

Team Ghost Riders

Production Document

Project: Ghostly Manor

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Interactivity

Goal

A player's primary objective is to return back to the world of the living and in order to do so, the player must defeat Death. Before confronting Death the player must ascend up the floors of the haunted house and survive its manifestations (see Ghosts).

Level One

Level one is comprised of two objectives. Successfully complete the tutorial sequence, and defeat Lily (see. Game Bosses) in order to get to the second floor.

Level Two

Level two forces the player to adapt to new enemies, and learn to cycle through his abilities in order to stay alive. The objective for level two is to reach the main hallway and defeat Fats McGee (see. Game Bosses)

Level Three

Level three will raise the difficulty a bit more, with the addition of new enemies and heavily different environments. The player's objective is to defeat Frank (see. Game Bosses) and move onto the next floor.

Level Four

The player has now been introduced to each element of the game, and is put to the test with unique scenarios and overwhelming numbers. The player's objective is to survive each battle and make his way to the Attic.

Level Five

This is the final fight with Death. Defeating Death will provide the game win condition.

Interface

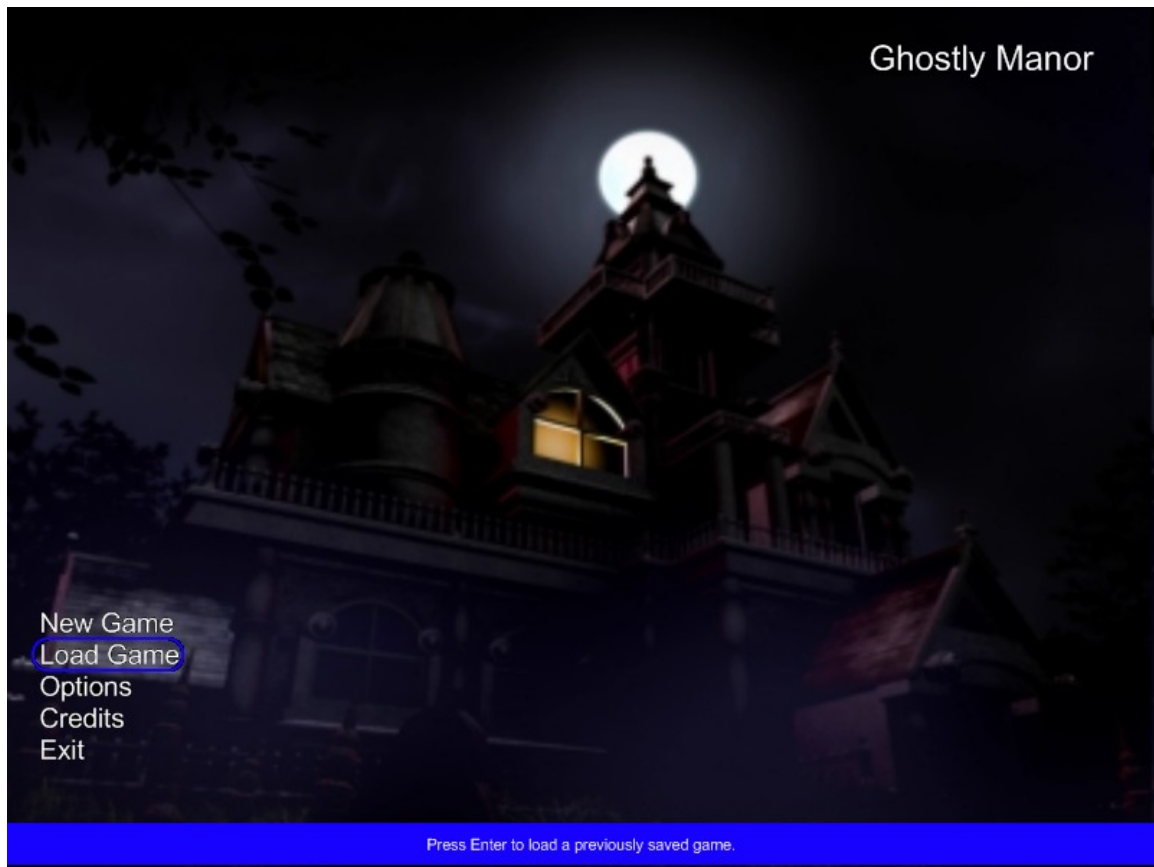
Menu Navigation

Key	Description
Up Arrow	Select Item Up or rollover to bottom item
Down Arrow	Select Item Down or rollover to the top item
Right Arrow	Adjust Selected Slider Right
Left Arrow	Adjust Selected Slider Left
Enter	Activate Selected Item
Mouse Over Item	Selects the item beneath the cursor
Mouse Left Button	Activated Selected Item
Mouse Left Button Drag	On sliders that are selected dragging will move the slider based on mouse x position

Game Controls

Key	Description
Mouse Move	Free Look
Left Mouse Button	Primary Fire
Right Mouse Button	Secondary Fire
Spacebar	Jump
W	Move Forward
S	Move Backward
A	Strafe Left
D	Strafe Right
E	Use/Pickup item/Drop pickup Item
ESC	Pause Game. Open Pause Menu.
Mouse Wheel	Cycle Channeling Abilities
1-6	Quick Switch Channeling Abilities

Main Menu



The main menu will have menu items in a vertical list on the bottom left side of the screen; selected items will have a highlighted rectangle behind them with rounded edges. At the top right side of the screen there will be the game logo and name. The bottom of the screen will have tool tip information describing the function of the currently highlighted item or how to navigate the menu. When an item is highlighted (mouse over), selected, or switched there will be an audio cue. Background music will begin playing when the main menu first comes on screen. The background music plays continuously while in the menus.

Menu Items

New Game
Load Game
Options
Credits
Exit

Options Menu



The options menu is broken into four sub menus. Sliders that control game volumes and gamma will simply be 3 circles and a line. One circle indicates the value of the option between the two bounding circles, which are connected by the line. All volume controls will play associated audio when adjusted to give feedback to the user. Options that contain a Boolean toggle can either be selected using the mouse or can also be toggled by using the left or right arrow keys. The user will be able to move up and down by using the up or down arrow keys. Pressing enter will apply the current changes and return to the main menu while pressing escape will cancel any changes that were made and return to the main menu. The user will also be able to interact with the menu using the mouse.

The Items on the options menu are:

Gameplay

Toggle Voice Dialogue

Toggle Static Cursor

ToggleCheckpoints

Controls

Map new controls

Graphics

Gamma

Sound

Effects Volume

Music Volume

Dialog Volume

Load Game Menu



The load game menu will have a similar appearance to the main menu. The game logo and title will still be on the top right side of the screen, as in the main menu. Not shown in the picture, but when a user has a saved game selected the border surrounding the saved game will be thicker to distinguish which one is currently selected. There will also be audio cues upon highlighting or selecting of a saved file. The user will be able to use their mouse to select the load or cancel button. They will also be able to use enter to load the currently selected game or escape to cancel out of the menu and return back to the main menu. Upon selecting a load game the whole main menu will fade out and the loading screen will appear.

The load game menu will have a vertical list of saved games with the following information:

Name
Time Stamp
Current Floor
Screenshot

Credits Screen



Whenever the user clicks on the credits menu option a window will open up containing the credits. The main menu music will fade out and the credits music will begin to play. When the user exits the credits screen then the credits menu will fade out and the main menu music will begin to play. The credits will slowly scroll up the window, when they get close to the top of the window they will fade out. When the credits reach the end they will simply loop back to the beginning. The user will be able to exit the credits screen by pressing escape or simply using their mouse to select another menu option from the main menu to the left.

Pause Menu



The pause menu will appear on top of the still image of the last frame of gameplay. It will consist of a status bar across the top of the screen. This bar will show your ammunition for all of your weapons and your current health. The menu items themselves will be vertically listed along the lower left hand corner of the screen; selected items will have a highlighted rectangle behind them with rounded edges. When an item is highlighted, selected, or switched there will be an audio cue. There will also be a tooltip bar at the bottom of the screen same as the main menu.

Pause Menu Options

Resume Game
Save Game
Load Game
Options
Exit Game

Loading Screen



The loading screen will be a still image as the background. It will show the loading text in the lower left hand corner with an icon animating next to it to indicate that the level is still loading. In the right hand corner there will be different information displayed about the game. Some of this information may include dialogue from a character, hints to help you survive and defeat your enemies. There will only be one hint per loading screen.

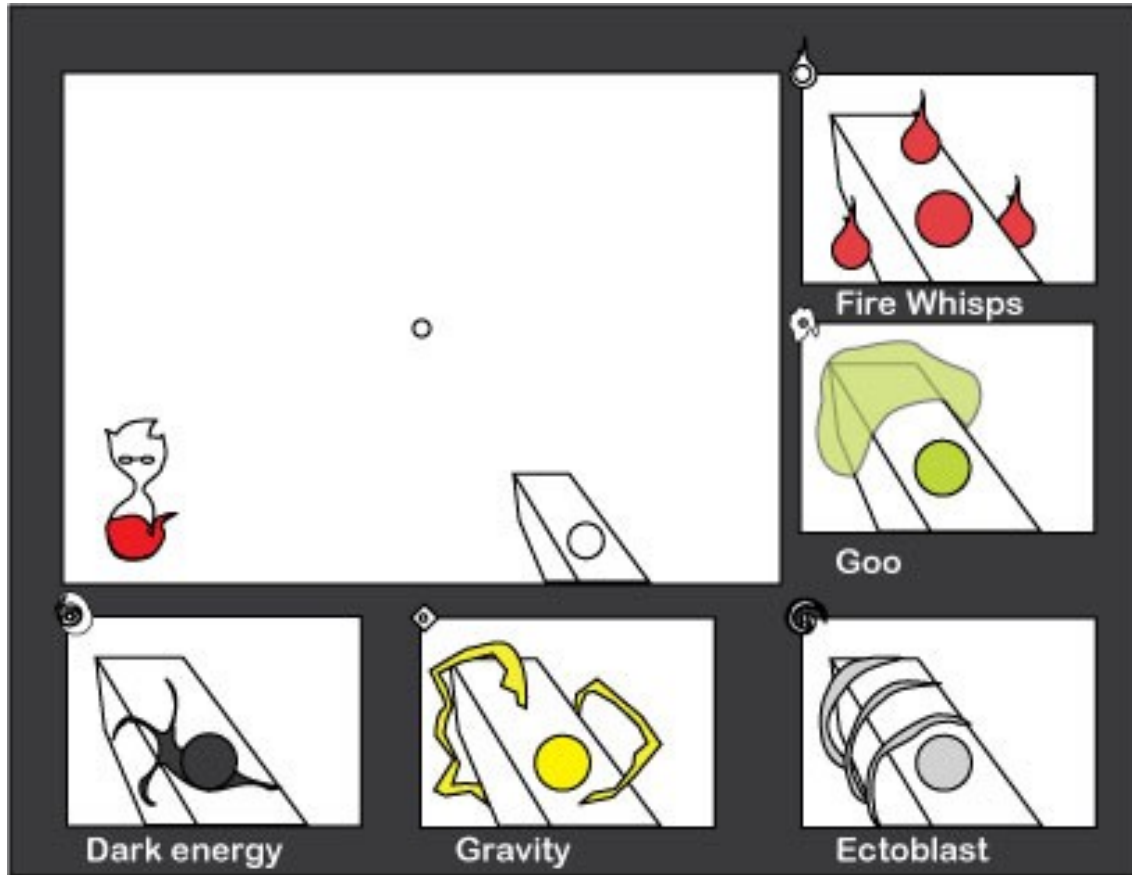
Menu Transitions

The menu will transition whenever the player makes a selection on a menu item that has a sub-category. For instance, if the player selected the options menu then in the center of the screen a sub-window and the text used in that sub-window will fade in revealing the selected menu items. All menu transitions will be universal, so the main menu screen will share the same menu transition that the pause menu will have.

