Team Members:
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Slimy's Dungeon

The Concept

The core concept and what our game is really about is you play as a person made of slime, aptly named Slimy, who wakes up in a large labyrinthine-esque dungeon. The player will explore the dungeon as Slimy whilst discovering secrets, gaining new abilities, finding items, defeating enemies, and possibly even learning why he's in the dungeon in the first place. The genre of game we are aiming for is a 2D Metroidvania style platformer that takes a lot of inspiration from other renowned titles in the genre such as *Ori and the Blind Forest* and *Hollow Knight*. The target audience for this game would be individuals who enjoy the Metroidvania genre, as well as those who are fond of exploration and platforming mechanics, which are the focal points of this project.

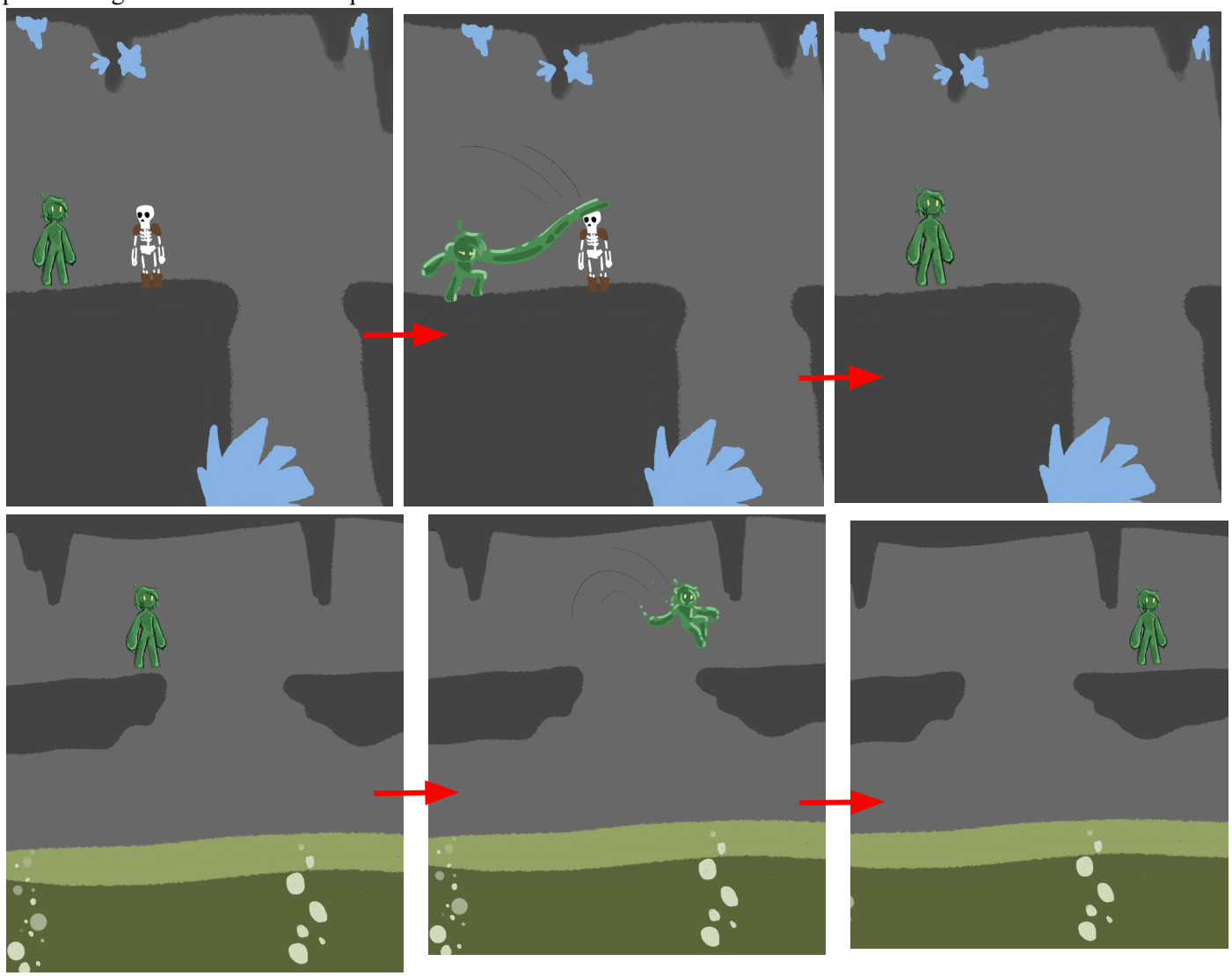
Inscribed Layer - Mechanics

Our proposed game will be a single player game where you play as the protagonist, a person made of slime named Slimy, as you explore a dungeon, find items/abilities, and defeat monsters. The only player relationship we plan on existing within our game is between the player and the protagonist. While not expected nor is it a goal there does exist the possibility of a player vs player relationship outside of the game in the form of speedrunning. Controls will be fairly simple with the player just using the arrow keys on a keyboard to navigate through the game space and having the PCs active abilities bound to specific keyboard keys. Our goal is to have all the menus be navigable through the arrow keys as well, but if the player prefers to use a mouse that would also be an option. While we don't plan on adding support for something like an xbox controller it should be entirely possible if we wished to do so in the future. Beyond the standard keyboard, monitor, and computer, no other equipment would be required to play our game and it would just run within the boundaries of its application.

The game is meant to be fairly simple, with simple rules, goals, and a simple gameplay loop. The game space is the entirety of the dungeon. The dungeon itself is composed of a series of interconnected rooms and paths that the player can freely traverse, assuming the path isn't blocked off due to lacking an ability or item. Nothing should stop the player from eventually returning to a room they were previously in. We plan on having the rooms also be reachable through various pathways to promote a more unique experience across playthroughs. The individual rooms will have enemies/obstacles that the player must overcome to proceed to the next room. One thing we plan to do is to have a map inside of our game menu to help the player navigate