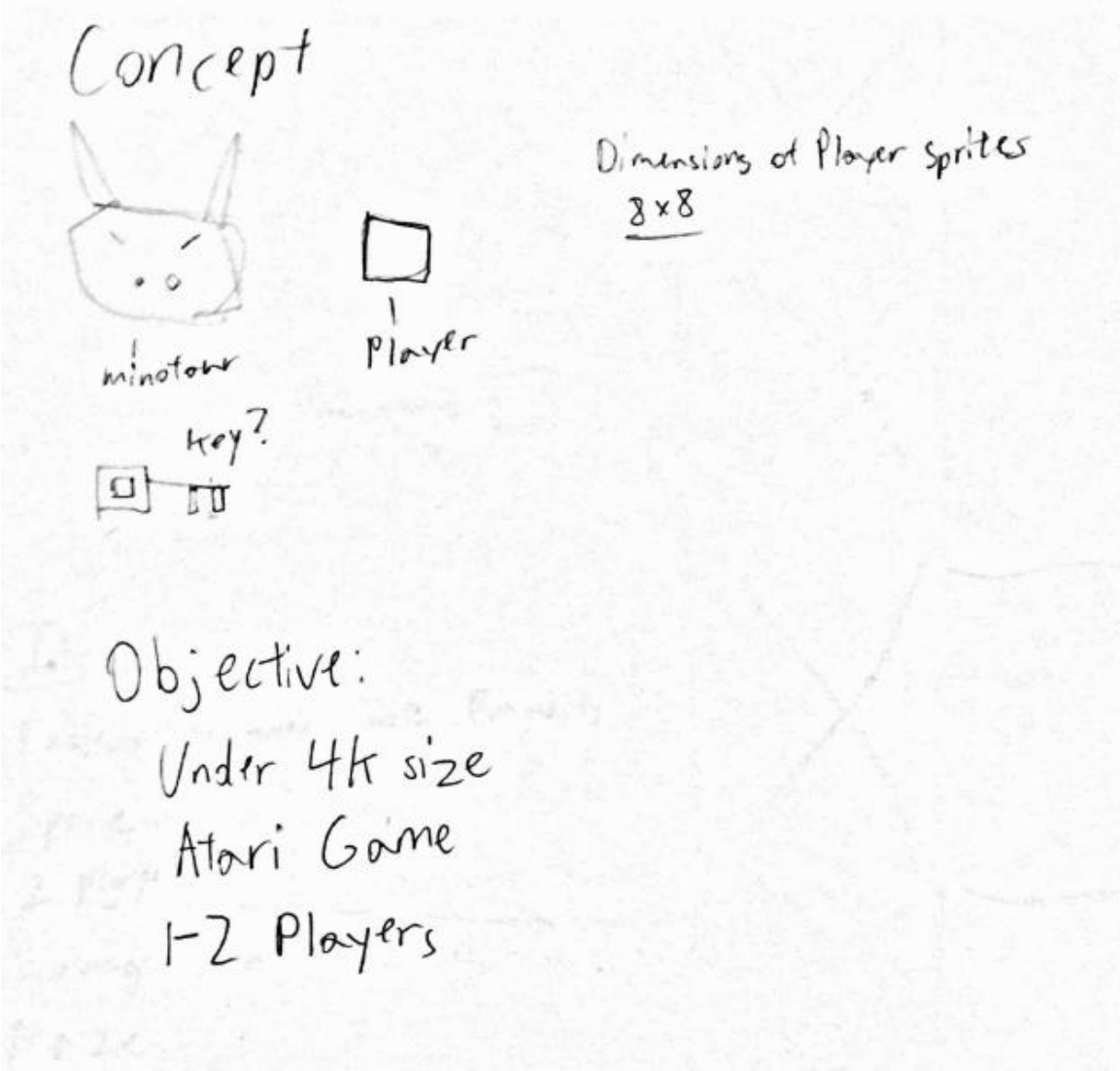
DESIGN DOCUMENT

Designer: Virginia Wu | Programmer: Adam Hayward | Producer: Katie Coveny

GitHub Link: https://github.com/dasEinhorn1/AtariLabyrinth

Overview

Labyrinth will be a single player game in which the goal is to escape the labyrinth. The player will take on the role of a human that is being chased by the minotaur.



- Revision Nov 30, 2017 Part I:
    - Considered to tinker with the two-player experience due to AI issues, but continued with a single player-experience.
- Revision Dec 5, 2017
    - Labyrinth is a single player adventure game set in the ruins of fallen kingdom. The player is tasked with collecting gems and placing them on a pedestal one at a time whilst avoiding the minotaur.