Menu Input

The player will be able to highlight different menu items using the arrow keys. The menu will also wrap around, for example if you are at the Exit Game selection on the main menu and you press down then the selection will now move up to New Game. The player can advance through the menus by using the enter key and can also back out to the previous menu by using the escape key. The player will not be able to use the escape key to back out of the main menu, however the player may also use the mouse to navigate through the menus. (See Interface for Controls)

HUD



The user's HUD will be comprised of a small ghost shaped health bar that will fill up with red when at full health, and white when empty. This icon will be on the bottom left corner of the screen. On the bottom right corner of the screen will be the Player's weapon (Jim's hand). The hand will have various effects textured on to it to indicate weapon selection and current ammunition. The crosshair will change based on the selected ability. In the above picture the box in the main screen indicates Jim Howler's hand. All the sub screens are what the animation will look like when the player has the different ability selected. For example, if the player ends up selecting the Fire Wisps, then the player's arm will take on that form and have multiple Fire Wisps orbiting his arm. (See Channeling)

Interactive Rhythm

Typical Play Session

5-15 minutes for progression to the next level

30-45 minutes for the entire game

Replay Value Features

Broad range of balanced weapons

Re-telling of the story

Rhythm

Players should always have at least camera control

Encounters will be broken up with brief downtimes

Traversal rooms and hallways

Flashback dialog

Thematic rooms

Progressive combat time per encounter (see chart below)

Combat Speed

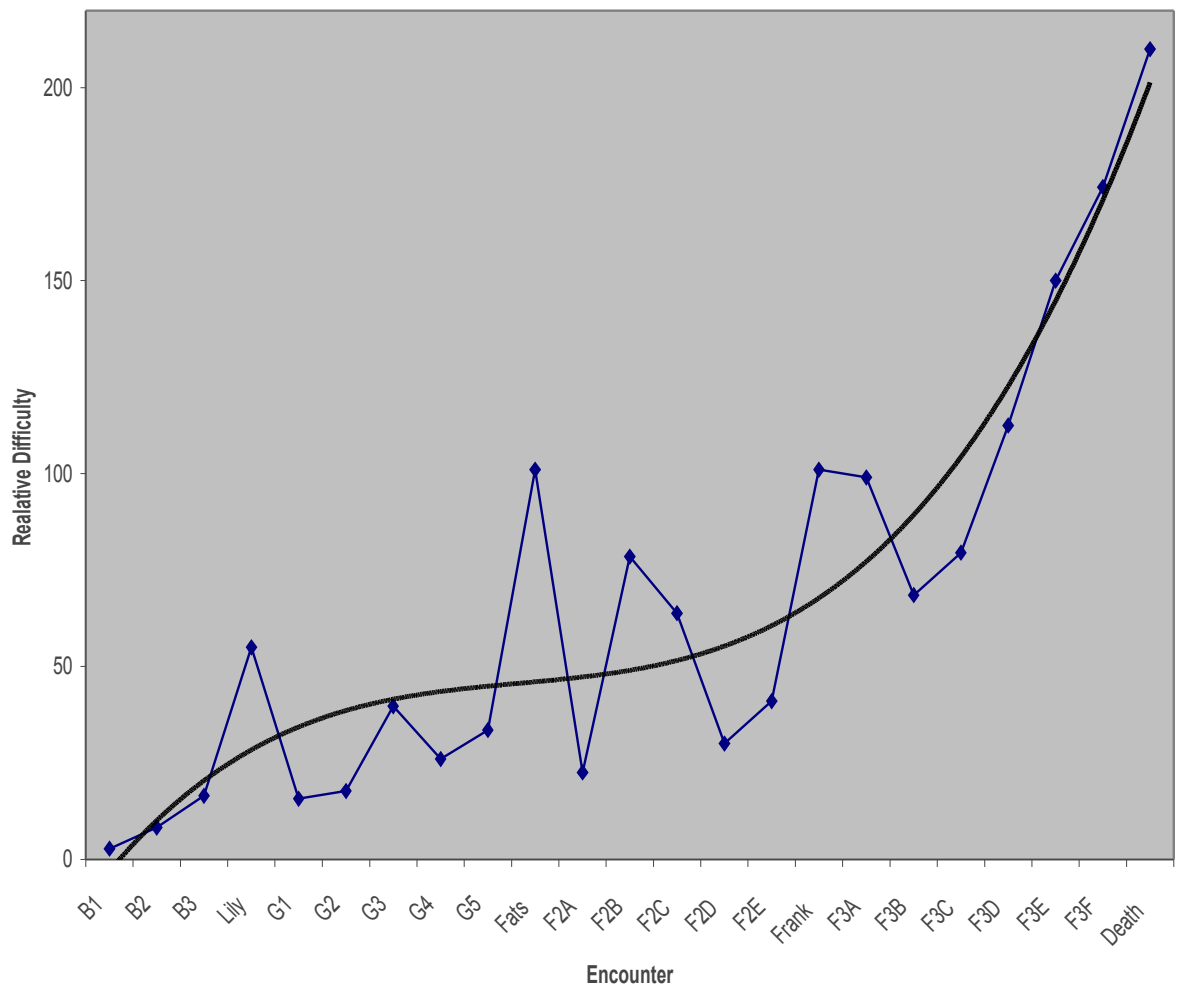
Single ghosts should last anywhere between 4-15 seconds

Boss encounters range from 30-60 seconds

Encounter	Igniters	Wisps	Slimers	GG	Blinkies	Shades	Boss	Est Total Time	Total Difficulty	Total Time
B1	1	1						4.4	2.75	4.4
B2	1	3						5.2	8.25	9.6
B3	2	3						10.4	16.5	20
Lily							1	24	55	44
G1			1					12	15.75	56
G2				1				8	17.75	64
G3	1	3	2					29.2	39.75	93.2
G4	1	3		1				13.2	26	106.4
G5			1	1				20	33.5	126.4
Fats							1	32	101	158.4
F2A					1			4	22.5	162.4
F2B			1	1	2			28	78.5	190.4
F2C	2	3	3					46.4	63.75	236.8
F2D						1		16	30	252.8
F2E	1	4				1		21.6	41	274.4
Frank							1	32	101	306.4
F3A			2		3			36	99	342.4
F3B	3	4		2				32.8	68.5	375.2
F3C	2	3	4					58.4	79.5	433.6
F3D					5			20	112.5	453.6
F3E						5		80	150	533.6
F3F	2	5	2	1	3	1		72	174.25	605.6
Death							1	48	210	653.6
Total	16	32	16	7	14	8	4	653.6	1546.75	

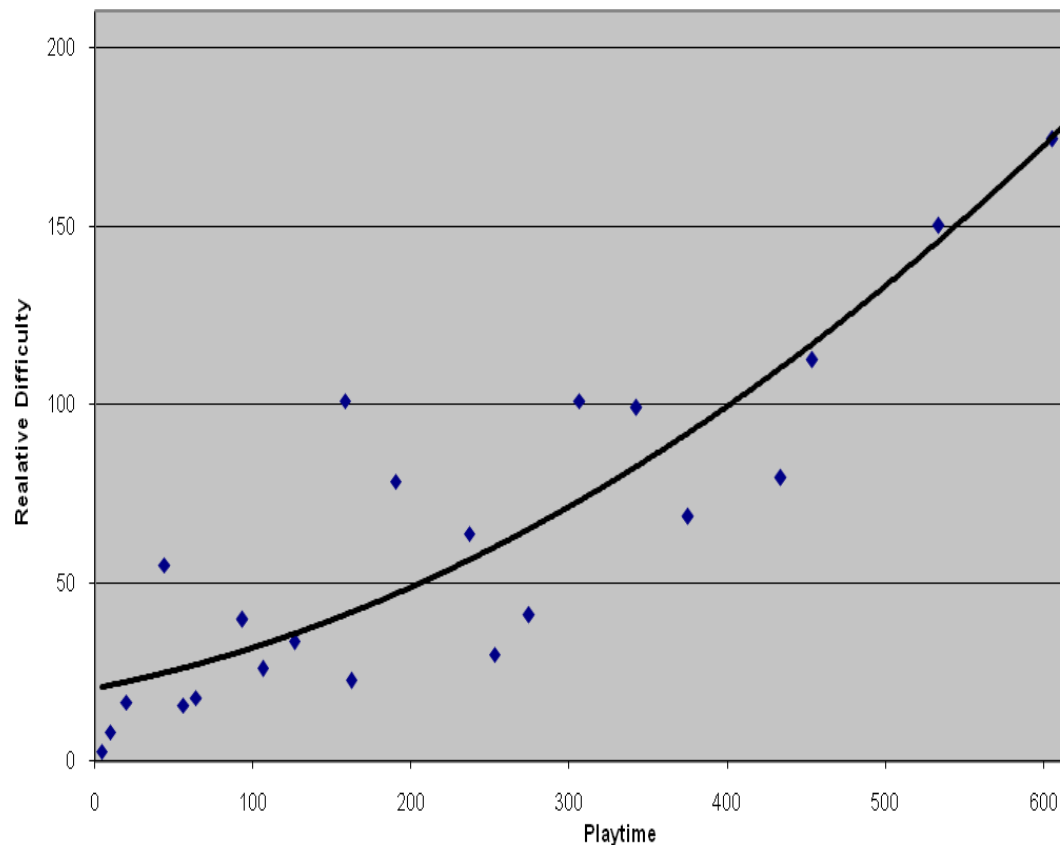
The above chart shows the game's combat encounters. Wisps are not a separate enemy they are part of the Igniter enemy. Difficulty is a relative number; it has no direct measure other than comparing it to another difficulty number. The difficulty is a linear ratio, thus a difficulty of 10 is twice as hard as a difficulty of 5.

Difficulty Curve



The Difficulty Curve diagram above shows the relative difficulty of each encounter graphed in order of the encounters. The black curve is the average of the data, that is represented by the blue lines.

Time-Difficulty Ratio



The Time-Difficulty Ratio diagram above shows each encounter as a blue diamond. Its position is a representation of its relative difficulty and the amount of time the player has played before finding this encounter.

How the Player Marks Progress

Progress is broken down into three categories; level progression, story progression, and weapon progression.

Level Progression

From the very first room the player is made familiar with the checkpoint system. A checkpoint is represented via a mirror, but more specifically a Victorian shaped, eight foot tall mirror that death occasionally uses to communicate to the player via.

The levels are also broken down by floor, and each floor is made to look and feel very different from the last. Each new floor will introduce a new color palate, and new background music.

Story Progression

The player will be introduced to his goals through a short opening cut scene. Story elements are then revealed through carefully placed audio bits, and ultimately through the boss battles at the end of each level.

Weapon Progression

The player begins with the ability to fire off slow, egg like bullets from his ghostly arm. The player quickly is introduced to channeling and the ability to cycle through the abilities gained from his enemies. The order by which Jim Howler upgrades his arm is as follows:

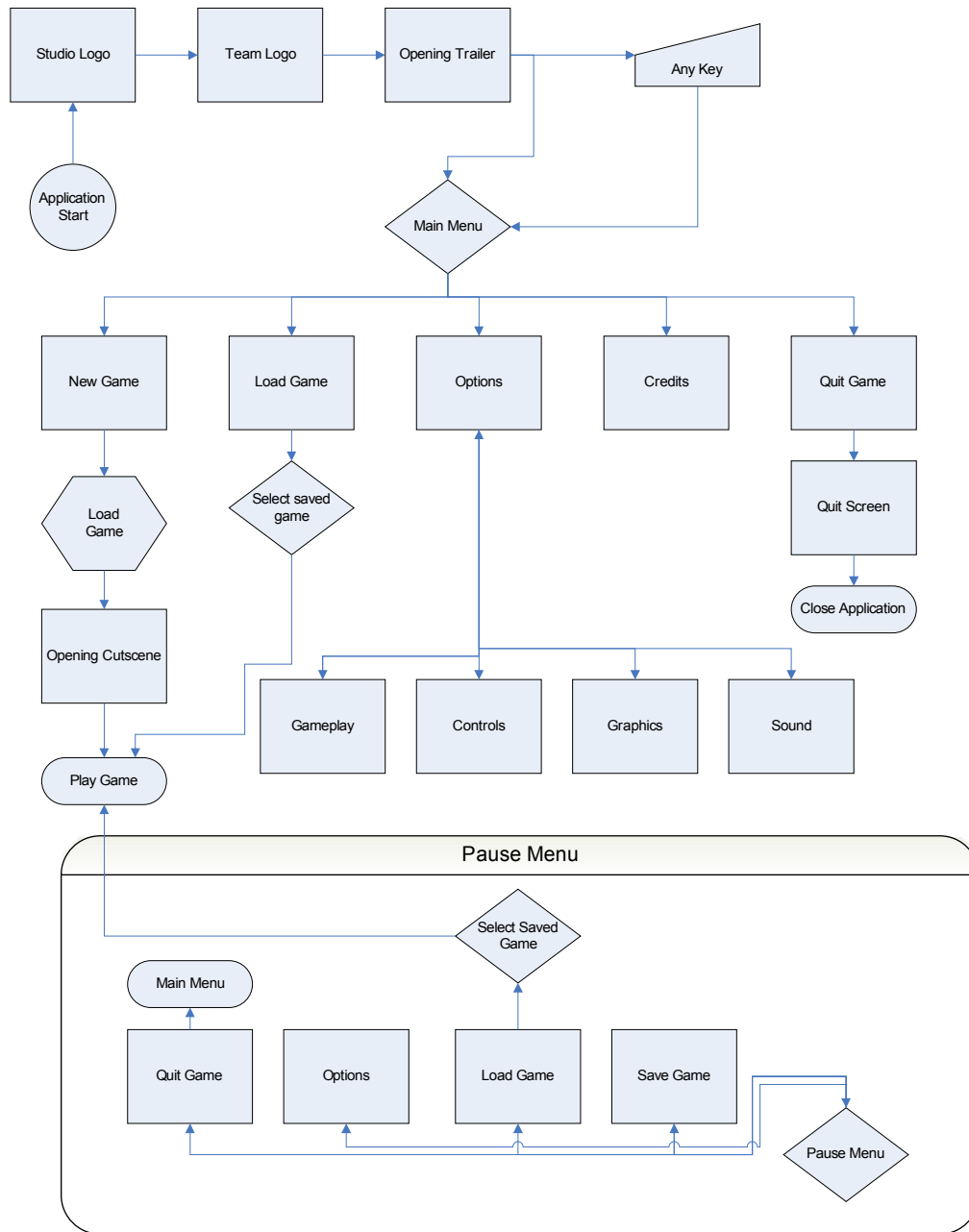
- Fire channeling
- Goo channeling
- Gravity channeling
- Ecto channeling
- Dark channeling

As the player gains more ammo of the same type the effects on the player's arm begin to appear stronger further marking ammo count.

