

Grimm Escape

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Overview:

Main objective:

The player will take the role of a ghost attempting to escape the clutches of a necromancer, who will have to fight their way through 'hordes' of necromantic constructs and solve puzzles to successfully escape.

Win/loss conditions (End states):

The game's win conditions are:

The game considers a level 'cleared' when all puzzles and combat encounters have been cleared, thus unlocking the elevator to advance to the next level.

The game itself is over when the player clears all puzzles and combat encounters contained within the tower.

The game's loss conditions are:

Should the player fall in combat, they will be sent to the last elevator they went through to restart the level.

Gameplay:

Main gameplay focus:

The primary gameplay loop will consist of the player switching between solving puzzles and slaying the necromantic servitors patrolling the evil wizard's tower.

How will gameplay be rewarding/interesting?

The variation of enemy attack patterns and the overall challenge of combat, alongside the complexity of the puzzles will provide a compelling

gameplay loop assuring players do not get bored of simply one ‘genre’ of gameplay. The overall tone of the game as well we think will carry it far, as the setting we are trying to cultivate is very compelling (to us, at least).

How will a player progress and how will progression be tracked?

Player progression will be tracked predominantly via stat upgrades, given between each level and chosen by the player. In each elevator between levels, the player will have the choice between an upgrade to their total health, or attack damage.

How will the level of difficulty increase as the game progresses?

Enemy AI will increase in complexity (as well as the typical stat scaling) as the player progresses, and the puzzles will grow more arduous in the same fashion. Combat will also become more difficult situationally, going from a single skeleton caught unaware, to several waves of skeletons, to a difficult necromancer boss fight.

UI:

Pause Screen:



Pause screen is accessed during gameplay by pressing esc. From there you have the option to resume play, exit the game, or access the info screen.

Start Screen:



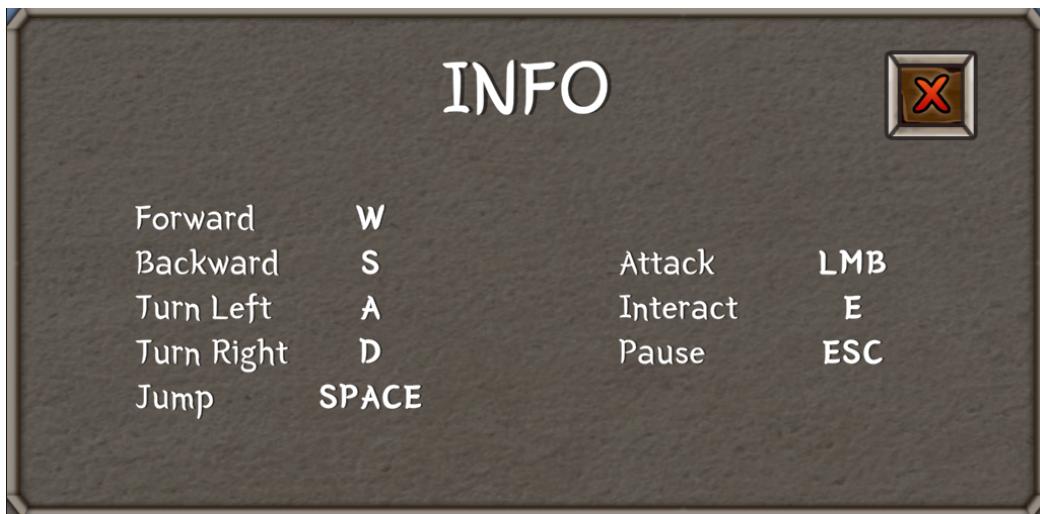
The start screen appears when you boot up the game. Clicking start brings you to the tutorial level. Clicking info shows the info screen.

HUD:



Health bar and inventory are located in the upper left corner of the screen. When the player picks up an item, an icon representing the item is added to the HUD.

Info:



Info screen has controls listed, the X button closes the screen and shows the previous menu

Stats:



Lists the player's upgradeable stats, updates as the player upgrades various stats.

Audio & Sound:

- Take damage (player) - oof sound made by ghost
- Take damage (skeleton) - “aaaa” sound
- Take damage (necromancer) - sound of weapon hitting a solid body, plus ‘ow’ noise
- Death (player) - sad ghost wail
- Death (skeleton) - bones being dropped on the floor
- Death (necromancer) - hissing(?) sound
- Swing weapon - object swishing through the air quickly
- Ranged attack (necromancer) - projectile noise
- Melee attack (necromancer) - whooshing sound
- Open/close wooden door/chest: sound of lock followed by squeak
- Attempt unlock without key: metal clink sound
- Put item in inventory - rustle sound like an item placed in a bag

Music:

