Quarter 1 Prism

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# Summary

Throughout the quarter, I personally contributed to the game’s development by implementing Algorithms to create dungeons for the game procedurally. 2 algorithms were implemented to create dungeon rooms, corridors and one to connect both, Random Walk and Binary Space partitioning.

# Algorithms

## **Corridor first Method**

Our team together with our mentor engaged in a method of approach in which we should start the dungeon. It was suggested to do a room first approach where we work on designing the room first make the room playable and then connect the corridors with the rest of the dungeon. This can be an issue later as connecting the corridors to the dungeon might be a problem code wise. We decided to do a mix of both room and corridor first methods to ensure that all the corridors were connected to the room first and working together in the design of the room.

### *Descriptions*

Our team engaged in extensive discussions regarding how we wanted the game to shape up regarding its map and area. We wanted to make sure that the dungeon was as organic and natural looking as possible. We decided on this approach as it was the one with what we had in mind. I personally contributed to the implementation of the dungeon creation generator algorithms. Random Walks generator algorithms were used to create a random generator that would traverse, creating a dungeon as it paces using a floor tile map. We can control the size and iterations of the random walk once it has been chosen.

### *Scenarios*

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The first-Generation dungeon created out of a random walk.

Chart

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First Random corridor without a connected dungeon.

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Corridors Connected to dungeons.

Corridors with dungeons with random walk algorithm

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# Task

Jira was utilized by the team to create tasks and sprints for scenarios, enabling us to complete the foundational elements of the game in a week. This strategic approach was designed to avoid any potential delays in future tasks that may rely on preceding ones.

I worked with my teammates to create a sprint in Jira, and helped decide who would do each task. I focused on the environment of the game which contains the map, walls, floors, as well as other things which we will add in future commits.

# Code

I followed a character tutorial on YouTube on how to implement each algorithm to our game. The tutorial exampled the way to ensure that the corridors and dungeons were going to be connected by the end of the tutorial.

The following tutorial(s) were used:

Dungeon creation:

<https://youtu.be/-QOCX6SVFsk>

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simple walk generator for dungeons.

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being created at random.