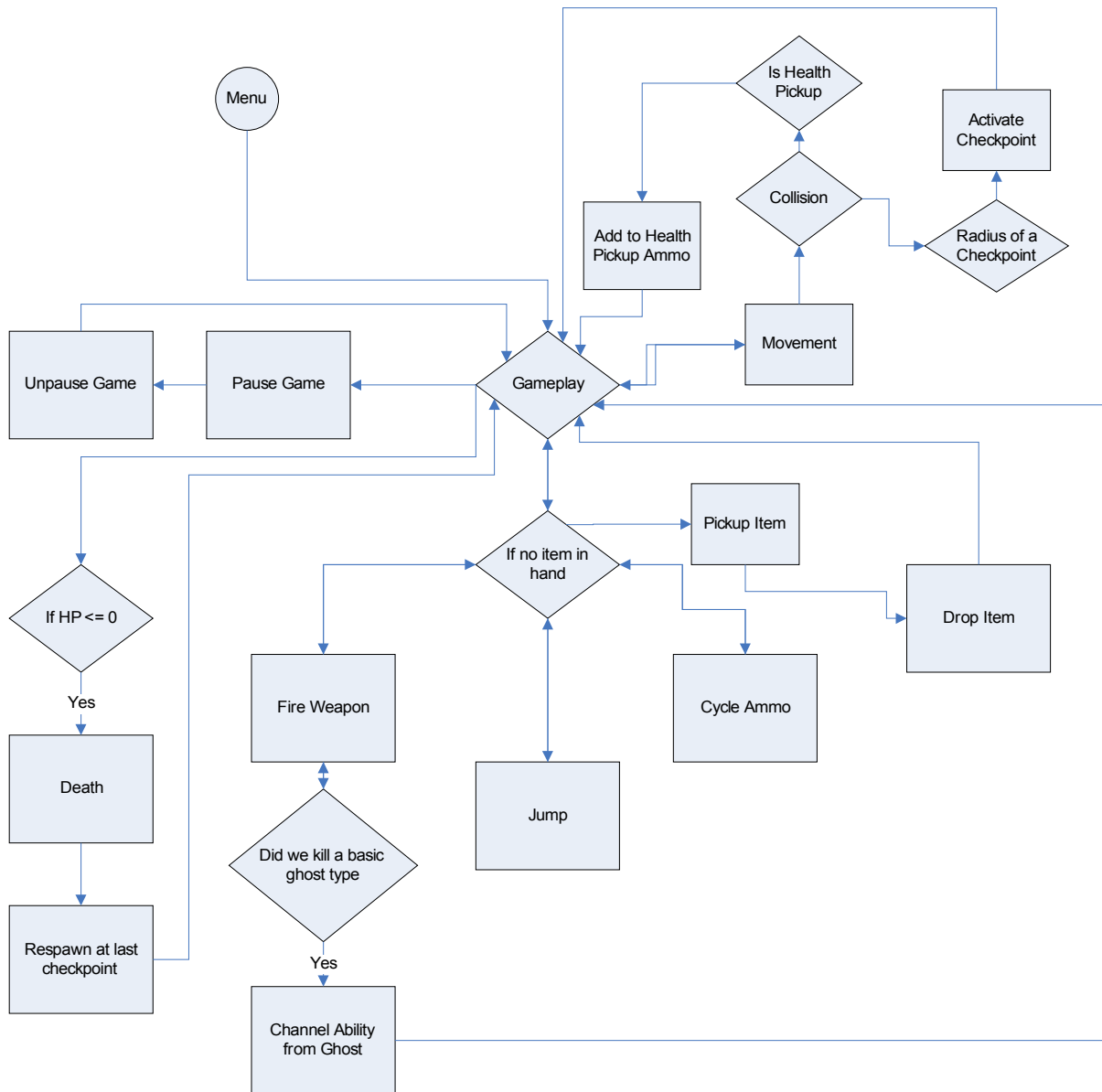
- Fire channeling gains more fire wisps around the arm
- Goo channeling grows larger and encompasses more of his arm
- Gravity channeling creates more sparks around the arm
- Ecto channeling whirls more rapidly and chaotically around the arm
- Dark channeling forces the dark tattoo on his arm to expand and cover more of it

Design Breakdown

Front End Flow Chart



Game Flow Chart



Glossary of Terms

Name	Description
Add to Default Weapon Ammo	Adds to the player's current amount of ammo for the default weapon.
Add to Weapon Ammo	Adds to the player's current amount of ammo to a specific weapon. The weapon is determined by which enemy is destroyed.
Angry Mode(Lily)	When Lily reaches 50% health, her rate of fire increases and she begins to pout. Her face expression changes from innocent girl to steaming angry.
Angry Mode(McGee)	When McGee reaches half life his rate of fire increases for both arms. He also laughs maniacally.
Bouncy Ball Attack	Lily's second attack has her throwing a ball directly at the target. This ball continues to bounce around the world and after certain duration fades out. This attack has priority over the Spiral Ball Attack, but is limited to the number of balls out every 25% of her health. When she reaches 25% total health, Lily can have a maximum of 3 balls bouncing towards the target.
Columns of Death Attack	Death launches 8 columns of black energy, evenly spread around his circumference.
Create Doppelganger	Jack will at interval spawn a doppelganger. The doppelganger may spawn on either Jack McGee's left or right hand side, and will therefore remain unpredictable for the player. He will particularly use this ability when the player remains under cover for a set period of time and will attempt to flank the player from both sides. Jack begins to use this ability more frequently at half-life. See McGee's Doppelganger.
Death	When characters reach 0 health they go through a visual effect unique to each character. (See Visual Design of Characters)
Death Aggro	Death aggroes when the player is in range
Death Towers Attack	Death launches 8 columns of black energy, evenly spread around his circumference.
Doors Close	Closes a set door in the level
Doors Open	Opens a set door in the level
Dynamic Objects	This refers to world objects in the levels that are movable. These are the objects that can be affected by the Gravity weapon.
Enemies	Enemies refers to any character besides Jim Howler.
Engulf in Flames	When the red box is dropped into the furnace is it engulfed in flames and then vanishes
Engulf in Flames	When the red box is dropped into the furnace is it engulfed in flames and then vanishes
Fire Dark Energy Beam	Fires the Dark Energy Beam weapon.
Fire Ecto Blast	Fires a ball of twirling white energy at its target. Can only use this ability when visible.
Fire Left Gatling Gun	Fire McGee's left arm at the target.
Fire McGee's Right Arm	Fire McGee's right arm at the target.
Fire Wisps	Launches one of his wisps directly at the target. (see. Weapons: Fire Wisps)
Flee	When her target gets to close, Lily will scream, and quickly create distance between herself and the target. After doing so, her movement speed returns back to normal.
Floor Rotate	The floor changes rotation direction at a random interval 8 to 16 seconds.
Furnace Scorching	Activated by proximity of 15 ft away from the center of the furnace.
Furnace Scorching	Activated by proximity of 15 ft away from the center of the furnace.
Igniter Spawn	Activated by proximity (varying)
Jump	The player can perform jumps that can be combined with directional movement.
Lily Fades in	Inside the TV Room
Lily Fades out	After second appearance
Mirror Attack	Activated when Death reaches 50% health. Death enters one of the mirrors in the room, and dashes in and out of mirrors while trying to slash his target.
Mirror Dash	Activated at 50%. Death enters one of the mirrors in the room, and dashes in and out of mirrors while trying to slash his target.
Mirror Glows	Activated by proximity of 1.5 ft away from the center of the mirror.
Mirror Glows	Activated by proximity of 4.0 ft away from the center of the mirror.

Mirror Slide	The exit is closed off after the player steps inside
Move(Blinky)	Blinky moves in true 3D space and is therefore not limited by traditional geometry. They perform raycasts 16 different directions.
Move(Death)	Death by will move towards his target to perform his Scythe Slash. He will stand still during his Death Towers Attack and Scythe Triplication Attack. When he uses his Mirror Dash he will orient himself slightly horizontally and increases his speed considerably.
Move(Death)	Death by will move towards his target to perform his Scythe Slash. He will stand still during his Columns of Death and Scythe Twirl Attack. When he uses his Mirror Attack he will orient himself horizontally and increases his speed considerably.
Move(Doppelganger)	Moves into flanking position with Fats on the opposite side of the player.
Move(Frank)	Frank tries to close in on his target, in order to get in range of his knives
Move(Gravi-Ghouls)	Movement is in full 3D. It moves towards its target and tries to locate ammo.
Move(Igniter)	Movement is tactical, cover to cover, especially when out of wisps. They always try to keep medium distance to their target.
Move(Jim)	The user is limited to a Free-Look Camera for orientation. Forward & backward movement. Left and right strafe.
Move(Lily)	She tries to keep her distance and circle the target.
Move(McGee)	McGee's movement is confrontational. He moves slowly towards his target. When he reaches half-life he will begin to back off and look for cover.
Move(Shade)	Movement is limited to teleporting. Teleporting can occur at any set point in a predefined shadow.
Move(Slimer)	Movement is tactical, cover to cover, they tend to hang far back from the fight.
Object Physics	Activated when an object at rest is applied a force, such as the firing of a weapon.
Open Final Door	Pressing the use key, loads up the load screen.
Phase In	Become Visible. Only possible when Phased Out.
Phase Out	Become Invisible. When phased out they are much weaker. Only possible when Phased In
Pickup Items	This refers to Health Packs and Spirit Essence (See Power-ups and Upgrades).
Player	The player refers to both the user and the avatar Jim Howler.
Primary Fire(Death's Scythe)	The scythe is used primarily to slash.
Primary Fire(Drum Gauntlet)	Primary Fire allows the user to rapidly shoot out bullets at a target
Primary Fire(Ecto)	Primary fire shoots out a large ball of energy that severely damages any enemy it hits.
Primary Fire(Fire Wisps)	Primary Fire for fire wisps' allows the player to shoot a blast of fire at enemies and certain interactive objects.
Primary Fire(Frank's Knives)	The knives are primarily used to slash and thrust at enemies.
Primary Fire(Goo)	Primary fire of the Goo Gun gives the player the ability to shoot out a single glob of goop that will crawl forward in the direction shot. Upon reaching an enemy, the glob will explode upwards, damaging the enemy above.
Primary Fire(Gravity)	Primary Fire gives the player the ability to shoot out a wave of force that picks up a single non-static object and forcibly projects it in the direction the gun is fired.
Primary Fire(Rubber Ball)	Primary Fire allows the user to launch the ball for a damaging effect.
Primary Fire(Shadow)	Primary fire is a shadow beam that causes damage to any enemy it encounters. The player can hold the fire button to prolong the beams shot.
Red Box Glow	The red box will begin to glow when picked up by the player
Red Box Glow	The red box will begin to glow when picked up by the player
Scythe Slash Attack	This attack is a regular slash attack when Death's target is within range
Scythe Slash Attack	This attack is a regular slash attack when Death's target is within range
Scythe Triplication	Activated at 50%. Death summons three Scythe that hover above him for a split second while twirling, and are then launched at the target.
Scythe Twirl	Activated when Death reaches 50% health. Death summons three Scythe that hover above him for a split second while twirling, and are then launched at the target.
Secondary Fire (Shadow)	Secondary fire changes the vision of the user, allowing them to see all enemies for a short period of time. This ability is automatically switched off if the user changes weapons.
Secondary Fire(Ecto)	Secondary fire renders the player invisible to enemies, allowing the player to sneak