- Eventide song loop - Piano music

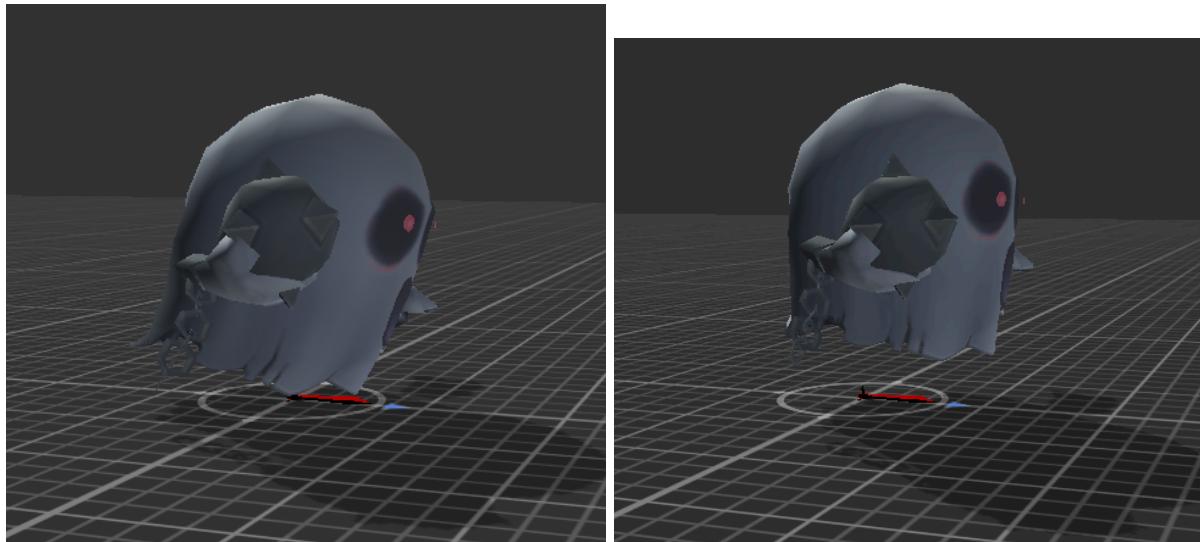
Main Character:

Screenshots:



Animations:

Forward (bobs slowly and moves forward)



Idle (bobs, sways back and forth)



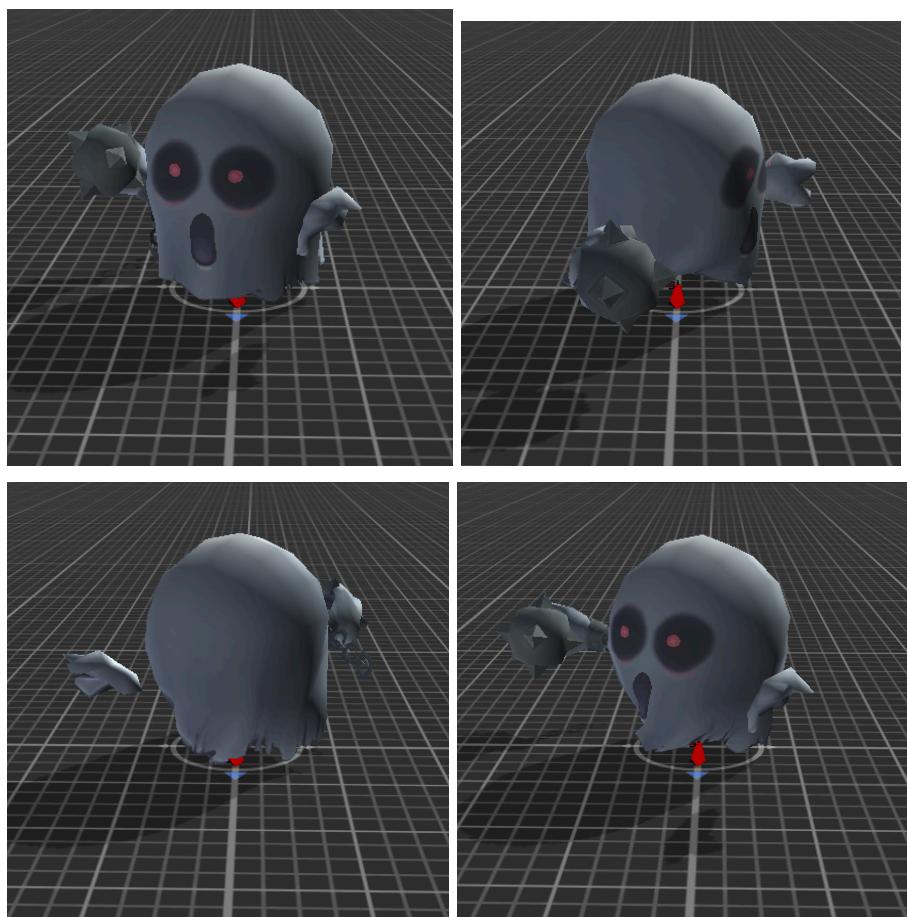
Jump (bottom of ghost swishes faster)



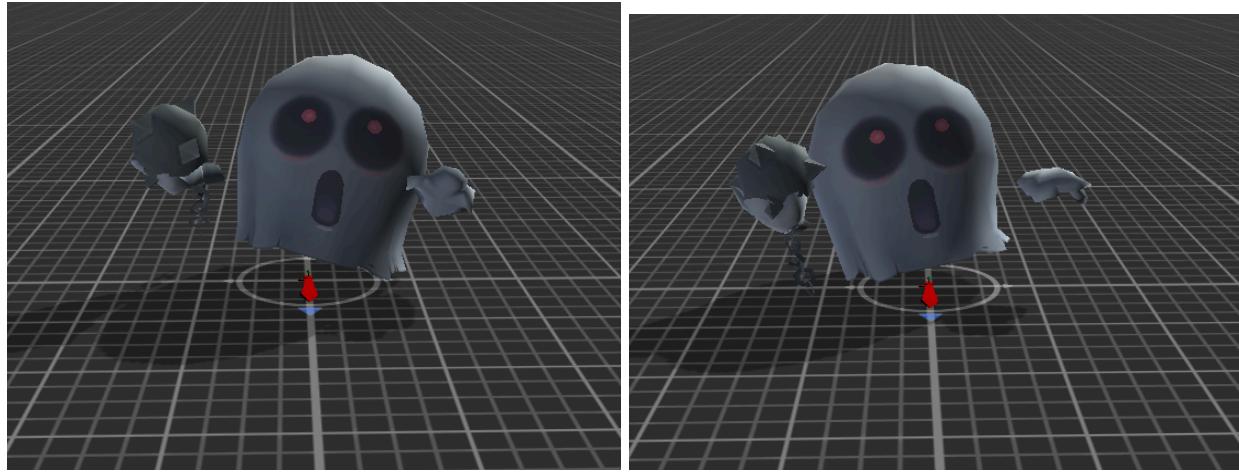
Turn (bottom of ghost swishes side to side)



