Progress Report

- Increment 1 -

Group #12

Please use this template to describe your progress on the group project in the latest increment. Please do not change the font, font size, margins or line spacing. All the text in italic should be removed from your final submission.

1) Team Members

- Nathan Ostrander (nro23a) Proxy711
- Bria Weisblat (bhw21) briaHailey
- Matthew Gonzales (mrg23a) Monkey-Matthew
- Amisaday Santiago (as21bj) Amo39
- Isabela Terra (irt21) belaterraa

2) Project Title and Description

We are developing a top-down adventure game where the player controls Luna, a character trapped in a mysterious labyrinth. To escape, she must navigate through the darkness, avoid traps, and use weapons to battle various enemies. With the guidance of her celestial companion, a glowing star, Luna can illuminate her path and uncover the secrets hidden within the maze.

3) Accomplishments and overall project status during this increment

This increment served as our foundation. We established a light system, defined movement mechanics, introduced enemies, created a basic pause menu, and began developing a coin system. We also implemented a health system where enemies and traps decrease Luna's health bar. We also collaborated with an artist to create custom sprites for Luna. To enhance the ambiance, we added fireflies that bring the environment to life.

4) Challenges, changes in the plan and scope of the project and things that went wrong during this increment

Please describe here in detail:

- anything that was challenging during this increment and how you dealt with the challenges

- any changes that occurred in the initial plan you had for the project or its scope. Describe the reasons for the changes.

- anything that went wrong during this increment

- One challenge we faced was learning how to manipulate sprite sheets, as GoDot has a pretty harsh system for cutting up sheets to make frames.

-A second challenge was working on a large project in GitHub with multiple creators. There was a lot of communication necessary to assure smooth merges. By using a Discord with several channels we were able to streamline and organize the development process.

-We faced another challenge when the main branch of our Github became corrupted. To solve this we had to restore to a functioning backup branch.

-Throughout the development of increment one our scope expanded. Whilst creating this game we had many new ideas that we wanted to incorporate into the final version which increased the complexity and depth. From weapons, to health bars, to coin systems, our game has evolved for the better from our original vision.

- With five collaborators, all with varied and tight schedules, finding a day to actually meet up and converse about the project was a bit laborious. Ultimately, we settled for every Sunday at 12:00PM-1:00PM.

- Another challenge that we faced was conflicting coding changes, where two people would work on the same part of the project and it would cause conflicts in merging branches.

-Another challenge was creating the hitbox for the enemy. This was challenging as we needed to create a collision box for the enemy so that the player is unable to pass them. However, when using the collision box to count it as a hitbox it only works on certain sides. So we needed to create another collision box this time only for the hitbox.

5) Team Member Contribution for this increment

*Please list each individual member and their contributions to **each of the deliverables in this increment** (be as detailed as possible). In other words, describe the contribution of each team member to:*

---

a) *the **progress report**, including the sections they wrote or contributed to*

- **Nathan Ostrander**: this section and the above, challenges faced.
- **Bria Weisblat**: Cleaned up the document, added some changes in section four, listed my contributions in section five, added our plans for the next increment in section six, wrote the stakeholder email in section seven, and created the presentation video in section 8.
- **Matthew Gonzales**: Added challenge in the challenges section, contributed to plans for next increment, and section five (Team member contribution),
- **Amisaday Santiago**: Added challenge in the challenges section, wrote the IT document, and added more plans for the next increment.

- **Isabela Terra**: Did the project title and description, the accomplishments, and did the first couple of the challenges bullet points.

b) *the **requirements and design document**, including the sections they wrote or contributed*

- **Nathan Ostrander**: Majority of the requirements and design was written by myself.

c) *the **implementation and testing document**, including the sections they wrote or contributed to*

- **Amisaday Santiago:** Majority of the document was written by me.