	around undetected for a short time.
Secondary Fire(Fire Wisps)	Secondary fire allows the player to launch an arcing flame grenade that delivers area of effect damage to enemies upon explosion.
Secondary Fire(Goo)	Secondary fire deploys a wall of goo in front of the player, serving as a temporary shield.
Secondary Fire(Gravity)	Secondary fire allows the player to shoot out a gravity wave of power that expands in a circular radius from the player. The wave picks up and throws outwards any non-static object, damaging any enemies it encounters.
Slash Attack	When Frank gets within range he will slash using his knives. The slash involves both of his arms winding up from his back and coming to a cross. Also forcing him to stop for a moment.
Spawn Miniatures	Spawns three miniatures that seek towards their owner's target.
Speak	Various characters can recite strings of dialogue.
Spin	Spins around.
Spiral Ball Attack	This is Lily's primary attack. Her rubber ball levitates to her chest and fires forward in a radial spiral towards the target. Upon colliding with another object it bounces off. The ball then fades out and fades into Lily's hands. If the ball hits no target, there is a maximum longevity which constrains its existence in the world when not being held by Lily, the ball will then fade out and fade back into Lily's hands. Lily uses this attack at various intervals of duration and when she has a clear shot at the target.
Static Objects	This refers to immovable geometry in the world such as walls, floor, and large immovable objects. These objects cannot be affected by the Gravity weapon.
Teleport	Instantly changes position.
Tornado Attack	This attack has Frank spinning rapidly and lunging himself at the target. This attack has priority over the Slash Attack but has a much longer delay between use.
Toss At Target	Locates the nearest dynamic object in the level that it can lift and tosses it at the target.
Triggered Spawn	Triggered via a script.
Unlock Door	Unlocks a set door in the level
Use/Activate	The player can carry items, drop items, and open doors. All of these are tied to a single action button for the player.
Weapons	This refers to the hazardous projectiles emitted by weapons (See Weapons).

Characters

Jim Howler

Description

Jim Howler is the doctor that the player plays as throughout the game. He is a ghost like the other characters in the game. With him you gain abilities and use them against the other characters in the game.

Visual Design

Because you will be in a first person perspective, you will only see Jim Howler's hand. The hand however will change its appearance depending upon which ability you currently have selected. When the player receives damage the screen will flash once with a red hue and you will hear Jim Howler grunt.

Behaviors

Behavior
Move
Jump
Use/Activate

Attributes

Attribute	Value
Health	100 out of a maximum 100 health
Movement Speed	5
Back peddle Speed	3
Jump Height	3
Activation Distance	4 feet
Red Screen Flash Time	.2 seconds

Lily

Description

Lily is a young girl ghost who is the first boss the player encounters in the game. She is one of the patients that Jim Howler killed. During the end of the first level in the basement of Death's manor, the player faces off against Lily.

AI

In this fight Lily uses a rubber ball roughly the size of a large softball. She has two main attacks that she uses at varying intervals against the player. For her first attack she lunges straight towards the player. As she begins the attack she raises the ball to her waist and it begins to spiral at a given radius towards its intended target. The attack is very linear and easily avoided through continuous movement. Her second attack, the Bouncy Ball, she throws the ball from her hip and aims to bounce the ball from another surface at the target. For example, Lily tosses the ball at a wall to reach a player behind cover. The attacks are not so much random as they are strategic, but in both cases the player should have no difficulty overcoming these obstacles.

When she reaches 50% health, she will begin to enter her angry mode and lower her rate of fire as well as slightly increase her movement speed. Lily's face will also change from an innocent girl to that of an angry brat. Her tone of voice and movement will be a lot more aggressive. If the player ever comes within a given radius of Lily, she will also gain a burst of speed and flee away from her opponent. During this sequence she will attempt to gain distance and seek cover. Upon reaching a safe distance, the Flee behavior is deactivated.

Periodically throughout combat, Lily will speak bits and pieces of dialogue to reveal her role in the story and Jim Howler's past life.

Visual Design

- Height: 3' 5"
- Age: 6
- She looks like a normal little girl but is slightly transparent and has a white hue to her. Her eyes and head are slightly larger than a normal child's. She has blond hair which is in pigtails and a large pink bow on her head. She is wearing a pink dress with white shoes.
- She levitates above the ground and moves at a continuously around the world. When Lily enters her "angry mode" she may increase her speed rapidly and run away.
- When she dies she fades but her bow remains and falls to the floor.
- When Lily takes damage she expresses her pain by pouting and crying.

Behaviors

Behavior

Move

Flee

Spiral Ball Attack

Bouncy Ball Attack

Speak

Angry Mode
Death

Attributes

Attribute	Value
Health	60
Movement Speed	6 ft/sec
Flee Speed	12 ft/sec
Flee Dangerous Distance	7 feet
Flee Safe Distance	15 feet
Spiral Ball Rate of Fire	Every 2.0 seconds
Bouncy Ball Rate of Fire	Every 2.0 seconds
Bouncy Ball Interval of Use	One ball additional ball every 25% of Max Health
Weapon	Rubber Ball
Rate of Fire Increase (Angry Mode)	50% increase in rate of fire
Body Fade out Time	3 seconds

Jack “Fats” McGee

Description

Jack “Fats” McGee is the second boss the player encounters in the game. He is a mobster crime boss who was victim of negligent homicide by Jim Howler. The player, as Jim Howler, will receive an introduction to Jack McGee during the second level of the first floor of Death's manor. He will make an appearance through audio flash backs, during which small bits of conversation between Jim Howler and Jack McGee will take place. These flash backs occur inside the dining room, and the lounge area on first floor. The player finally faces off against Jack inside the Main Hall of the manor, where Jack will say various bits of dialogue at periodically through the course of the battle.

AI

Fats fires at his target using his two gauntlets. Each arm/gauntlet moves independently and the Rate of Fire varies. Unlike Lily, Fats is more challenging as he attempts to fire at moving targets based on an accuracy formula (See Algorithms). To avoid 100% accuracy, he will have less accuracy if the target is moving or jumping, and a harder time hitting his opponent at a distance. Finally, each gauntlet has a small level of spread fire, and will therefore create for a realistic gun battle for the player.

Fats McGee's also has the ability to create a doppelganger that is essentially an exact copy of himself, has only one point of health and does the same amount of damage, and does not speak (See McGee's Doppelganger). Fats is limited to only being able to use this ability if there is no current doppelganger out. He will use this ability when the player remains under cover for a set period of time and will attempt to flank the player from both sides. The doppelganger will try to move away from the real McGee to the opposite side of the player. The doppelganger may spawn on either Fats' left or right hand side, and will therefore remain unpredictable for the player.

The goal is to create an intense fight where the player must seek cover, but not remain under cover for long periods of time. When Fats McGee reaches half life, he will increase his rate of fire and begin to shoot much more rapidly. His facial expression becomes more sinister.

Visual Design

- Height: 5' 6"
- Age: 38
- He is overweight with a wispy tail replacing the lower half of his body. He is slightly transparent with a white hue. He has on a white and black horizontal striped shirt, similar to a traditional prison uniform. His hands have been replaced with two large-drum Gatling guns. He has on a black top hat with a horse race ticket stuck in the side.
- His movement is sluggish compared to an average enemy. He moves by levitating above the ground.
- When he dies he fades out but his teeth remain for a certain time and then they fade out as well.
- When he receives damage he grunts.

Behaviors

Behavior
Move
Create Doppelganger
Fire Left Gatling Gun
Fire Right Gatling Gun
Speak
Angry Mode
Death

Attributes

Attribute	Value
Health	80
Movement Speed	3
Accuracy Moving Object	15%
Accuracy Stationary Objects	35%
Damage	.675 per bullet
Left Arm Weapon	Drum Gauntlet
Right Arm Weapon	Drum Gauntlet
Increase of Rate of Fire (Angry Mode)	50% increase in rate of fire
Force Doppelganger Spawn when the player remains under cover for	5 seconds
Body fade out time	2 seconds
Teeth remain visible time	3 seconds
Teeth fade out time	2 seconds

McGee's Doppelganger

Description

McGee's Doppelganger spawns when Jack "Fats" McGee summons him. He attempts to flank the original McGee's target, and in essence doubles his fire power. The clone's only limitation is his very low health.

Visual Design

- Height: 5' 6"
- Age: 38
- He is overweight with a wispy tail replacing the lower half of his body. He is slightly transparent with a white hue. He has on a white and black horizontal striped shirt, similar to a traditional prison uniform. His hands have been replaced with two large-drum Gatling guns. He has on a black top hat with a horse race ticket stuck in the side.
- His movement is sluggish compared to an average enemy. He moves by levitating above the ground.
- When he dies he disappears instantaneously.

Behaviors

Behavior
Move
Fire Left Gatling Gun
Fire McGee's Right Arm
Death

Attributes

Attribute	Value
Health	1
Movement Speed	3
Accuracy Moving Object	15%
Accuracy Stationary Objects	35%
Damage	.675 per bullet
Left Arm Weapon	Drum Gauntlet
Right Arm Weapon	Drum Gauntlet

Frank

Description

Frank is the third boss the player encounters in the game. Jim Howler killed him by willful negligence also. The player is introduced to Frank throughout the third level of the game. Things such as pictures on the wall of figures that have a similar facial style to Frank will be present. Another way is that in the ballroom there will be ghostly couples dancing who will be similar in appearance to Frank. This is all kept a mystery to the player as he is unaware of Frank at this point and time. Frank loves music, and Frank's level heavily reflects that. The fight with Frank takes place inside a music room resembling that of the mirror room from the Haunting. When the player enters the room, it begins to play music, and Frank begins to speak. After he is done revealing himself as the most horrific patient incident, and also the most recent, from doc's past he fades into the room.

AI

Frank has two very large knives in both hands. He is a melee based fighter. His movements, and attacks simulate those of a conductor. Frank will perform a slash attack if the player is near him, otherwise he will laugh and chase after the player. At varying intervals Frank will perform a move where he violently spins and lunges himself at the player. Due to the small size of the room, it is a very dangerous attack at particular times. The idea for this fight is for Frank to be uncomfortably close to the player, always keep the player afraid of being slashed.

Frank as previous boss fights will speak dialogue periodically during the fight to reveal more of the story throughout the fight. Frank's dialogue will vary between two tones, one that appears sane, and the other insane. During the fight with Frank, the floor of the room will continuously rotate clockwise or counter clockwise at a given rate. Upon defeating Frank, he fades away with one last bit of dialogue.

Visual Design

- Height: 6' 0"
- Age: 54
- Appearance: He is thin and wiry with a wispy tail replacing the lower half of his body. He is slightly transparent with a white hue. He is wearing a black suit jacket with a maroon shirt underneath. He is holding two long knives in his hands. He has messy black hair. He is wearing a mask that covers his face. The left side of the mask is black. The right side of the mask is white and has a smile.
- When Frank dies he fades out but his mask remains and falls to the floor.
- When he receives damage he laughs maniacally.

Behaviors

Behavior
Move
Slash Attack
Tornado Attack
Angry Mode
Speak
Death

Attributes

Attribute	Value
Health	100
Movement Speed	6 ft/sec
Weapon	Frank's Knives
Slash Attack Delay	5.0 seconds
Slash Attack Min Range	6 feet
Tornado Attack Delay	10.0 seconds
Tornado Attack Duration	2.0 seconds
Tornado Attack Speed Increase	100% increase
Body Fade out Time	3 seconds

Death

Description

This is the final boss the player encounters in the game. Death has very dark sense of humor, and throughout the levels he acts as a guide and a mentor. Death brings you into his house in hopes of making you suffer, but lies by saying that Jim Howler, controlled by the player, has a chance at reincarnation if he successfully makes it to the attic of the house where Death resides. At first, Death appears friendly by providing the player with useful advice and tutorials for the game. As the game progresses, Death makes his appearances sparser and occasionally appears to mock the player and discourage him from moving forward. Upon finally confronting Death, he is positioned inside a small room, the attic, surrounded by sixteen mirrors. Death has a very similar style of fighting to that of Frank, but is a bit slower.