Attack (spins in circle with mace)



Death (shakes violently)



Player properties:

Health: 20
Damage: 5
MoveSpeed: 5f
Interact Distance: 0.5 meters

Control Scheme:

Mapping table:

Move Forward	w
Move Backward	s
Turn Left	a
Turn Right	d
Attack	LMB
Jump	SPACE
Interact w Environ.	e
Pause Game	ESC

What abilities will the player have?

The player will have the ability to attack and (their main method of world interaction) the ability to push/pull/drag certain environmental objects. The player also has the ability to pick up objects that are put in their inventory to be used in the puzzles they solve.

How will the camera move?

The camera will be a fixed distance behind the player in all axes, and will rotate according to the movement of the mouse. The exceptions are in the UI displays.

Player's Perspective:





Player Rewards:

Objects that positively affect the player and descriptions thereof:

As stated the player will be offered a 'level up' upon reaching the elevator delimiting levels, which take the form of stat increases. The player will be allowed to choose between increased health attack, or movement speed.

Antagonistic Elements:

Enemies:

There will be 4 antagonistic AIs present in Grimm Escape: Three skeleton variations, and the necromancer themselves.

Skeleton 1:

Description: This skeleton is found in the tutorial level, sleeping (or otherwise distracted) at a desk that is surprised by the player. The skeleton will then attempt to kill (rekill?) the player.

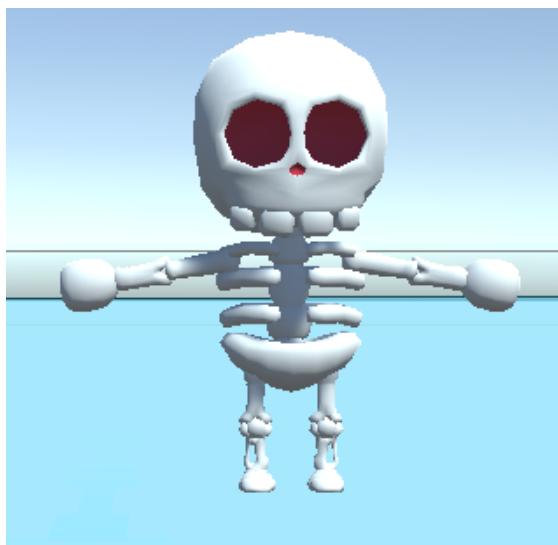
Model:



Skeleton 2

These skeletons act as guards for the necromancer's tower, patrolling its grounds to ensure nothing less than sinister is afoot. They will patrol whatever area has been assigned to them that day, pursuing and neutralizing anything that falls outside the norm.

Model:



Skeleton 3 (The Skeleton in the Closet)

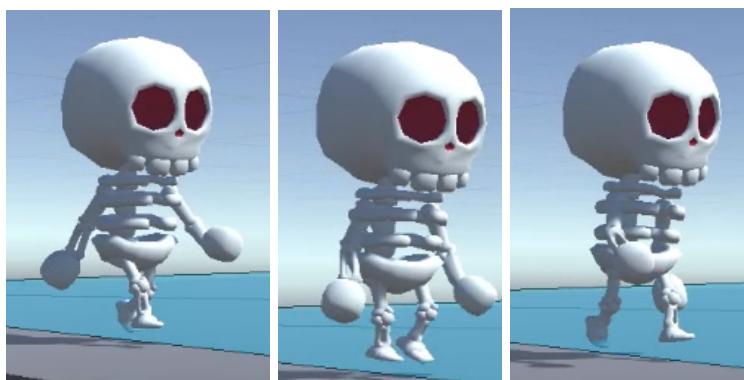
A sad relic from the necromancer's youth, a project so horrible and yet they can't fathom getting rid of it, no matter how much they'd like to. This botched reanimation lives its unlife shoved in a closet, guarding a relic protecting the sanctity of the infernal machine powering the necromancer's plans. Upon being removed from this closet, they act as an aggressive security measure: Relentlessly attacking and pursuing the player.

Model:



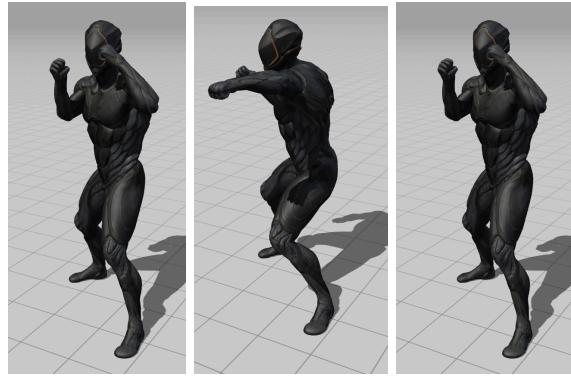
Shared Animations:

Walk:

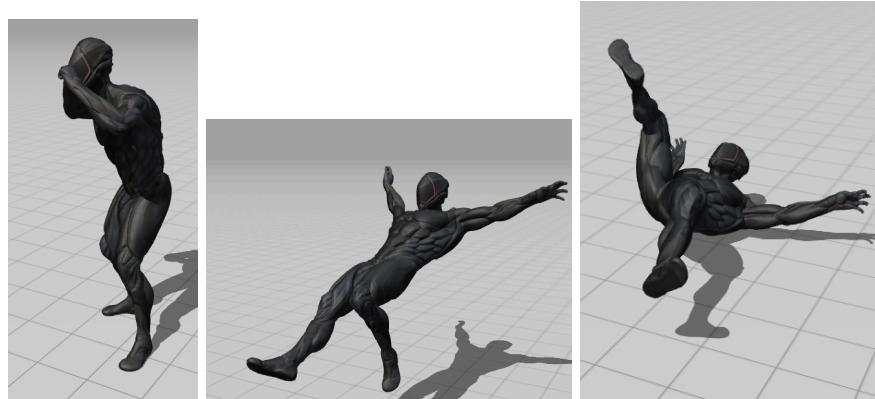


Run: Same as Walk, just sped up about 2x

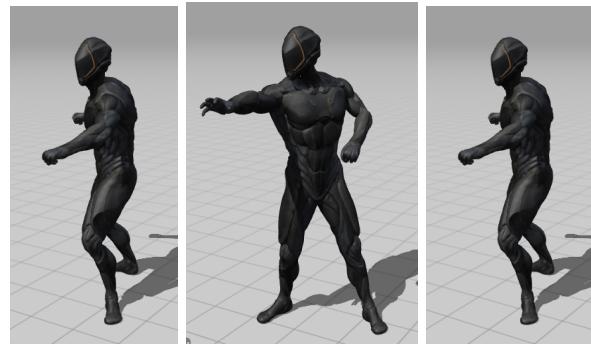
Melee Attack (everyone except necromancer):



Death:



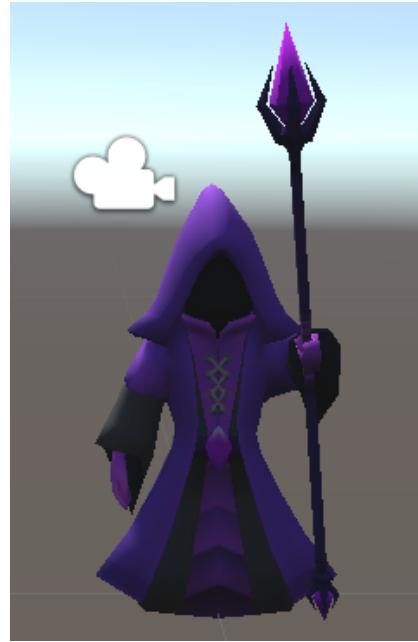
Ranged attack(only valid for skeleton in the Closet, necromancer):



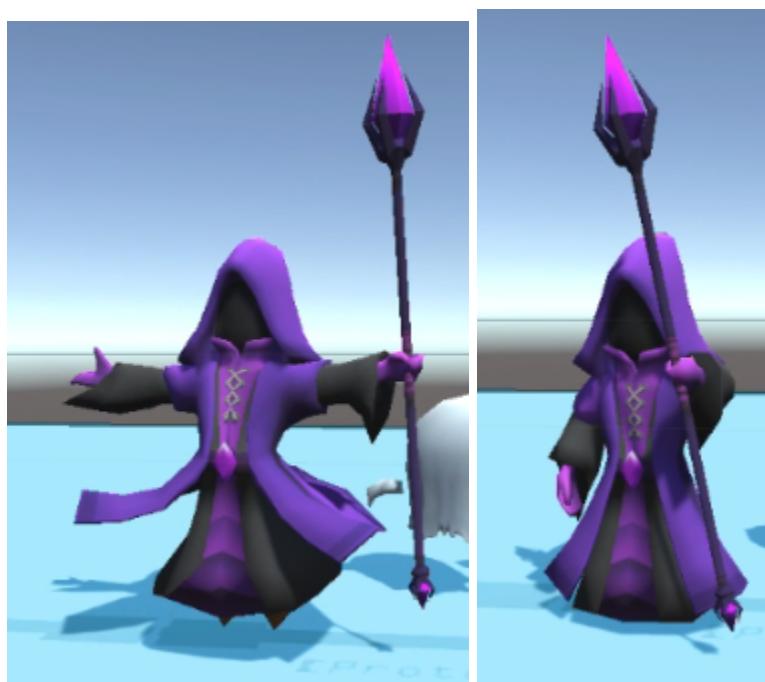
Necromancer:

The primary antagonist, and final combat encounter of the game. Responsible for imprisoning you within this tower to power their nefarious necrotic schemes. The necromancer is a bastion of arcane power, and relies heavily on it during combat. From ranged spells to swipes of their enchanted staff, they will do their very best to stop you from bringing their machinations to a halt.

