Project Plan

Project 1 Phase 3

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**Introduction:**

This is our project plan. Should new elements come into play that we have either forgot at this time or came up with at a later date, some of these dates may be altered. A majority of the artistic tasks such as music and sprites will be done by Corbin. A majority of design and AI tasks will be done by Liam Clift. Many of the time estimates are just that. Some tasks may take much longer or much less time than planned. The name stated with the time is the person who will work the most on that task, but both people will work on tasks together if needed.

**Tasks (with resources):**

1. Create music for levels with Audacity and royalty-free resources. 5 hours of Corbin’s time.
2. Create sprites for jungle level using in-engine sprite creation and GIMP. 10 hours of Corbin’s time.
3. Create sprites for crystal level. 10 hours of Corbin’s time.
4. Create sprites for the ship level. 10 hours of Corbin’s time.
5. Create scripts for player movement and tile interaction with GML. 2 hours of Liam’s time.
6. Attach those scripts to objects corresponding to the Player and tiles to test. 1 hour of Liam’s time.
7. Create the first enemy (bug) script, attach it to an object, and test the interactions. 2 hours of Liam’s time.
8. Create the first gun script, attach it to the Player, and test the interactions. 2 hours of Liam’s time.
9. Create the script for the first pick up object (health pack), attach it to an object, and test. 2 hours of Liam’s time.
10. Create all jungle level objects. 4-5 hours of Liam’s time.
11. Create all jungle level enemies. 1 hour of Liam’s time.
12. Create all gun scripts for the whole game. 3 hours of Liam’s time.
13. Jungle boss script, attach to an object, and test. 3 hours of Liam’s time.
14. Place all tiles, objects, and enemies including boss in the jungle level. Place the player in as well. Test the level. 4 hours of both’s time.
15. Make level transitions. 1 hours of Liam’s time.
16. Create all elements for crystal level in the same format as the jungle level.
17. Create all elements for the ship level in the same format as the jungle level.
18. Test entirety of game multiple times and tweak where necessary.

**Deliverables:**

Player is able to move as the flow diagram suggests (2/7/18)

The bug object has all AI elements it needs implemented (2/10/18)

The pistol weapon creates and shoots a projectile entity that does damage on impact with enemies (2/14/18)

The health pack object heals the player (2/16/18)

All objects to be used in the jungle level are created (2/23/18)

All enemies to be used in the jungle level are created (2/26/18)

All guns for the whole game created (3/2/18)

Jungle boss fully created (3/7/18)

Jungle level fully created (3/9/18)

Crystal level fully created (3/23/18)

Ship level fully created (4/6/18)

**Dependencies:**

Music can be added at any time with no dependency. Art can be added either before or after the object is fully implemented using a placeholder. Sound effects can be completed before object implementation, but should be done after art so animations can be synced.

Task 5 should be done first, so that player interaction can be tested with all future features. Task 6 requires task 5. Task 7-13 can be done without most of the other tasks, but can be tested better with task 5 and 6 completed.

**Risks:**

The major risk is the feel of boss fights. We want the boss fights to require skill without being unfair, but we also want the art, music, and sound effects to be perfect. The AI for the basic enemies should be simple enough because team members have done very similar scripts before. The AI for the boss will be more complex because we want the boss to have patterns so the game feels more rewarding for people who can manipulate these patterns well.

Another risk is the overall look. Neither of us are professional artists, but so far the artistic elements are coming along very well. Both of us share a clear view of the game and how it should look and feel, so should one of us not know what to do the other may be able to step in.

One risk is the size of the game. We want rather large levels with many enemies and objects. The way we have seen to best mitigate this risk is to make the game somewhat modular with tiles that can be placed rather than specific objects for every point in the level. We will also use tactics, such as prioritizing elements in and close to the screen above elements far away.

**Tests:**

During creation of script tests will be rudimentary. The creator of the script will play the game to test the script in general; for instance, the movement and tile scripts will be created, then the creator will play with the controls in runtime to make sure they work as desired. After the script is working as the creator intended, more specific tests will be run, such as if the player is going at the corner of a passable tile at just the right angle.

For major elements and at milestones, both creators and maybe a few outside sources, such as friends, can test the elements to make sure the desired feeling gets across.

**Configuration Management:**

Gameplay elements will be configured to achieve the most flexibility in design, while maintaining the feel and flow of the game that we want to have. The game should feel natural to play while still retaining a sense of challenge in order to keep the player excited.

**Design Requirements:**

The game is designed to feel like a classic 2D side-scroller with metroid-vania elements. For those familiar with video games, it should be a very natural transition. However, we would like to incorporate some modern ideas as well, such as dodge-rolling and diving mid-jump. The aesthetic of the game should be gritty, but vibrant and unique. In order to fulfill these requirements, a large amount of time will be set aside for testing and configuring the game. As for the artistic portion, we will be recycling artistic portions of the game in order to cut down on time, allowing for more elements and review of these parts. Recycling isn’t necessarily copying and pasting. More so, it would be taking a similar element and tweaking it in order to generate that new object, instead of creating each new element from the ground up. This will also keep our artistic designs consistent with one another.