AI

He moves towards the player and will slash his scythe when close enough. He will pause when performing his swing of the scythe, and then continue forward. For his second attack he will throw his scythe up in the air and it will begin to twirl. As it does, two more will appear beside it, and Death will then launch them directly at the player. After the attack is performed, the scythe will simply fade back into Death's hands. When Death reaches 50% health, he will add two more attacks to his repertoire. First the Columns of Death attack, during which Death will send eight columns of dark energy evenly around his circumference. This attack is not very damaging, but comes out fairly quickly. For his final attack, Death will hide inside one of the mirrors, and fly out of another mirror to attempt to slash at his target. (See Algorithms for Mirror Attack)

Visual Design

- Height: 6' 3"
- Appearance: He is wearing a long black robe that reaches the floor. Sometimes he will be carrying a huge scythe. The only part of him you can see is his head. The hood of the robe is over his head. His face is a skull
- Specific dialogue is TBD.
- Basement Tutorial – While talking through a mirror Death teaches you the basics of movement and combat. Here's some example dialogue: "Now move to the door and open it." "Shoot that box." "Jump three times." "Eliminate that Igniter."
- Second Level – Death briefs you on the Slimers and Gravi-Ghouls that you will encounter in this level.
- Third Level – Death briefs you on the Blinkyies and Shades that you will encounter in this level.
- Fourth Level – Death says, "You have made it to where no living soul has set foot. But you will not survive for long." He then laughs.
- When Death dies the camera will shake violently and then a black explosion of energy will emanate from him engulfing the screen.

- When he receives damage he hisses at you.

Behaviors

Behavior
Move
Scythe Slash Attack
Columns of Death Attack
Scythe Twirl
Mirror Attack
Speak
Death

Attributes

Attributes	Values
Health	120
Movement Speed	6
Weapon	Death's Scythe
Scythe Attack Radius	10 feet
Scythe Attack Pause Duration	1.0 second
Scythe Twirl Height	8 feet
Scythe Twirl Duration	3.0 seconds
Columns of Death spread angle	45 degrees
Columns of Death Speed	15 ft/sec
Columns of Death Column diameter	1 foot
Columns of Death damage	10 per column
Mirror Attack max teleports	3
Mirror Attack Death Speed	10 ft/sec
On death camera shake time	2 seconds
Death explosion engulf time	1 second

Igniter

Description

The Igniter is a basic enemy that the player encounters throughout the entire game. They are fire based and their flames do a lot of damage to Shades and Slimers. Igniters are weak when they have no wisps around their body.

Visual Design

It's a floating yellow and orange flame. It is floating 3 feet off the ground. It has other smaller flames orbiting around it. It has black glowing eyes. When it dies it will disappear and a puff of smoke will replace it. When it receives damage it will make a small auditory squeak.

AI

The Igniters movement is determined by avoiding world objects and the player based on ray casts.

Behaviors

Behavior

Move
Fire Wisps
Death

Behavior

Move

Fire Wisps

Death

Attributes

Attribute	Value
Health	10
Movement Speed	2 ft/sec
Weapon	Fire Wisps
Num. of Wisps	1-4 wisps
Wisp Regeneration	1.0 second
Ideal distance from player	7 - 10 feet
Ideal distance from world objects and static objects	1-Infinity feet
Puff of smoke duration	2 seconds

Slimer

Description

The player encounters the Slimer from the second level on. Slimers are large goopy blobs made from spirit goo.

Visual Design

It's a ball of green slime with a trail of slime behind it. They have vertical slit black eyes. When it dies it scales down to zero and disappears. When it receives damage it will make a small auditory squeak.

AI

When spawned, slimers immediately fall to the ground and move along the floor until they encounter an enemy. Once they encounter an enemy, they attack and damage the enemy. Slimers also have the ability to generate small miniatures, which they use as weapons.

Behaviors

Behavior
Move
Spawn Miniatures
Death

Attributes

Attribute	Value
Health	30
Movement Speed	3 ft/sec
Weapon	Slimer Spawns
Num. of Spawns	3 at a time
Rate of Fire	Every 1.25 seconds
Ideal Distance to target	10 – 15 ft.
Ideal Distance from world objects	1 - Infinity ft.
Scale down time	1 second

Blinky

Description

The player encounters Blinkies from the third level on. Blinkies most resemble the ghosts from Pac Man.

Visual Design

These ghosts have a cloth over them, but are not really visible. They will occasionally blink in and out of visibility rapidly. It has small circular black eyes that blink. When it dies it will fade out permanently. When it receives damage it will make a small auditory squeak.

AI

Blinkies float much higher than other enemies, and move around in true 3D. They have the ability to “blink” in and out, rendering them invisible to the player for a period of time. When phased in they may attack with an ecto blast. They are especially weak during their phased out stage. They move around randomly using a wander steering behavior.

Behaviors

Behavior
Move
Fire Ecto Blast
Phase Out
Phase In
Death

Attributes

Attribute	Value
Health	10
Damage received during Phase Out	50% increase
Movement Speed	
Weapon	Ecto Blasts
Phase Speed	1.5 seconds
Phase Out Duration	4.0 seconds
Phase In Duration	6.0 seconds
Death fade time	3 seconds

Shade

Description

The player encounters Shades from the third level on. They have the ability to teleport from shadow to shadow and fire a dark energy beam at their target.

Visual Design

It is a reminiscent of an hour glass-shaped puddle of black goop. When it dies it sinks slowly into the ground. When it receives damage it makes a small auditory squeak.

AI

Shades are a pretty stationary enemy, though their ability to teleport makes them a difficult enemy. When encountered, they will shoot at the player from their current shadow. After a period of time, they disappear into the shadow and re-emerge at another shadow point.

Behaviors

Behavior
Move
Teleport
Fire Dark Energy Beam
Death

Attributes

Attribute	Value
Health	40
Weapon	Dark Energy Beam
Teleport Frequency	4 – 6 seconds
Teleportation Time	1.0 second
Death sink time	1.0 second

Gravi-Ghoul

Description

The player encounters Gravi-Ghouls from the second level on.

Visual Design

It is two spheres revolving around each other with electric bolts crackling between them. One sphere has a plus sign on it and the other has a minus sign. When it dies the electric arcing between the spheres stops and the two spheres fall to the ground and they sink into the ground. When it receives damage it makes a small auditory squeak.

AI

Gravi-Ghouls wander around the room looking for objects to throw at their enemies. Once they find an object, they will turn towards an enemy and launch their projectile.

Behaviors

Behavior	
Move	
Spin	
Toss At Target	
Death	

Attributes

Attribute	Value
Health	15
Weapon	Gravity
Rate of Fire	Every 3.15 seconds
Max Distance From Target	15 ft
Death sink time	1 second

Weapons

Default

Description

This is the initial weapon the player is equipped with. The primary fire takes no ammo, thus the player is always able to use this. The secondary fire gives the player a health boost if he has collected health packs.

Visual Design

Primary fire shoots out round white pellets of spirit energy.

Behaviors

Behavior

Primary Fire

Secondary Fire

Attributes

Attribute	Value
Primary Damage	2
Secondary Health Boost	25
Primary Ammo Consumption	0
Secondary Ammo Consumption	10

Fire

Description

Fire Wisps are the first enemy the player encounters, and serves as the first weapon the player can absorb. It gives the player the ability to use fire based attacks.

Visual Design

The circular tattoo on the players back forearm will fill with a red flame, from out of which miniature fire wisps will pop out to circle around the players arm and hand.

Behaviors

Behavior

Primary Fire

Secondary Fire

Attributes

Attribute	Value
Primary Damage	10
Secondary Damage	15
Rate of Fire	Every 1.0 seconds
Max Ammo	100
Primary Ammo Consumption	1
Secondary Ammo Consumption	4
Secondary Area	5ft radius
Primary Speed	15 ft/ sec
Secondary Initial Speed	15 ft/ sec

Goo

Description

The primary fire is slightly weaker than the damage from the Fire Wisps, but also has the ability to home in on enemies. The secondary ability gives the player a defensive shield.

Visual Design

Primary fire looks like miniature version of a Slimer. Secondary fire shoots out a defensive wall which is an arched pile of goo.

Behaviors

Behavior

Primary Fire

Secondary Fire

Attributes

Attribute	Value
Primary Damage	3
Rate of Fire	Every 1.25 seconds
Max Ammo	100
Primary Ammo Consumption	4
Secondary Ammo Consumption	10
Goo Wall Health	20

Gravity

Description

Players earn the ability to manipulate gravity by absorbing energy from Gravi-Ghouls.

Visual Design

Primary fire depends upon the object being thrown. The secondary fire creates a visual distortion effect, a circular wave that expands outwards from the player.

Behaviors

Behavior

Primary Fire

Secondary Fire

Attributes

Attribute	Value
Primary Damage	Varies by the amount of objects (See Algorithms)
Primary Fire Initial Velocity	15 ft/ sec
Secondary Fire Additive Velocity	15 ft/ sec
Rate of Fire	Every 2 seconds
Max Ammo	100
Primary Ammo Consumption	5
Secondary Ammo Consumption	10

Ecto

Description

Absorbing Blinkyies further adds to the players growing list of abilities, giving the player a strong offensive attack and the ability to render one's self invisible.

Visual Design

Primary fire sends out a large white ball linearly from the users aim. The secondary fire renders the user invisible to all enemies.

Behaviors

Behavior

Primary Fire

Secondary Fire

Attributes

Attribute	Value
Primary Damage	20
Rate of Fire	Every 3 seconds.
Max Ammo	100
Primary Ammo Consumption	20
Secondary Ammo Consumption	8 per second
Primary Speed	15 ft/ sec

Shadow Energy

Description

Shades are one of the last enemies the player encounters, and round out the list of player abilities with an additional offensive blast and the ability to view all ghosts.

Visual Design

Primary fire sends out a glowing black beam. Secondary fire changes the vision of the user, applying a color changing filter to all objects in the scene.

Behaviors

Behavior

Primary Fire
Secondary Fire

Attributes

Attribute	Value
Damage	5 per second
Rate of Fire	Constant Stream
Max Ammo	100
Primary Ammo Consumption	5 per second
Secondary Ammo Consumption	5

Rubber Ball

Description

A small toy used by Lily as her main weapon.

Visual Design

A round colored sphere made of rubber.

Behaviors

Behavior

Spiral Ball

Bouncy Ball

Attributes

Attribute	Value
Spiral Ball Damage	10
Spiral Ball Radius	1 ft.
Bouncy Ball Damage	15
Rate of Fire	Every 2.0 second
Spiral Ball Speed	15 ft/sec
Bouncy Ball Speed	6 ft/sec
Bouncy Ball Duration	10.0 seconds

Drum Gauntlet

Description

This is the favored weapon of Fats McGee, who has two of these weapons attached to his arms instead of hands.

Visual Design

An offensive weapon the shape of large drum with multiple barrel holes. The barrels rotate as the weapon is fired. (See Algorithms for the weapon's spread algorithm)

Behaviors

Behavior

Primary Fire

Attributes

Attribute	Value
Damage	0.675
Rate of Fire	Every 0.1 second

Frank's Knives

Description

Frank, the psychotic boss of the third level, favors the use of two long knives as his weapons of choice.

Visual Design

Both knives are very similar, being extremely long and thin, like a fencing Sabre. They are also both extremely sharp.

Behaviors

Behavior

Primary Fire

Attributes

Attribute	Value
-----------	-------

Damage	10
--------	----

Death's Scythe

Description

The iconic main weapon of Death, the scythe is an extremely versatile and destructive weapon.

Visual Design

A large, intimidating scythe, with a large staff of wood as the handle and an extremely large and deathly sharp blade shaped like a half moon.

Behaviors

Behavior

Primary Fire

Secondary Fire

Attributes

Attribute	Value
Primary Damage	15
Mirror Attack Damage	20
Death Swirl Attack Damage	7

Power-ups and Upgrades

Health Pickups

Description

This pick up is ammo for your secondary fire ability on your default weapon which restores a portion of your life. This pick up is placed around the levels and the player receives it whenever they walk over it.