through the dungeon. The player starts the game with only simple abilities such as walking and jumping, but through exploring the dungeon the player will find items/abilities that will provide them with new options they can use to continue their quest. By increasing the number available actions a player can take we expect there to be some emergent strategies such as which abilities are best, optimal routes, and even mechanical techniques. If the player at any point encounters an obstacle they just can't overcome, then it is likely there is an item they are missing and they must backtrack to find it. Inversely, if they have said item they would be able to access areas that are more mechanically complex. For example, having the double jump ability would allow the player to access and traverse areas with more complex and harder platforming. Additionally, the player will have health points that they must manage. If their HP reaches zero, through taking damage from enemies or obstacles, then they will respawn at a checkpoint.

It is important for the player to manage their HP whilst traversing the dungeon lest they needlessly die and waste time. In the final prototype this isn't as big of a deal as dying just respawns the player at the beginning of the room they died in. Additional resources such as what items the player has found and what rooms the player has explored will be stored in static classes that are constantly loaded during gameplay. In the short-term the player should be focussing on surviving the room they are currently in and what they can do in said room to advance in the dungeon. The mid-term goals for the player should be to look for the ability upgrades that allow the PC to more efficiently navigate through the dungeon. The long-term goals for the player are to collect all the items and abilities and explore/reach the end of the dungeon.

Here we have some sequential concept drawings, made by China, to show some gameplay. The first concept drawing is showing Slimy attacking an enemy and the second drawing shows Slimy platforming over a toxic water trap.



Inscribed Layer - Aesthetics
The setting is going to be very cave-like, as the dungeon mimics an underground area. Level assets will be implemented using tilemaps that match a dark cave aesthetic. The player character and enemies will have brighter colors so they pop out against the background and are thus made visible. In addition, we will be choosing royalty-free music tracks and sound effects to properly convey the atmosphere of exploration and dungeon-crawling. The other senses are not accounted for. We have found some free visual assets ranging from level art, to enemies, and GUI elements that look promising and we plan to base a lot of the look off those assets.