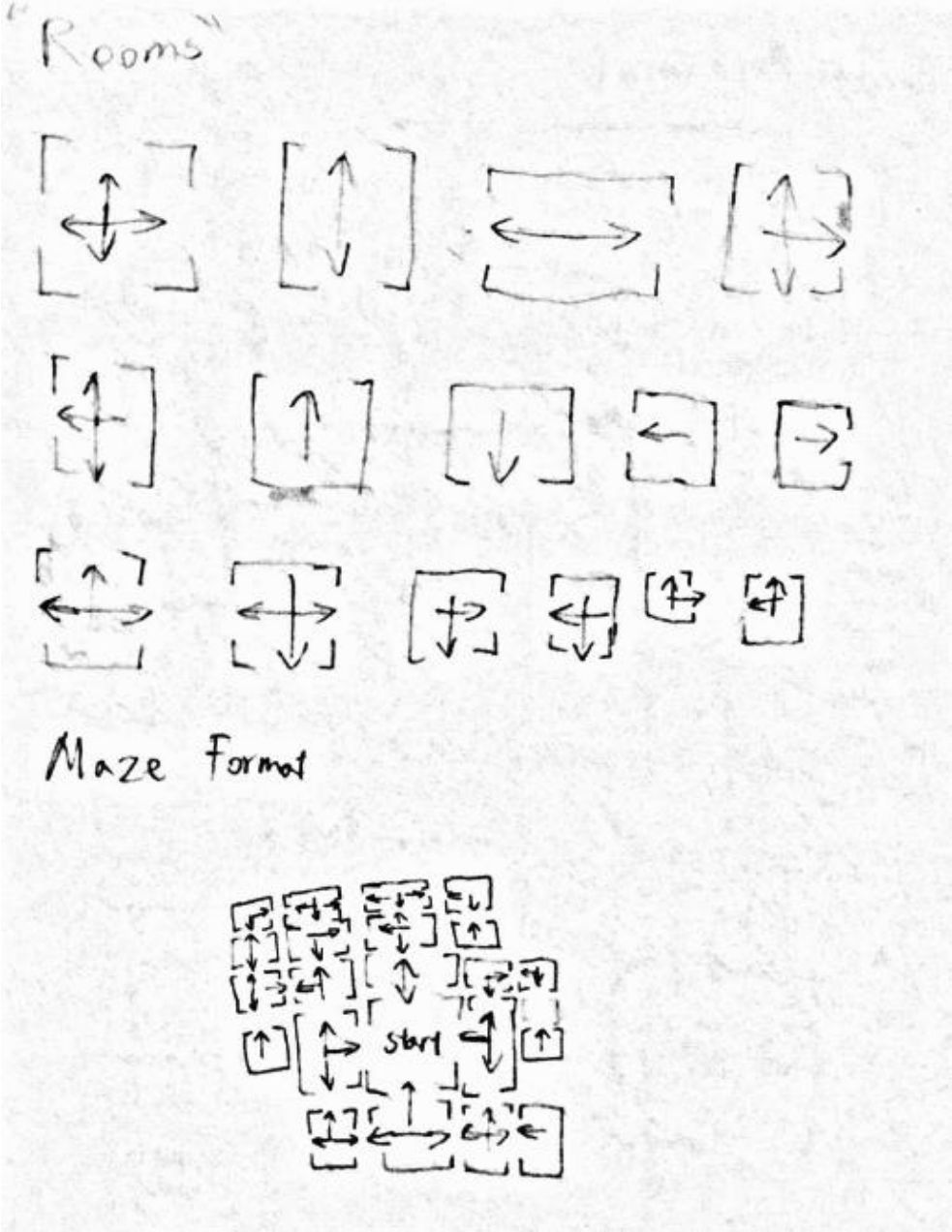
They are expected to use the environment and the minotaur's AI against the monster. The goal of the game is to collect enough gems to finally banish the minotaur for good at the third level.