Visual Design

A wispy white sphere with a large red cross in the center.

Behaviors

Behavior

Add to Default

Weapon Ammo

Attributes

Attribute	Value
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Ammo Added	10
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Essence from Ghosts

Description

After destroying an enemy ghost, it's soul/essence remains, and is sucked towards the player. Depending on the enemy it will replenish its respective ammo type, or upgrade to a new ability if it is the first time the essence is absorbed

Visual Design

Small colored orbs, the color depending upon the enemy that drops it.

Behaviors

Behavior

Add to Weapon
Ammo

Attributes

Attribute

Value

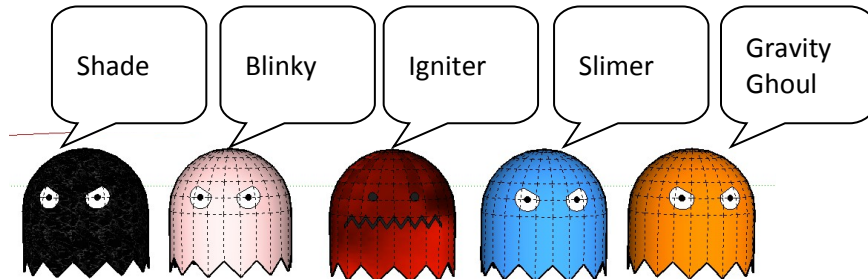
Ammo Added

Varies dependent upon the enemy that drops it. (See Character's Section)
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Levels and Maps

Map Key

Enemies



Audio

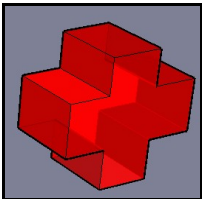


Music Queue, or Sound Effect

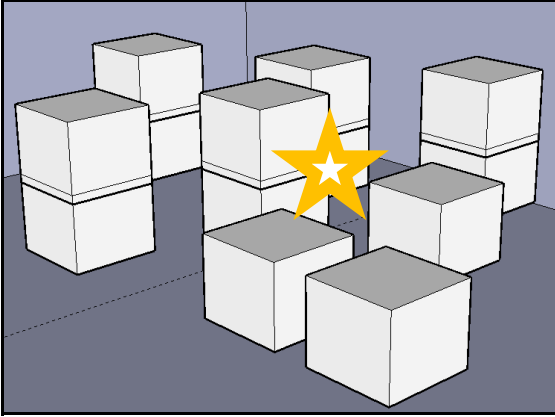


Dialogue

Items and Pickups

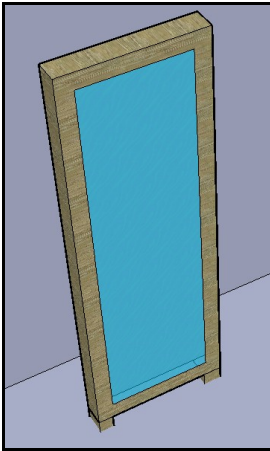


Health pickups are placed throughout the levels (See Powerups). The placement may change based on testing and feedback.



Dynamic Objects are objects in the level that can be picked up using the use key, or interacted with using the channeling abilities such as gravity channeling. (See Weapons).

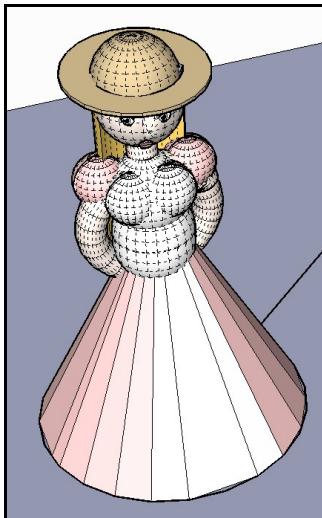
Items marked with an orange star, are dynamic objects.



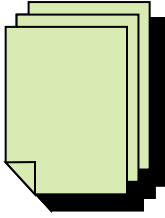
Death's Mirror can be found throughout the levels. These mirrors will usually have Death appear and provide a short tutorial or story element for the player.

These mirrors are also used to mark game progress and serve as checkpoints through the levels.

Other Keys



Game Bosses are all represented by the model on the left. These bosses do not necessarily share in appearance with this particular model.



Scripts usually mark a scripted event. For details, please reference the verbal map.



Bubble Bullets are used throughout the maps to provide extra detail.

Game Scale

The game levels are represented in feet. Respectively all numerical speeds are in feet per second.

The reason for the decision to use feet was primarily a visual preference.

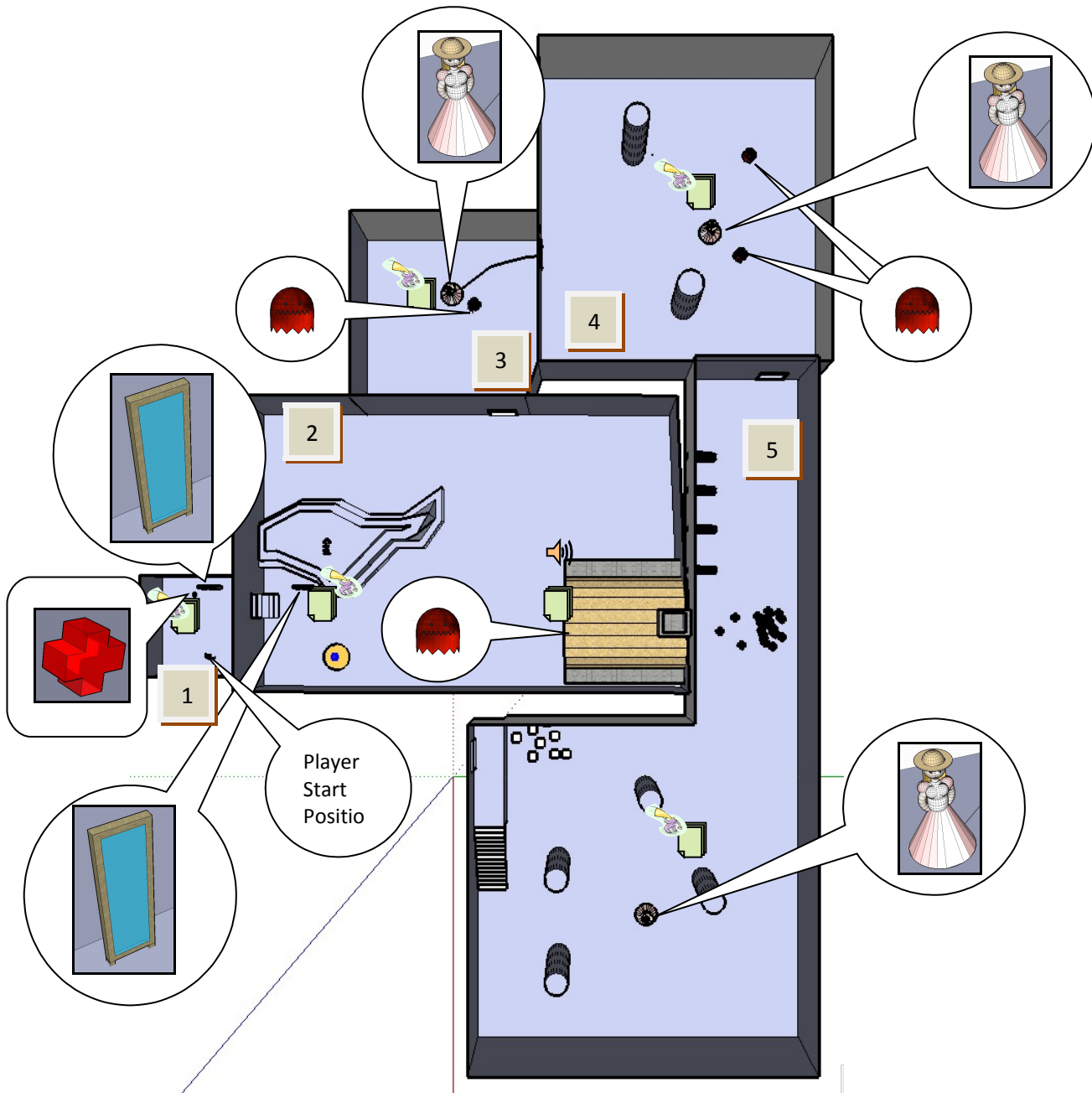
Room Progression

Unless stated otherwise, the player cannot progress to the next room without first defeating all the enemies within that room. Each room is bound by a locked door which will be opened upon the final enemies defeat.

Level One: Basement

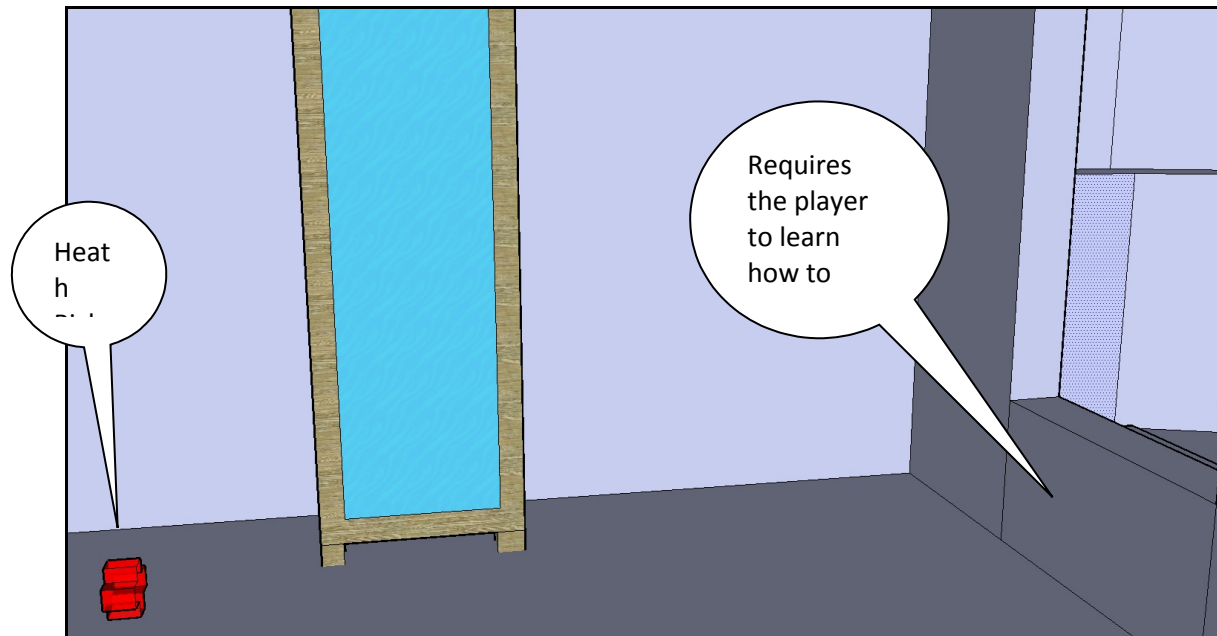
Level one has the player learn basic gameplay and introduces him to the first ghost type the Igniters. The player also faces off against his first boss battle, Lily. The level focuses on lots of grays, and very saturated colors. This will provide from a grim first look into the game's environment as well as set the mood.

Map



Verbal Map

1. The Storage room



From player's perspective, after the opening cutscene.

- The room fades in after the opening cutscene, and the player should have now realized he's a dead ghost.
- Death appears in the mirror in front of the player, you're instructed to approach (thus learning movement). If the player chooses to move on ahead to the next room, or pickup the health pickup the tutorial jumps ahead or ends.
- Death proceeds to explain the game's objective: Reach the Attic
- He also tells you to pick up the health pickup on the floor to your left, and explain pickup usage and secondary fire.
- Death tells you that before moving on, he needs a small favor in the next room.