Model:



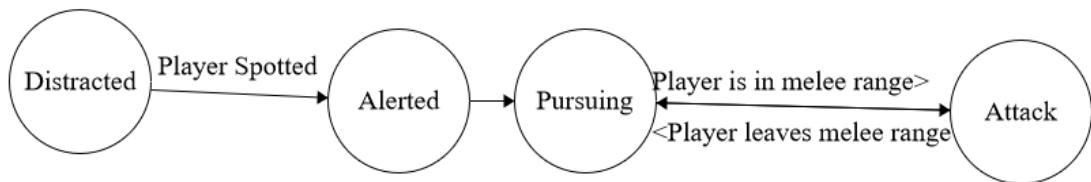
Attack:



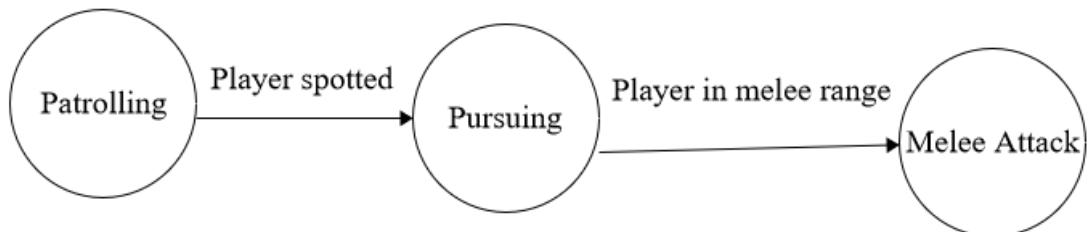
Artificial Intelligence:

Antagonistic:

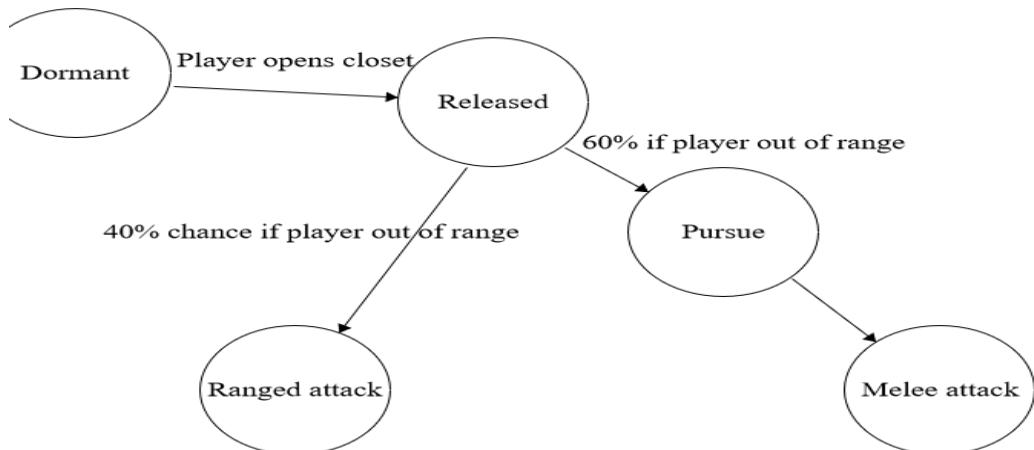
Skeleton 1:



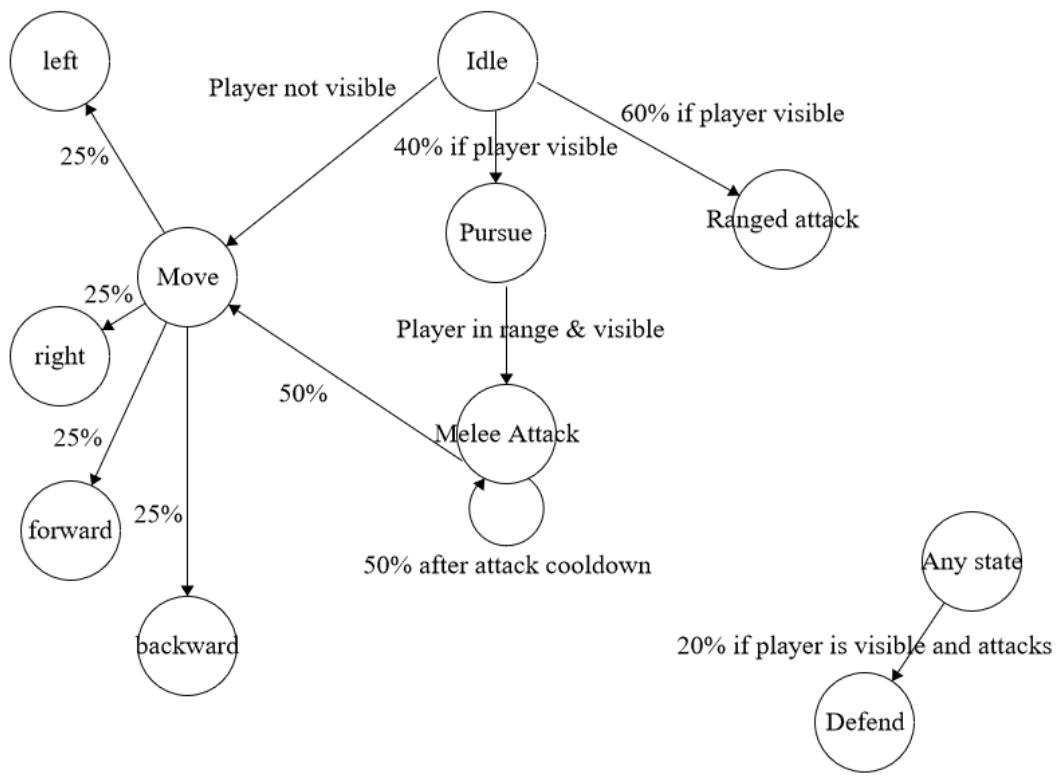
Skeleton 2:



Skeleton 3 (The One in the Closet):