REASONING

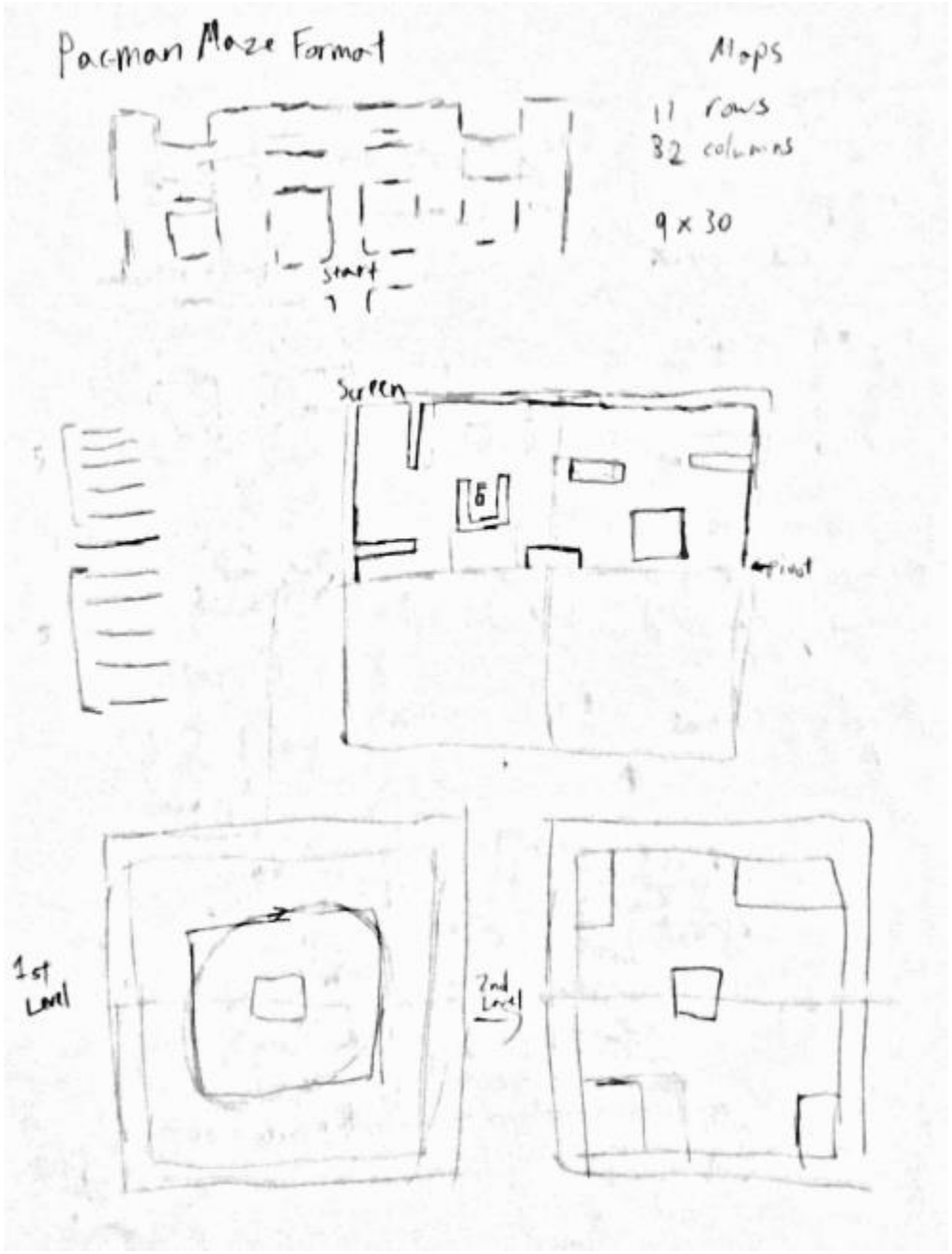
Instead of a two-player game, we wanted to explore a single player experience with an AI opponent. We know that space is limited, but we wanted to challenge and see the extent of the AI that is capable.