Tentative list of assets:

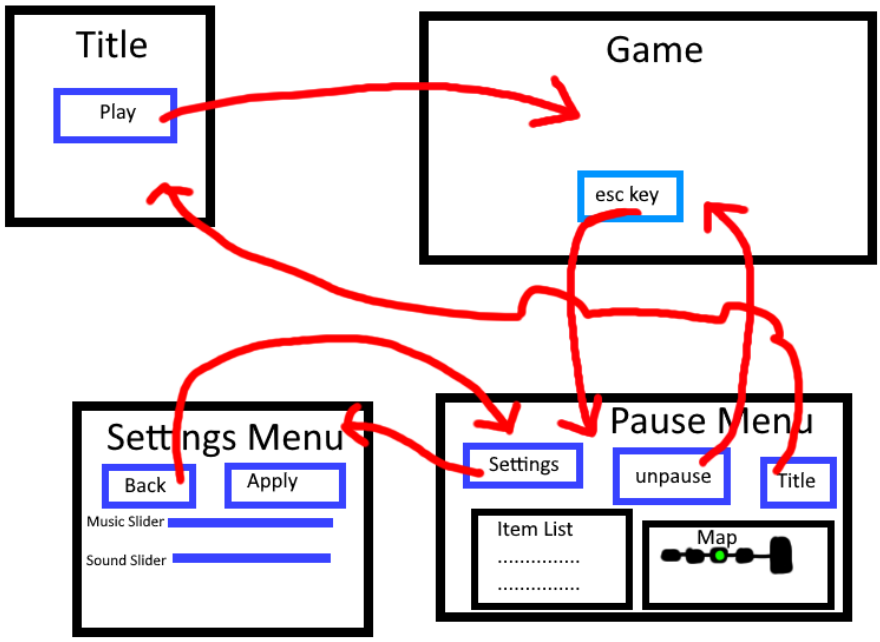
- https://jesse-m.itch.io/skeleton-pack
- https://luizmelo.itch.io/monsters-creatures-fantasy
- https://paperhatlizard.itch.io/cryos-mini-gui
- https://szadiart.itch.io/pixel-fantasy-caves
- https://assetstore.unity.com/packages/2d/environments/free-game-items-131764
- https://assetstore.unity.com/packages/2d/environments/platformer-fantasy-set1-159063
- https://assetstore.unity.com/packages/2d/environments/crystal-world-platformer-150016
- https://assetstore.unity.com/packages/tools/particles-effects/dark-singularity-156548
- https://gx310.itch.io/sign-posts
- https://mixkit.co/free-sound-effects/whoosh/ - dash sound effect
- https://leohpaz.itch.io/minifantasy-dungeon-sfx-pack - background music
- https://www.purple-planet.com/ - other sound effects

Beyond just using these free assets we will make some original assets to make our game feel/look more unique along with editing pre-existing assets to match our desired use case. The assets we decide to use will need to match our desired look for the PC, which is shown in concept art below by China, which isn't too menacing, kind of cartoonish, and likable looking.

Inscribed Layer - Narrative

The overall setting is just a mysterious labyrinthine-esque dungeon that the PC finds themselves in at the start of the game. Presented with the options of just staying where you awaken or venturing into the unknown, you choose to explore the dungeon and try to uncover its secrets. We don't plan on adding too much of traditional narrative to the game as our primary focus will be gameplay. We plan on having any potential story elements in our game to be subtle and vague to allow the player to form their own narrative, motivation, or justification. Due to that however our game will lack quite a bit of dramatic elements. The only real dramatic elements the player can experience would be the suspense, excitement, and sense of discovery that comes with exploring the dungeon and finding new things. As the player progresses through the game they will gain more abilities. These abilities allow for the game's difficulty and gameplay to become harder and more complex, which reinforces the mechanics and gives the player a sense of progress. Furthermore, since the player is able to backtrack through the dungeon earlier sections would become easier to traverse which further reinforces the sense of progression for the player.