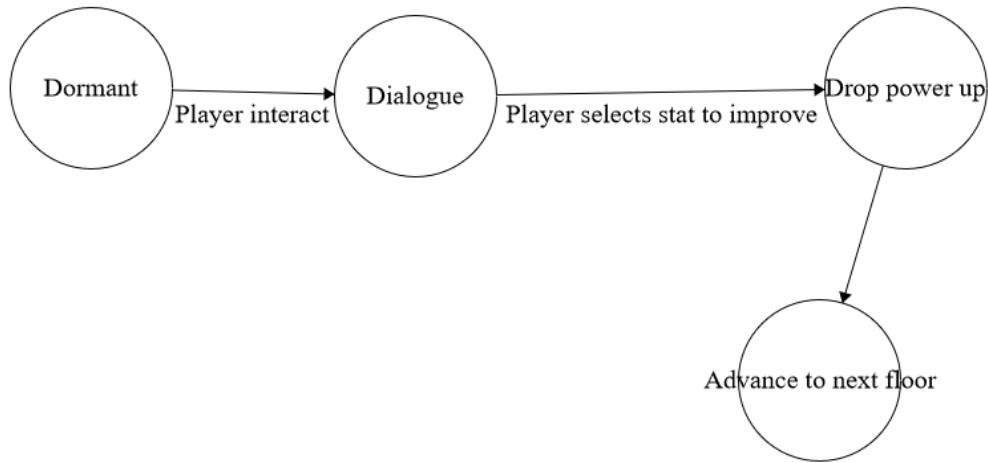


Necromancer:



Friendly:

Elevator Friend 1 & 2:

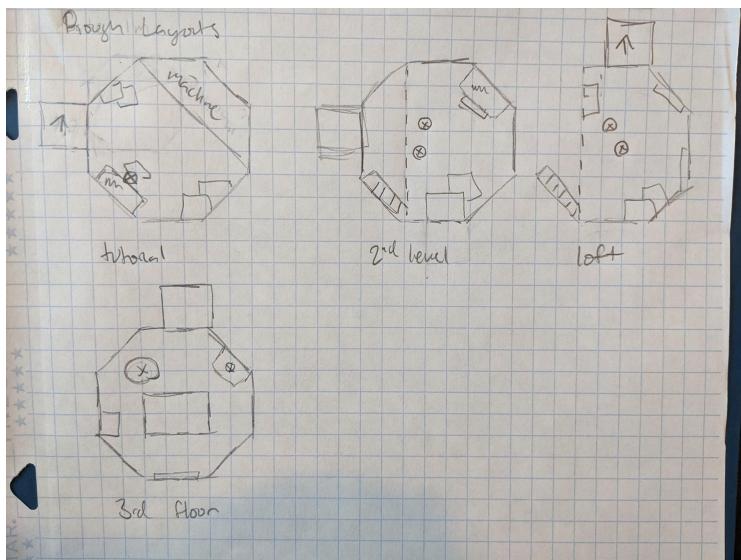
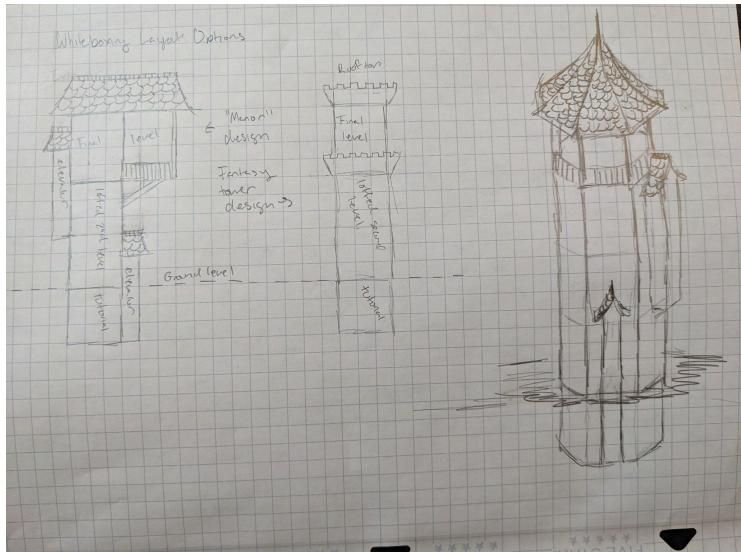


Level Design:

World Setting:

The game takes place entirely inside a wizard's tower that also gives off vague dungeon vibes, with very brief glimpses into the outside world showing a landscape besieged by rain.

Sketches:



Level Description:

Tutorial Level

14 x 14 octagon

- 1) Escape containment by unlocking cell gate with key
- 2) Fight simple enemy (Skellie at desk, facing away from player)
- 3) Get a key to open a chest disguised by boxes
- 4) Solve the puzzle to open elevator door
 - a) Combination puzzle composed of a few pieces of riddle scattered around the room - on the desk, on the floor, behind boxes, etc

Elevator 1:

2 x 2 cube

- 1) Upgrade guy living inside elevator walls sparks back to life
 - a) Converses with player briefly (I hate my boss, etc)
 - b) Offers power up in exchange for slaying Necromancer (increase in health or attack damage)
 - c) Heals player

2nd level (1st floor):

14 x 14 octagon

- 1) Fight an enemy, this one is more difficult as it isn't caught off guard
- 2) Floorwide puzzle: Collect rungs of a ladder to advance upwards
 - a) 2 behind puzzles
 - b) 3 behind crates/hidden in environment
- 3) Advance upward!