Gameplay

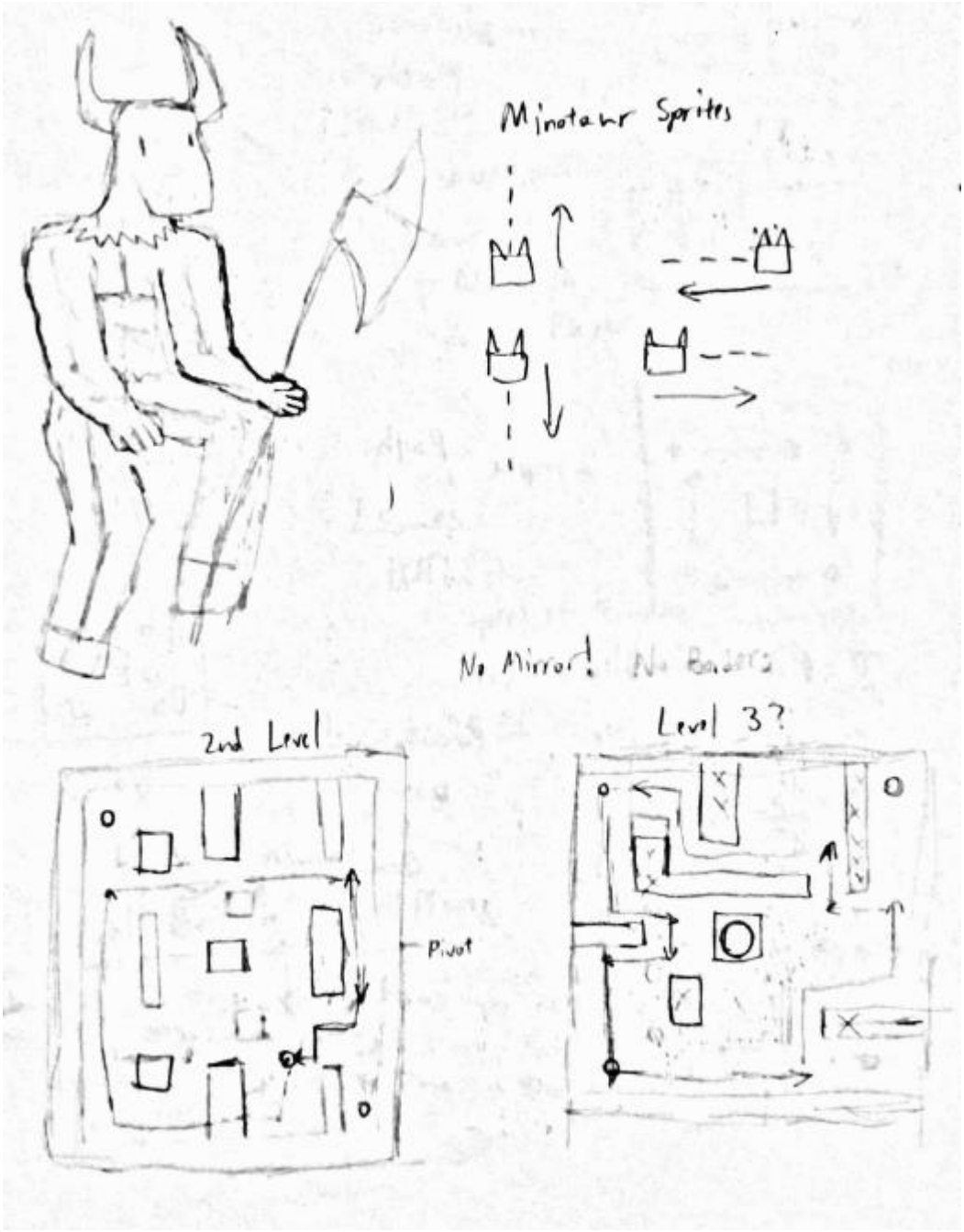
The gameplay will center around collecting a key that will open the next level or complete the game depending on the size of the level. The Minotaur AI will follow a path and if the minotaur sees the player within the path they will chase the player. The player must avoid the minotaur as on contact it will cause a game over. The player will use the arrow keys to move around.