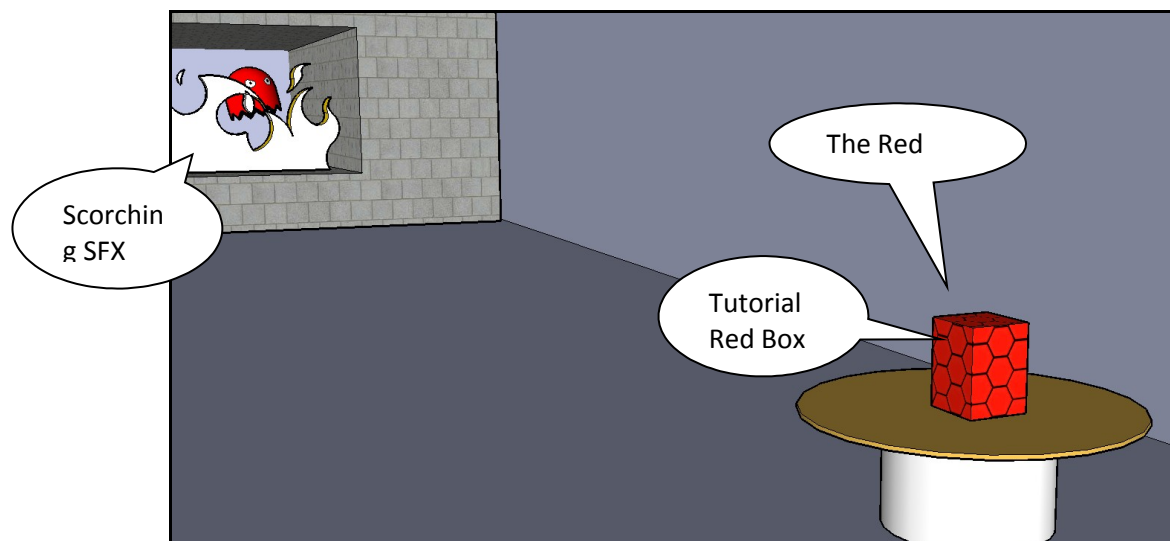
This is Coal

2. The Furnace



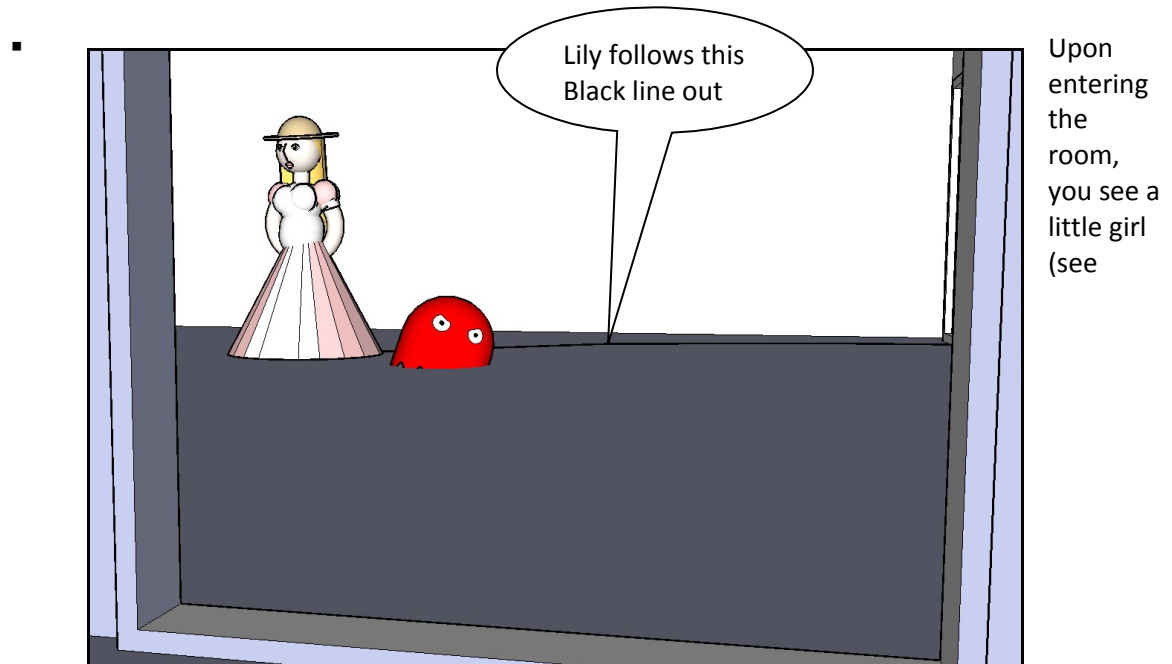
Player perspective after jumping over the set of bricks.

- Blocking the entrance to the next room is a small obstacle of bricks.
- The player must jump over the obstacle.
- Next the player is introduced to his now spirit like arm. He's told to shoot some ghost essence (See Default Weapon) at the box sitting on the table behind him.
- The player is then told that some objects in the game are movable while others have a magic barrier. This particular box holds a few items that Death would like to get rid of.
- He instructs you to take the box (thus learning the use/activate button) and dispose of it inside the furnace.
- After the box is dropped inside the furnace, it ignites, and an igniter spawns from the furnace.
- Subtle level music begins to play.
- The igniter possesses only one wisp.
- Defeating the igniter allows the player to proceed to the next room through the doors in the south west side of the room. These doors remain locked until the Igniter is defeated.



Red Box is part of the tutorial

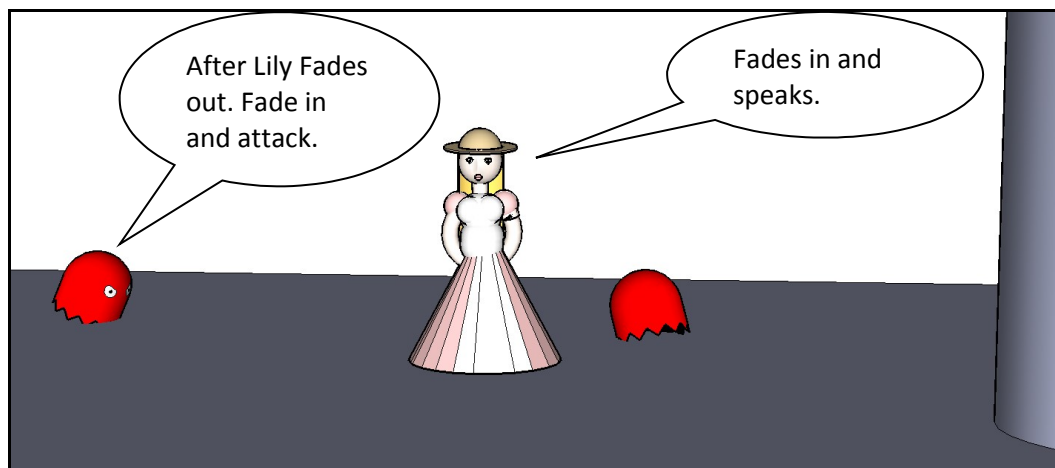
3. The Toy Room



characters. Lily) with a rubber ball. She says “Mommy, mommy, come play with me mommy” giggles and runs off into the next room.

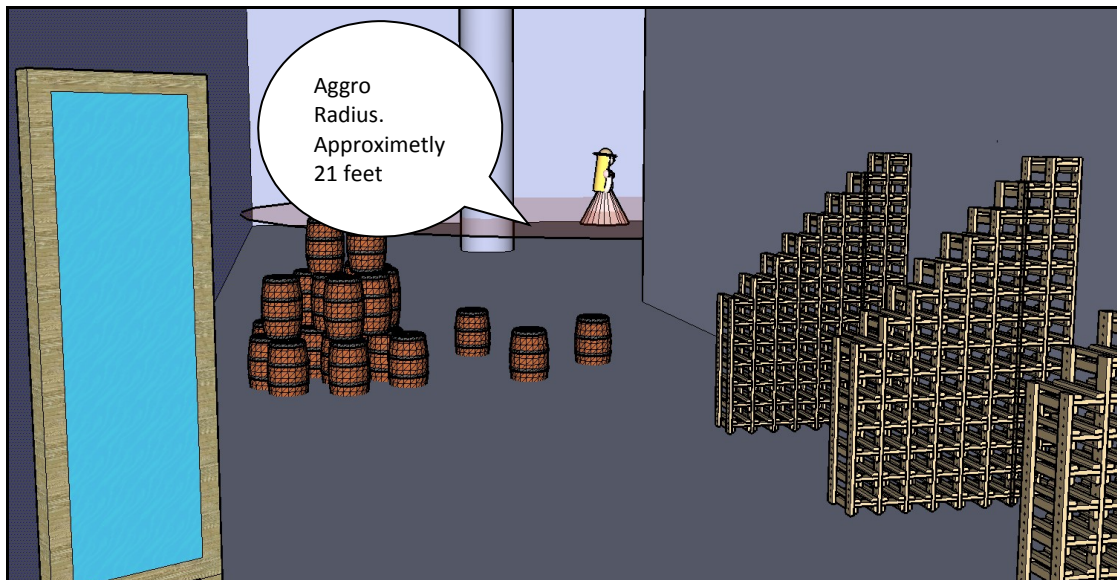
- After Lily leaves; an Igniter with 3 wisps immerses from the floor and attacks the player.

4. The TV Room

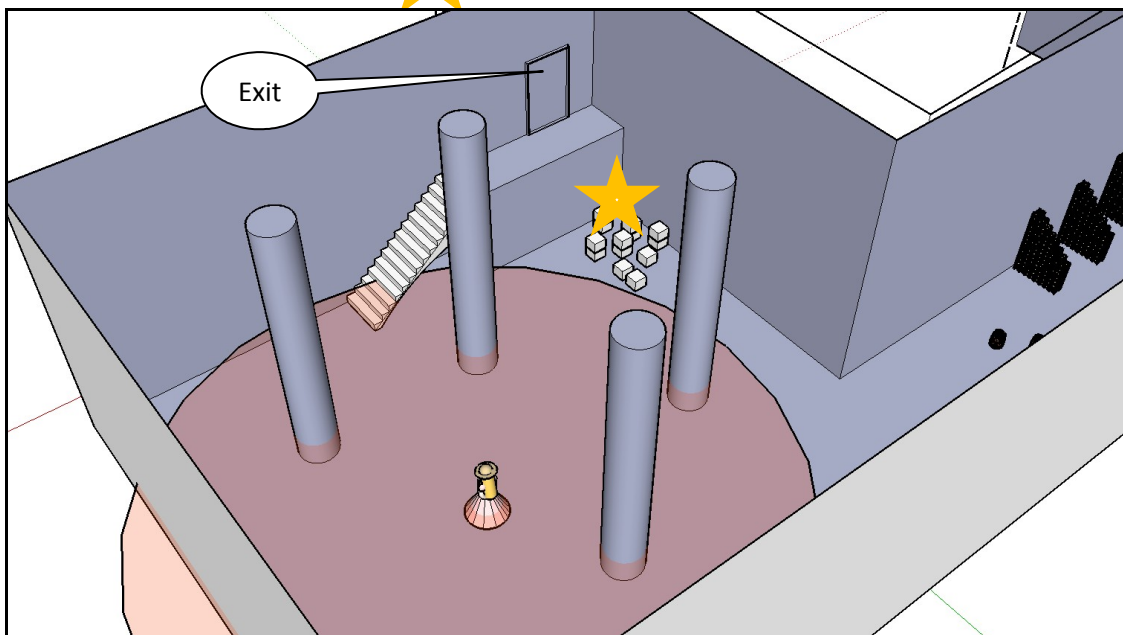


- Lily fades in the middle of the room and says “Mommy I don’t like the doctor, I don’t want to get the operation” she sulks and fades out.
- As Lily fades out two Igniters fade in with 3 wisps each.
- There are two columns in the room that provide for good cover.

5. The Wine Cellar



-
-
- This is where
- Another mirror is placed near the entrance. Death explains that mirrors mark the players progress and absorb some his humanity in case he were to lose it.
- Lily stands in the middle of the adjacent area. When the player begins to approach she will say "Its you! You did this this"
- Upon defeating Lily, the player can finally ascend to the next floor of Ghostly Manor.



Level Goal

The player must learn movement, the use of his default weapon and secondary fire, to pick up and interact with items using the “use key”, and experience his first enemy type “the Igniters”. Finally, the player must defeat Lily, the boss at the end of the level. Upon doing so the player may proceed up to the next floor.

Ambient Environmental Aspects & Objects in Level

The basement level features primarily gray and heavily saturated colors similar to those found in infomercials from the 1960s United States. The music should complement the mood. The melody should be quite and not overly distracting. The music also should feature shortly paced percussion, and occasional strings to help simulate anxiety, and the unexpected. Very similar to track 17 by Yoko Kanno / Stand Alone Complex, Vol 2. The sfx for the level will feature lots of scorching paper sounds, that are heavily associated with the Igniters.