2rd level (2nd floor):

14 x 14 octagon

- 1) Two more skeletons attack at the same time
- 2) Book puzzle
 - a) Interacting and sorting through a bookshelf reveals a time for the clock
- 3) Clock puzzle
 - a) Solving the puzzle triggers more enemies to rush in
- 4) Completing wave of enemies allows the player to exit through the second elevator doors.

Elevator 2:

2 x 2

- 1) Sibling of first upgrade guy living inside elevator walls does the same thing as the other one
 - a) Upgrade to health or damage
 - b) Dialogue - good luck out there champ etc.
 - c) Heals player up to full health

3rd level:

14 x 14 Octagon

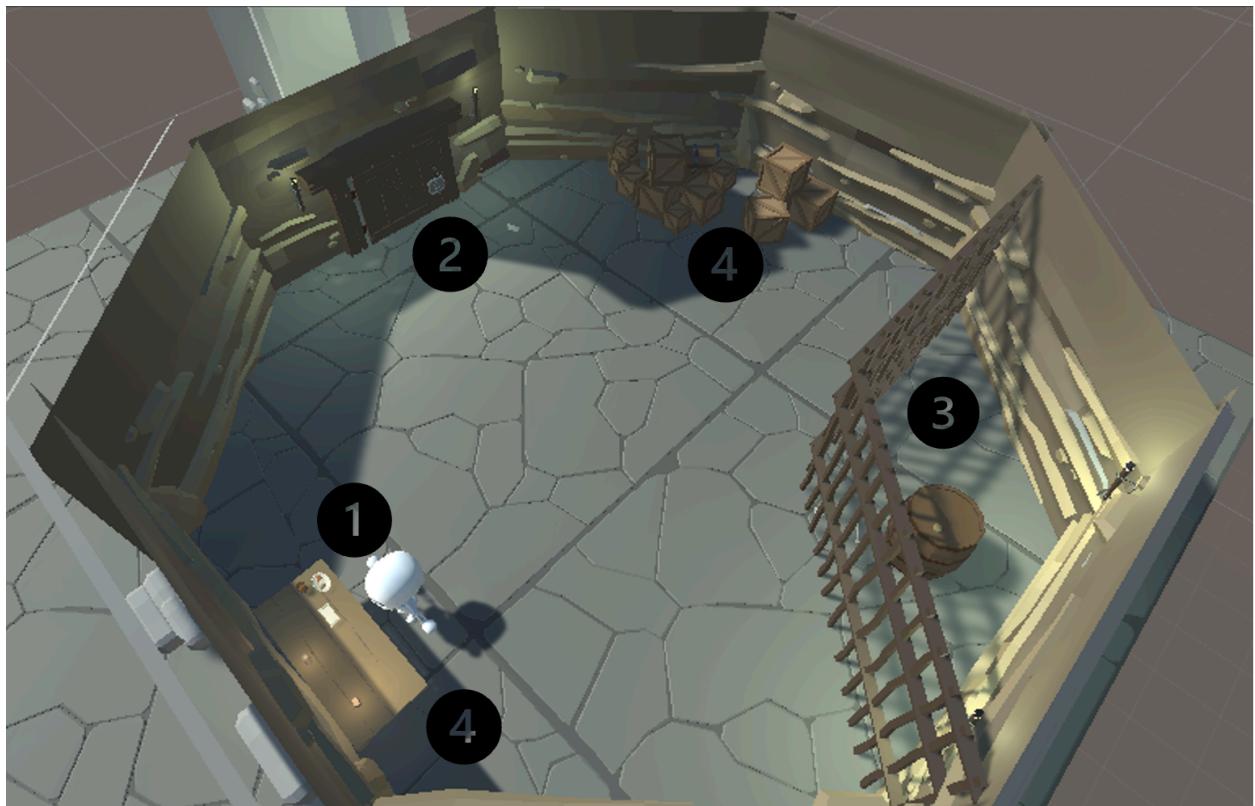
- 1) Skeleton Door Puzzle
 - a) Find the clues riddle to open the door
 - b) skeleton enemy pops out
 - c) Piece of the final puzzle on the center table
- 2) Button puzzle, press the buttons in the right order to spell Magic
 - a) One of the chests opens revealing both a jar for the scale puzzle and a piece of the main puzzle
- 3) Scale puzzle
 - a) Put the jar to even out the scales and the chest opens revealing a piece of the main puzzle
- 4) Mushroom Puzzle
 - a) Sort the mushrooms to their names, information is found on the book on the other side of the room
 - b) When solved it reveals a piece of the final puzzle
- 5) Final puzzle
 - a) When $\frac{3}{4}$ of the pieces of the final puzzle are found the necromancer spawns in to stop them
 - b) When all 4 pieces are placed the player flips the switch and the game ends

Screenshots:

Tower Outside:



Level 1/Basement



1. Enemy - skeleton
2. Number code lock
3. Pick up key off ground and unlock gate
4. Grab key by skeleton to open chest behind boxes

Level 2 (lower lvl)