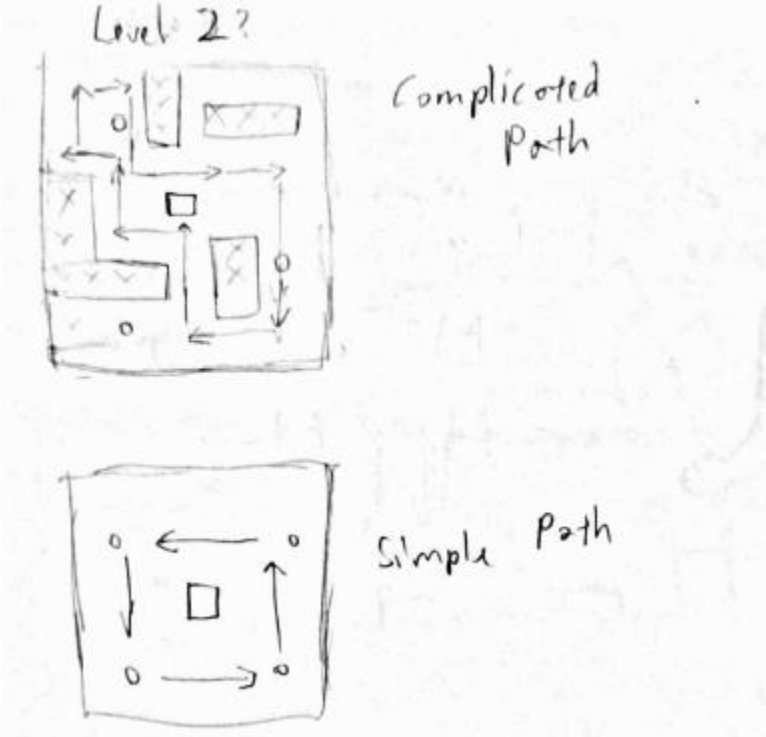


The first idea was to use Rooms where each room would take up a full screen, but that was quickly dismissed due to the size.



The second idea was to contain the whole maze on one screen. We explored the idea of quadrant design and flipping the map here. This was also where the idea of the pedestal appeared. To make the gameplay more engaging, the player must take the key to the pedestal and that will open the way to the next level.

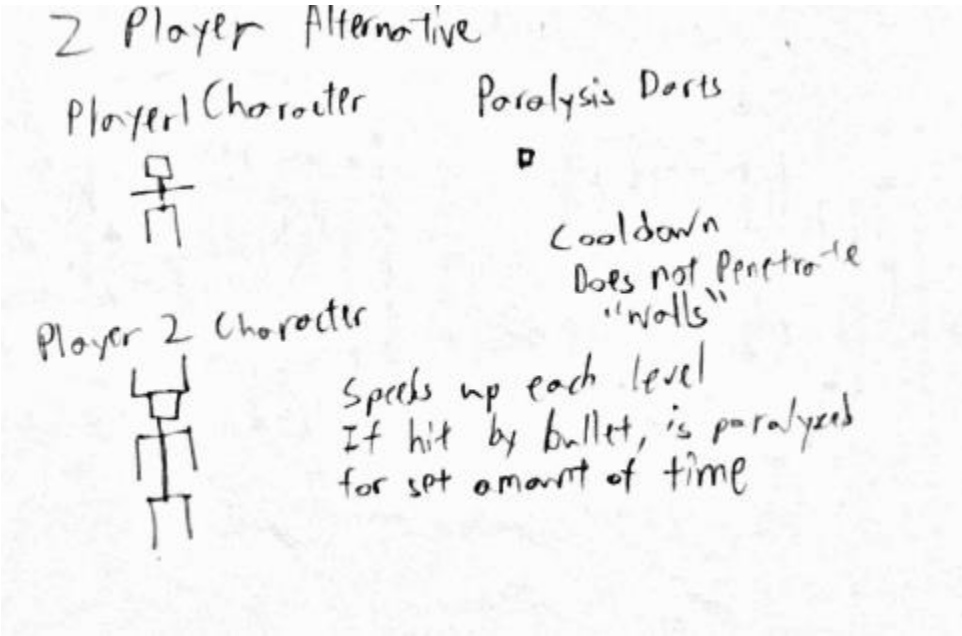

Minotaur Sprites
No Mirror!
2nd Level
Pivot
Level 3?