Inscribed Layer - Screen Flow/Game Flow sketch



Technology

The game will run in a windowed application on Windows, Mac, or Linux. We will use the Unity to create our game, using C# for behavioral scripts. Desktop computers with sufficient GPU specifications will be needed to run the software during development. Game art will be developed in Procreate on the iPad, and it will be shared between devices via Google Drive. The project itself will make use of version control and be hosted on Github for easier file syncing and collaboration. We will also use Discord for communication.

Work Division

Anthony Wittenborn - Primary focus on C# scripting and game tone and aesthetic ideas.

G Piddington - Additional Scripting and gameplay pacing.
James Haywood - Additional Scripting and design.
China Gunter - Game art.
All - Level design, concept ideas, and Unity world building.
Milestones and Schedule

Roadmap:

Basic player movement -> player abilities coded -> Basic Structure of level design -> Enemies behavior code -> All dungeon rooms functional -> Completed prototype -> Tweaking -> Complete.

Timeline/Tentative schedule:

1. Basic player movement by (3/24)
2. Player abilities coded by (3/28)
3. Basic structure of level design by (3/30)
4. Enemies coded by (4/6)
5. All dungeon rooms functional by (4/9)
6. Completed prototype by (4/10)
7. Polish/Finish by (4/16)
8. Due by (4/19)

Playtest

Some things noticed from watching playtesters is that they didn't explore as much as we had hoped. Many of the testers chose similar routes when playing through the game. The dungeon itself was partially designed to kind of nudge players towards specific directions and power ups, so at least that intended game dynamic was successful, in part. It seems that the design nudged players a bit too much, however, and, as a result, hampered exploration a bit. This could also have been due to our low testing sample size.

Another thing we noticed was some boredom/frustration. It was reported that some of the levels felt empty with not much to do and certain jumps/obstacles feeling too difficult to overcome. In the future we would like to expand the rooms with more planned and varied obstacles. Currently, many of the rooms were slapped together without a huge amount of thought, so a lot of them feel fairly linear, which is something that playtesters complained about, and with more variety, the game might feel more dynamic and exciting.

Another common complaint was that the camera was too zoomed in, resulting in the player being unable to see where they actually landed upon making a jump. This caused many players to hesitate when making jumps they didn't know the outcome of. While testers experienced a small variety of bugs, the most common was area exits sending the player to the wrong location. Many of these small wrong warps were fixed in quick patches and the camera issue was partially resolved by adding a look up/down mechanic and zooming the camera out a little.

Not all bugs found were bad, though. One playtester found a bug where, if you dash against a slope in a certain way, you could perform what was basically a super jump, gaining a lot of vertical velocity. This could have been fixed by capping the players vertical velocity, but we felt it was a cool unintentional addition.

Discussion.

There were a couple of features that we wanted to include in the game but decided not too and just couldn't due to time constraints. For example one of the earliest concepts we had was giving the player a sort of grappling hook. This would have allowed the player to latch onto walls/ceilings and swing around. You can actually see it in some of the concept art in the Inscribed Aesthetics section. Another possibility that we wanted, and the grappling hook could have fulfilled, was a ranged weapon which would give combat a bit more variance.

Besides those, there were also a host of other features that could have been added given more time, such as puzzles, a wider variety of environmental obstacles, enemies that have more varied behavior, a final boss, and just more levels in general. In particular, the environmental obstacles (such as the acid water, as shown in the concept art) and better enemies would have made the game more interesting and engaging.

If we were to make a sequel to the game we would definitely try and have the game feature more unique mechanics, taking advantage of the player being made of slime. We might also implement more polished and unique artistic assets and also add a story to further motivate the player and get them invested in the game.

Collaboration.

We definitely had trouble communicating with each other during this project. If we had discussed things more and divided up the work more evenly we probably could have added more content to the game. More frequent meetings or early effort in organization would have benefited, streamlined, and balanced the development process.

China created all the player character sprites/animations along with playtesting the game. James did all the code and level creation. G primarily playtested the game and found some bugs that needed to be fixed. Anthony proposed the original concept and checked level design and scripting implementations.