

Progress Report

- Increment 2 -

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 the main character Luna, who is trapped in a mysterious labyrinth. To escape, players must navigate Luna through the darkness to find a key that will unlock a door to the next stage. Along the way Luna must avoid traps, collect coins, and use weapons to fight off enemy attacks. 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

During increment #2 we made several developments to our designs, enemies, and overall functionality. We added new environmental sprites, coin crate sprites, coin key sprites, and enemy sprites. We also made some adjustments to the character and environmental scaling and added music to improve the ambience and overall aesthetic. We improved enemy movement so that enemies are now able to chase Luna as she moves throughout the maze. Rather than simply running into Luna to cause damage, the enemies can now fire their own weapons. We also constructed a weapon that Luna can fire at the enemies. We added enemy health bars so that when Luna lands an attack, enemies take damage and disappear when their health bar is empty. We also added a feature that shakes the screen when an enemy lands a hit on Luna. This feature can be toggled on and off from the pause menu. As far as additional functionality, we also improved the coin system and added a display that shows the character how many coins they have collected. We added additional ways for characters to collect coins as well.

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.

- Another challenge we faced was handling Godot references. With a large game that consists of many functions and moving parts that everyone works on together, it can become difficult to track reference variables. We did our best to ensure that we were modifying the correct parts of the code but had to be especially careful when adding to code that we did not write. We handled this through proper documentation and team communication.

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, worked on section three, added some changes to section four, listed my contributions on section five, added our plans for the next increment on section six, wrote the stakeholder email on 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) implementation and testing document, including sections they wrote or contributed to

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

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

- **Nathan Ostrander:** This time around I made a destructible crate, as well as a destructible group. Crates can be broken for extra coins, when broken they'll spawn one to three, around the area it was destroyed.
- **Bria Weisblat:** I created and developed the shake feature. When an enemy lands a hit on Luna the screen shakes to indicate the hit. This is a feature that can be toggled on or off. I designed and added features to the pause menu so that when users pause the game they can turn the shake feature on or off.
- **Matthew Gonzales:** I started by fixing the main character size. Add a better looking forest environment. Added a boundary around the scene so the player couldn't leave the area. Added a thorn environmental trap. I added enemy projectiles and the enemy dying. I added the main character shooting. I also added light to the main character and enemy projectiles. I changed the environmental trap to take constant damage. I made it so there is damage delay for the main character. Cleaned up code and folders. Added a key to the game. Added a gate that leads to the next level/stage. Add the actual progression to the next scene.
- **Amisaday Santiago:** Added the bat character with the feature to shoot. Added a follow system for the enemies where Luna went inside of the POV. The enemies would follow Luna until they are killed. Fixed some issues when it came to going to the gate making the game crash and making sure that when Luna dies, there is nothing that she would have from before. Lastly helped correct a bug in the crates so that when broken would spawn 0-4 coins.

- **Isabela Terra:** I added music to the game and some sound effects. Our first level now has a unique custom theme song. There are sound effects for Luna now including a shooting sound, hurt sound, pick up key sound, and coin sound. I also helped design detailed sprites to help give our game a unique feel, and worked with the artist to ensure our vision was kept true.

e) *the video or presentation*

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

6) Plans for the next increment

During the first increment we focused on laying the foundation of the game. During the second increment we made some major improvements to the enemies, adjusted the scaling and environmental sprites, added functional firing weapons for Luna and the enemies, improved the coin system, added a screen shake effect, worked on the main menu, and added music. During the third increment we are hoping to continue developing the backstory and potentially add elements of the story to the game. We are also looking to add a shop where users can purchase items with the coins they collect. During increment three we are also going to decide how many levels the final version of the game will have and work to implement them. For ease of development we temporarily disabled the darkness feature but will add this back towards the end of increment three for the final product. During increment three we will also finish implementing the main menu and complete all features associated with it. With the development of the enemies during increment two we encountered a few bugs that we will fix during increment three. Likewise for increment three one important feature we want to implement is the randomness element to the amount of enemies, enemy spawn points, key, creates, and the gate. Where each level will feel different from the last. Also plan to add 3-6 more enemies with different attack patterns so that each level there would not be the same enemies.

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're excited to share the progress we've made in the second development increment of our maze adventure game. Although we still don't have a final title, we have made significant progress improving our designs, developing more advanced enemies, and increasing overall functionality.

To recap, in this immersive top-down game, players control the main character Luna as they try to help her escape a large labyrinth. As Luna navigates through the labyrinth, she must avoid hazards, collect coins, and fight off enemies. We plan to have several levels for this game but have mainly focused on one testing 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.

Building upon our initial foundation, we've introduced new features that enhance both gameplay and overall player experience. One of our major focuses during this increment was improving the visual and auditory experience. We introduced new environmental sprites, coin crate sprites, key sprites, enemy sprites, and music to further develop the mysterious yet cohesive aesthetic of the game. We also adjusted the scaling of the character and environmental sprites for improved immersion.

Regarding gameplay improvements and complexity, we made significant advancements in enemy behavior. Enemies are now more dynamic, and can more actively chase Luna throughout the maze. Enemies can also now fire weapons rather than being limited to contact damage. To balance out this feature, we also improved Luna's weapon so that she can fire back at the enemies. Enemies also now have functional health bars and disappear from the game when their health reaches zero. To add more ambiance and pressure to combat, we also added a feature that shakes the screen when Luna takes damage. Users can toggle this feature on and off from the pause menu.

Beyond combat improvements, we also enhanced the coin system. Players now have multiple ways to collect coins, and we introduced a display to track the number of coins Luna has gathered.

As this project has many moving parts and different implementation details, we encountered a few challenges along the way. One notable obstacle was keeping track of references in our code. With a large game that consists of many functions, we occasionally struggled with finding the correct code segments to modify. However, we were able to avoid major issues by using proper documentation and by communicating regularly.

While these updates have brought us closer to our vision, we will continue to refine what we have and make more progress in the next iteration. Our next steps will focus on sorting out the different levels, adding a shop where players can spend coins, and fixing some small bugs. 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=I-o7hqELhpg>