*d) the **source code** (be detailed about which parts of the system each team member contributed to and how)*

- **Nathan Ostrander:** I oversaw the initial movement system and made minor modifications to it, I made the jump mechanic, and modified the spike trap collision script to appropriately react to the player jumping. When overseeing the player_movement script I noticed that very little of it needed to be changed. Having made a few lua games before, I was looking for a very common bug where moving diagonally will cause the player to move faster: the script accounted for that, which was a pleasant surprise. The jump mechanic was made to provide invulnerability to traps of the floor bound variety and will continue to do so. I suspect the spike trap object will later be repurposed by myself, used for lava or maybe thorny vines in the future, and should operate mostly the same.
- **Bria Weisblat**: I designed and created the pause menu. Users can either use their mouse or their keyboard to interact with the menu. The escape key opens the menu. The user can click exit to close the menu. While the pause menu is open, the user cannot move Luna.
- **Matthew Gonzales**: I implemented basic movement, added the lighting that follows the player. I also added fireflies to make the scene feel more alive. Fixed the scaling of the project. Added an environmental hazard. I also worked with Ami to create a health system. I also helped him a little with the enemy movement. Fixed a couple bugs that were found.
- **Amisaday Santiago**: I created the sprite for the enemy character and did the script for the enemy. Creating the movement for the enemy to move in a square that can start at any point of the square at the start of the game. I also along with Matthew created the health system and the restart of the game if the main character died. Lastly, added the limitation on the jump so that the player is unable to spam the jump button to be invulnerable.
- **Isabela Terra**: I set up the coin system with animated sprites. The coins will disappear when the user touches them and my next step will be to set up a tally for the amount of coins the user touches so they can use the coins later. I also set up the discord and set up the “when to meet” to ensure that our team stayed in communication. I also recruited and started working with an artist to create custom sprites for our game, presenting our vision to her and working with her, being her first time drawing pixel art, to ensure that we had all of the sprite images needed for a smooth looking game and to ensure that our vision

would be displayed correctly. I then implemented the sprites into the game for all of Lunas movements.

*e) the **video or presentation***

- **Bria Weisblat**: I created the 5 minute video presentation.

6) Plans for the next increment

If this report if for the first or second increment, describe what are you planning to achieve in the next increment.

During the first increment we focused on laying the foundation of the game. In increment two we plan on adding depth and additional functionality. We are going to finish developing the health system, create a basic world boundary, improve environmental hazards, add enemy movement, enhance player movement, and work on the coin system. We are also going to focus on adding more depth to the enemies in general by having them emit light of their own or even pretend to be a door for an added challenge. We will also try to make the enemies chase the main character if they are seen in their POV. During increment two we also plan on adding the key to the door for the current level and altering the door so it emits light. We also hope to decide how weapons will be implemented and used. Another thing I think we might look to add in increment 2 is a background/environment to our game since it looks bland at the moment.

7) Stakeholder Communication

Draft an email communication to the stakeholders of the project succinctly communicating progress and current project status. The email should be intended for a non-technical audience that is expertly aware of the domain your application is designed for. You may not "break the fourth wall" or otherwise refer to the course in the email, instead, you should think about how setbacks or issues you encounter may reflect setbacks that happen in the larger context of production software development and explain them as such. The email should not exceed 500 words.

Dear Stakeholder,

We would like to update you on our progress developing the maze adventure game. Although we don't have a final title, we have made significant progress in developing the story behind the game as well as the foundational mechanics. In this immersive top-down game, players control the main character Luna as they try to help her escape the maze. Luna's design has been custom made by an artist we collaborated with who tailored her aesthetic to match that of the game.

We plan to have between 20-25 levels but at this point have focused exclusively on one level to properly implement the basics. In each level there will be a key hidden in the maze that unlocks a door leading to the next level. During this development phase we established player movement, a

pause menu, a light system, environmental hazards, and enemy interactions. We have begun designing health systems and coin systems but they are not yet functional.

As this project has many moving parts and different implementation details, we encountered a few challenges along the way. One notable obstacle was refining sprite sheet manipulation, requiring us to adjust our approach for efficiency. We also faced technical difficulties when the main branch in the project became corrupted, forcing us to roll back to a functioning backup version. Fortunately, our team's structured workflow and communication through dedicated channels allowed us to navigate these setbacks effectively.

Looking ahead, our next focus will be to deepen gameplay by enhancing enemy movement, refining environmental hazards, and introducing more interactive elements like functioning keys and weapons. We appreciate your support and look forward to sharing further updates.

Sincerely,

The Maze Adventure Development Team

8) Link to video

https://www.youtube.com/watch?v=FLTvFn_w6QI