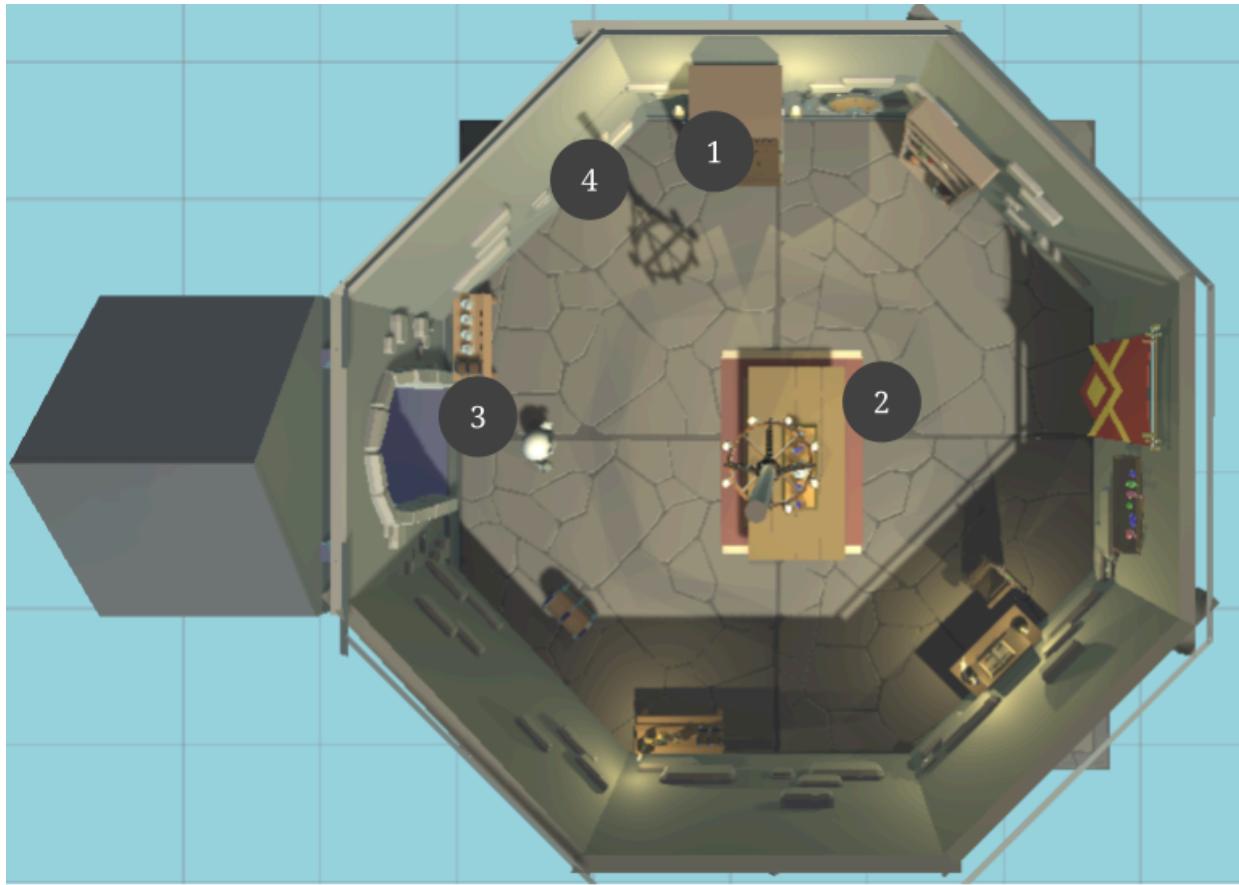
1. Interaction - Ladder frame missing rungs
2. Hidden ladder rung
3. Interaction - open chest to find last missing ladder rungs
4. Enemy - skeleton

Level 2 (upper lvl)



1. Enemy - skeleton
2. Interaction - bookshelf with clue
3. Interaction - clock with keycode reveals key
4. Interaction - key unlocks door to elevator

Level 3:



1. Enemy - a skeleton in the closet
2. Interaction - Final Puzzle
3. Interaction - Mushroom Puzzle
4. Interaction - Buttons around the room that make up a puzzle

Milestone 1 Progress:

It must be noted that all members meaningfully contributed to all aspects of game design through our brainstorming meetings. Specific member contributions are as follows:

Robin Preble

- Scripted camera so that it follows the player and rotates with the mouse
- Rewrote player movement script so movement direction is relative to the camera orientation
- Found ghost asset
- Added player perspective and animation screenshots to Game Design Document

Mila Brooks

- Added animations to player controller and character movement script
- Wrote initial player movement script
- Edited player jumping physics

Justice Baum

- Chased rainbows trying to learn Blender for player model.
- Created basic player attack function
- Created “Enemy” tag
- Wrote first (bad) implementation of jumping physics

Ellie Skiffington

- Entirety of the whiteboxing & level sketching
- Began brainstorming puzzle ideas

Milestone 2 Progress

Robin Preble:

- Implemented player attack
- Item pick up, inventory, and interact scripts
- Updated player movement and animations

Mila Brooks:

- Created functional start screen and pause screen
- Designed mockups for info screen and HUD
- Made list of SFX needed
- Rescaled levels 2 & 3, moved them into separate scenes, started adding assets
- Updated design doc with new player model + animations and level design

Justice Baum:

- Created state machines for all AI components.
- Scripted two antagonistic AIs with animations.
 - Found animations for AIs whose models did not include them or whose provided animations were non-exhaustive.
- Resized first level & put in its own scene in response to milestone 1 critique.

Ellie Skiffington:

- Made scripts for object interactions
- Added Lighting

- Main set dressing throughout
- Object animations

Final Milestone Progress

Robin Preble:

- Found sound clips and handled all game audio
- Debugged and fine-tuned player controls
- Debugged skeleton animations and scripting

Mila Brooks:

- Formatted and implemented all UI elements
- Debugged and fine-tuned player object interaction
- Implemented scene switching

Justice Baum:

- Scripted remaining stochastic AI and animations
- Implemented respawn system

Ellie Skiffington:

- Designed and implemented puzzles
- Made assets where needed
- Made terrain for level3 and cutscenes
- Gathered final level screenshots