

Prototype Documentation

Team: Lunatic Kappa

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Implemented features

- Currently, our team has implemented the basic foundations for our player character's visuals, mechanics, and a small enemy type to interact with. The player's character can only walk and jump at this time, but we plan to elaborate more on the mechanics the player will interact with. The player's character walk, jump, and idle are also fully animated. Similarly, for the small enemy type, its walk cycle is also fully animated. The small enemy type also has been programmed to have ledge detection to prevent them from walking off platforms.
- White Boxes have been implemented for the first level to help lay the foundation before we continue to iterate and implement more features to flush out the overall levels.

Challenges

- Our main challenge currently is figuring out what exact assets are necessary for the starting level environment. Uncertainty in what we were all exactly visualizing and wanting it to be cohesive to the narrative made this slightly difficult.
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- We have experienced frequent changes in team members, which in turn have made it difficult to maintain continuity. It is also been hard to ensure that responsibilities and roles are clearly defined due to this.
- Additionally, one of the biggest challenges we've faces so far is not having a dedicated programmer for the project on our team. As a result, our work is being done on the unreal blueprinting system, but due to this the learning curve is hard, but will be worth it later on. We have made progress in these technical areas, but slower than we initially anticipated.

Solutions

- We were able to gain an idea on possible assets as we'd continue to isolate and iterate on possible ideas for the environment of the starting level. Once we gained a more focused idea for the environment we all contributed our ideas to our artist to help them create visuals guides, while also discussing with our programmer future mechanics so we can have a solid grasp on what assets will be needed.
- With our game idea, we persuaded a new class member to join our team, helping us hopefully with the programmer issue by contributing a bit to that role as well as finalizing our team roster for the semester, allowing for us to have more solidified roles to make our project working more efficient.
- Additionally, we have been working on researching unreal documentation that has to do with the Paper2D stuff, Character Controller, Enemy AI, Behavior Trees, and so much more. As we get more experience, we will gain more forward momentum, allowing us to improve both team collaboration and technical proficiency.

Project Scope:

Features to include:

- Grappling-hook: Dual-use for traversal and combat.
- Hijacking Mechanic: Taking over enemy robots and gaining their move set.
- Wall-jumping and Mantling: Adds fluidity to platforming segments.
- Dynamic Combat: Players can switch strategies by hijacking enemies with varied abilities.
- Hazardous Environments: Platforming challenges increase in difficulty with environmental Hazards.
- Unlockable abilities: Potential for upgrading Machina's abilities, adding more combat or traversal options.
- Narrative decisions: Potential to make choices that influence the game's story or ending.

Future features:

- Modular Weapon System
- Multiple Playable Characters
- Enemy Evolution System
- Environmental Interaction
- Variety in Enemy types
- Level variety by introducing new factors and mechanics

Changes to scope: If your team has changed the project's scope from the original plan, explain why and how it has changed.

The team was initially very excited and wanted to plan for something like 5 levels. As we began to work, we saw how much time and dedication we needed. Based on our hectic schedules and some opinions, we have all agreed on just attempting to get one good level out, and if we have time after that, we could add something like a small boss or a lot of polish.

Deliverable:

Project Goal:

To design and develop one fully functional and polished demo level for a 2.5D platformer game by the end of the semester. The scope is entirely based around being able to complete this one single level, ensuring quality gameplay and visuals, and if time allows, adding a small boss fight or extra polish.

Core Features

1. Game Level

- a. A playable action-adventure level that includes basic enemies, environmental hazards, and platforming.
- b. Distinct beginning, middle, and end sections, provide a natural progression of difficulty and an increased sense of engagement as it plays on
- c. The visual theme will reflect our mood board of an abandoned overgrown train station in order to immerse you further into the world and story.

2. Character Design and Interaction

- a. Protagonist: design and animation of a player-controlled character with basic movement and the ability to steal mechanics from enemies (shooting, wall climbing, etc...)
- b. Enemies/Obstacles: At least 3 enemy types with simple AI and environmental challenges like holes in the ground and rubble in the way.
- c. Potential boss: if time allows, a simple end-level boss with a unique attack pattern and weaknesses.

3. Visual Assets:

- a. Concept Art: Early sketches and color palettes for the character and environment.
- b. 2D art: Finalized character and enemy background, UI elements (title screen, health bars), and level decorations.
- c. 3D Models: low-poly environment with interactive objects

4. Polish and Optional Features

- a. Additional visual polish (particle effects, better lighting)
- b. Focus on sound design for enhanced immersion
- c. Potential inclusion of a simple beginning cinematic or cutscene