REVISION NOV 26, 2017

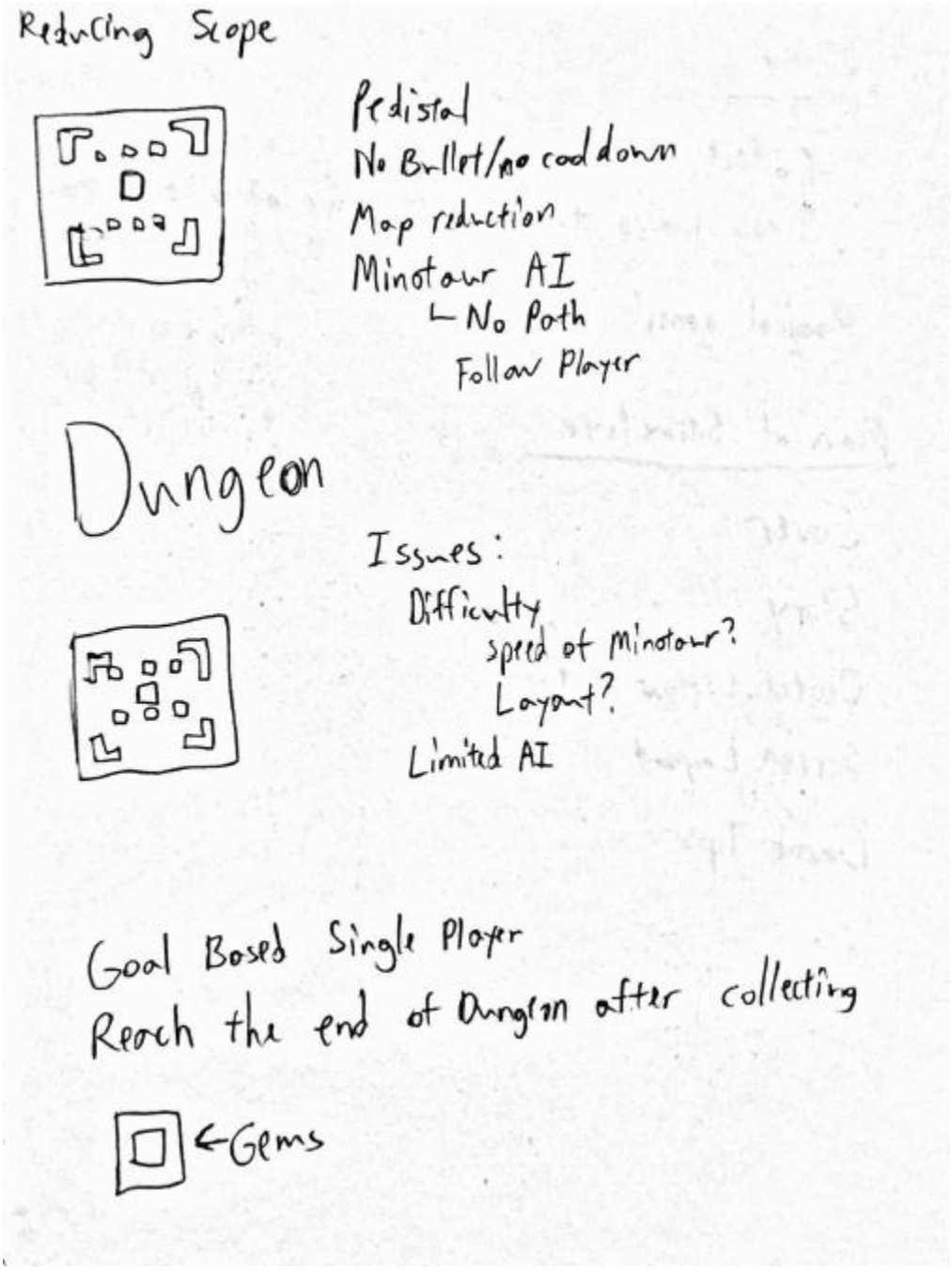
The path concept is continually explored, though the path must be continually simplified due to the nature of the complexity. Due to the limitations, instead of a key icon, we decided to use a square and call it the gem. It still serves the same purpose of the key.

REVISION NOV 30,2017 PART I



A two-player alternative idea was brought up. At this point the path based minotaur AI was not working out for the group. So, we tinkered with the idea of just creating a two-player based game. It will involve one player being the minotaur and chasing the other player. The goal is still to exit by finding the gem to place on the pedestal and exit the level. To add some form of balance we thought that the player can have a weapon that freezes the minotaur for a set amount of time. This weapon will have a cooldown. Of course, the weapon controls will utilize the red button/space bar.

REVISION NOV 30, 2017 PART II



We decided to continue with a single player experience, but instead of a minotaur on a path, the minotaur will just be trying to approach the player from the beginning. The AI will attempt to find the quickest path to the player. It is imperfect as it will get stuck at certain corners or gaps, but that was put in as an advantage and feature. We can design levels around this concept.

REVISION DEC 5, 2017

There will now be 3 levels. Each one with increasingly less corners that the minotaur's AI can be 'tricked'. As the player collects more and more gems for the level, the minotaur will increase in speed. It will require the player to collect 21 gems per level to advance.

Final Product

The final version of the game is a single player experience. The main controls will be the arrow keys to guide the player sprite. The red button/space bar of the controller will only be used to move past the start screen and reset on a game over. The minotaur AI will chase the player through 3 levels of mazes that take up one screen. Each screen will have increasingly smaller chance to "trick" the minotaur due to the structure of the screen. The goal is collect gems and place them on the pedestal. It will take 21 gems per level to complete that level. If the player manages to complete the third level they win! After collecting 10 gems, the minotaur will speed up. An audio cue is provided for each gem collect. The Minotaur will also speed per 10 gems collected and a visual cue of a darker minotaur will signify the speedup.

A manual will be provided alongside the game, detailing the storyline and basic gameplay for the player.