Audio

Music	Description
gr_Lvl1Music	Queues after the first fight with the igniter in the furnace room
Sound Effects	Description
Death Dialogue	Introduction; game goal, and tutorial
Lily Dialogue	Backstory/flashbacks
Scorching Furnace	SFX when the red box is dropped inside the furnace
Surface Collision Sounds	

Level Objects

Object	Description
Cardboard Boxes	The player is free to interact with the environment using Agea’s physics SDK and these boxes become the main source of fun early on.
Round table	A certain object rests on this table.
Death’s Mirror	Checkpoint, and tutorial point
A Huge Furnace	The player is asked to dispose of a certain item, by dropping it into the Furnace. Also the first enemy spawns from within the furnace.
Coal	These provide some form of terrain for the player as these objects are not moveable.
Small Red Box	Used for the tutorial on the “use key”
Basement Doors	Doors between rooms
Wine Racks	These are in the boss room.
Wine Bottles	These are on the wine racks.
Wine Kegs	These are in the boss room.

Game Time

Below are expected play time for level completion. This is based off of the estimated time for combat as shown in Interactive Rhythm section, the estimated time for story events, and player exploration.

- Basement 130 seconds

Level Scale

A Maya base unit for the entire level is 1 foot per unit. Below are some metrics for each room.

Room	Width	Depth	Height
Storage Room	13'5	13'5"	12'7"
Furnace Room	57'3"	37'8"	21'
Toy Room	24'2"	24'2"	17'4"
TV Room	38'1"	41'10"	17'4"
Wine Cellar	91'2"	44'7"	20'3"

Environmental Interactions - Behaviors

Behavior
Mirror Glows
Furnace Scorching
Red Box Glow
Engulf in Flames
Lily Fades out
Lily Fades in
Doors Open
Doors Close
Unlock Door
Open Final Door
Triggered Spawn

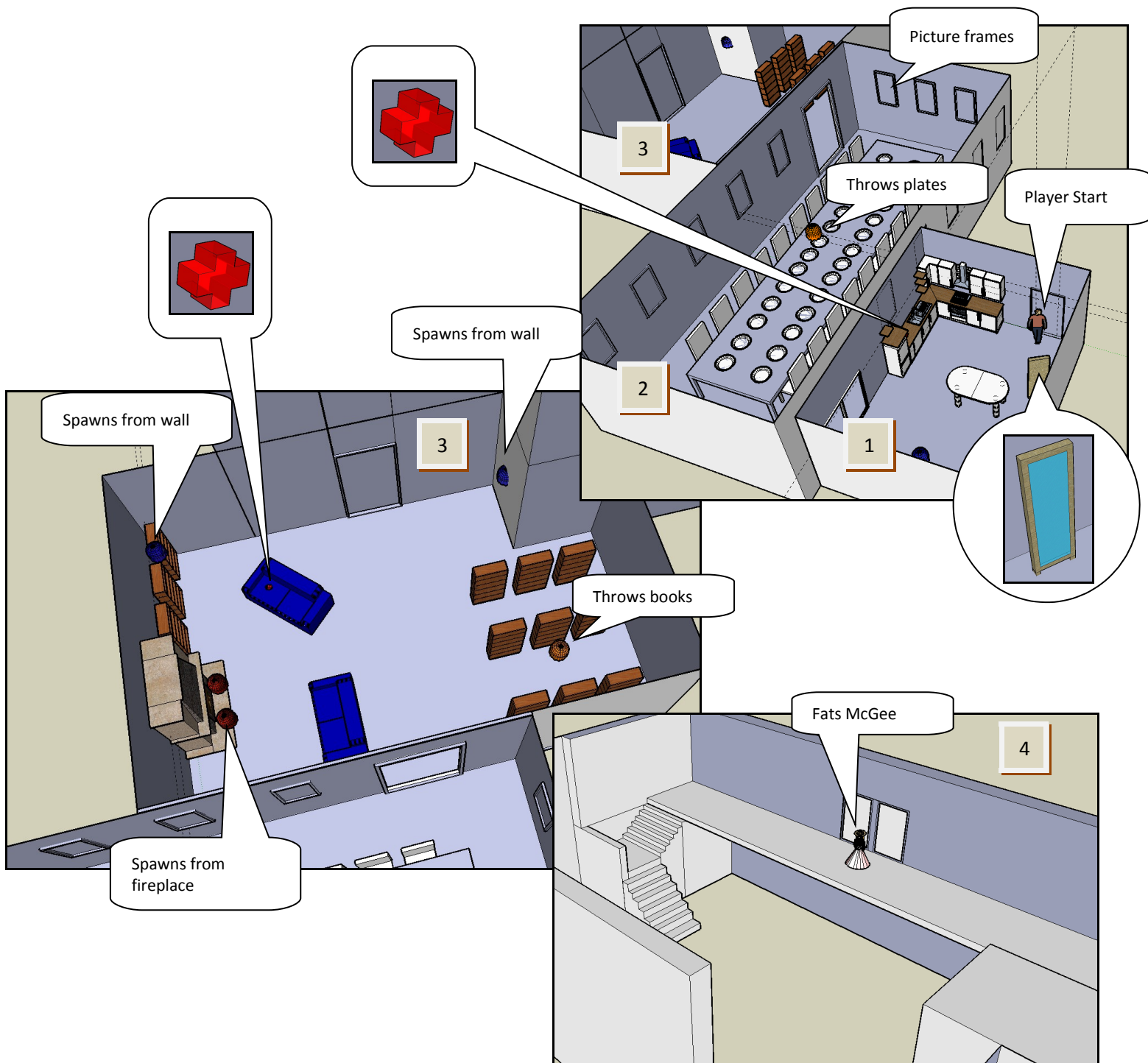
Level Attributes

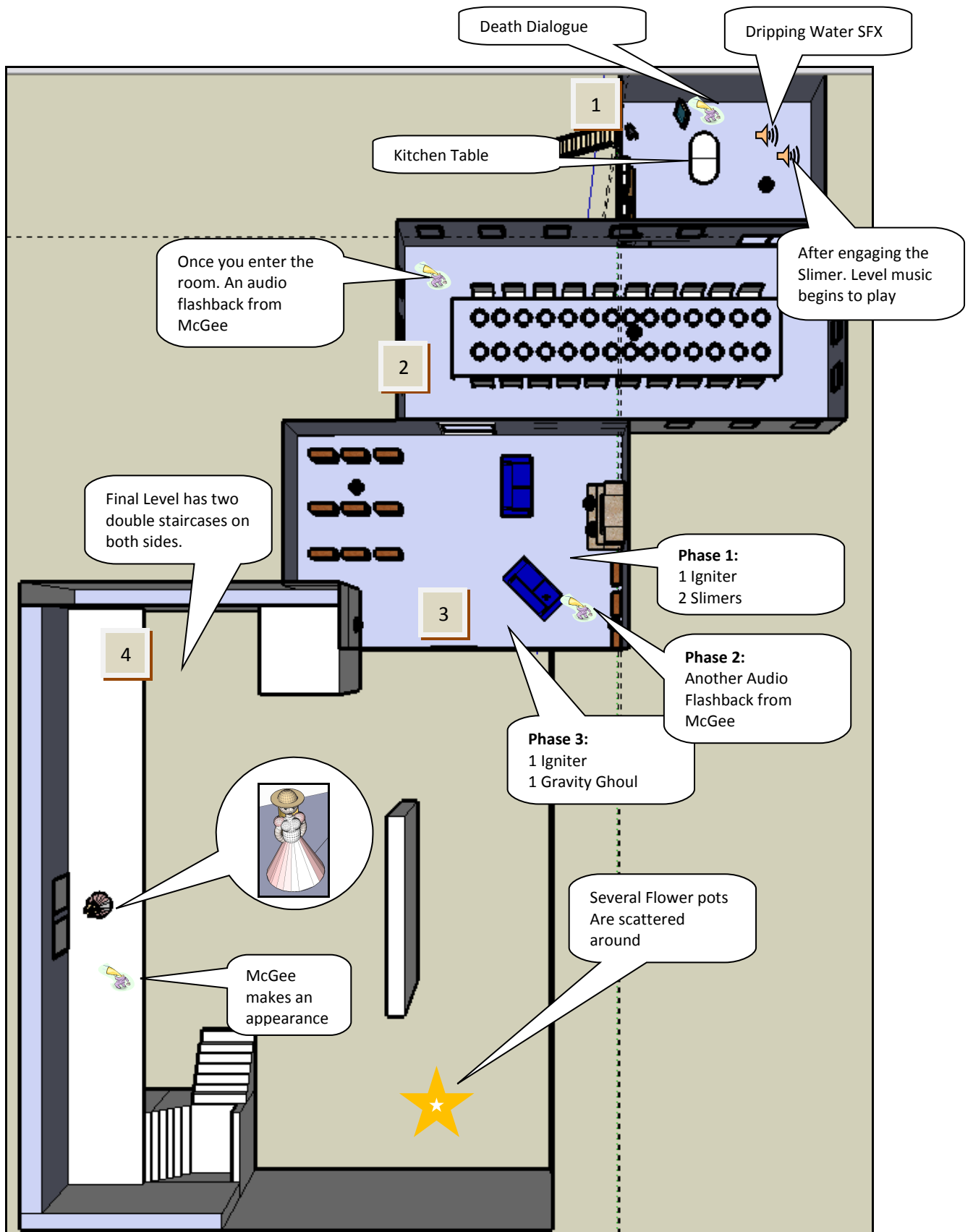
Attribute	Value
Mirror Glow Proximity	4.0 ft
Red Box Glow Rate	Every .5 seconds
Time before first igniter spawns	.5 seconds
Lily fade in speed	1 second
Lily fade out speed	0.3 seconds
Door Open Speed	0.3 seconds
Door Close Speed	0.3 seconds

Level Two: Ground Level

Level two features lots of cold blues, as the player begins to surface, things are still looking very dim. The objective of level two is no different than the objective of level one. Reach higher ground. The end of the level has the player faces off against the notorious gangster incarnation Fats McGee.

Map





Verbal Map

1. Kitchen

- Entering the kitchen player hears chilling sounds of dripping water echo.
- Upon entering the player receives another visit from Death through the mirror on the left side of the door.
- Death jokes about the player's progress and talks about cycling ammo.
- As the player approaches the set of double doors leading to the next room he'll notice a puddle on the floor.
- From this puddle he triggers a Slimer (a new ghost type). Upon successfully beating the Slimer the player may proceed forward.
- An optional health pickup is on the counter.

2. Dining Room

- Upon entering, the player receives some flash-back audio from when Fats McGee (his old patient) was suffering on the operating table.
- The dining room is filled with painting of Death's family members. From Mama Death to Papa Death. In the middle of the room is a long dining table, on which there is a scatter of plates and other pickup objects.
- After the audio flashback from McGee a gravity ghoul will spawn and begin tossing the table ware at the player. The player will hopefully utilize his slime wall from the previous encounter.

3. Lounge

- Another flash-back audio from a conversation between Fats and the good doctor Jim Howler.
- The lounge has several sofas scattered across the room, including one that is blocking the exit and is too heavy to pick up. There are several bookshelves, and a large fireplace on the wall. This room is the first two phase room, meaning that upon beating the first wave of enemies, a second wave will spawn.
- The igniters will spawn from the fireplace, while the Slimers will drop from the walls. When the second wave spawns, the Gravity Ghoul will use small books to pummel the player.

4. Main Hall

- Upon defeating Fats McGee, the player is free to proceed up the stairs to the second floor.

Level Goal

The goal of this level is to proceed up to the next floor. It is also important to introduce to the player a few more ghost types and teach him how to cycle ammo types. The player is further immersed into the story with the introduction of another character, previously known as Fats McGee.

Ambient Environmental Aspects & Objects in Level

The second floor is filled with cold blue colors. In a way it should feel more gloomy than the basement. The level is complimented with sounds of dripping water to help emphasize the new presence of Slimers, and as well as chimes and chain rolls.

Audio

Music	Description
grLevel2Music	Queues after the first fight with the Slimer in the kitchen

Sound Effects	Description
Death Dialogue	Mocks your progress
McGee Flashback	McGee has two flashbacks for the player; one in the dinning room, another in the lounge
Dripping Water	Sound is emitted in the kitchen.
Surface Collision Sounds	

Level Objects

Objects	Description
Tableware	Gravity Ghoul throws plates at the player in the kitchen
Books	Gravity Ghoul throws books at the player in the Lounge
Flower pots	Spread throughout the main hall for the payer to use against McGee (See Weapons)

Game Time

Below are expected play time for level completion. This is based off of the estimated time for combat as shown in Interactive Rhythm section, the estimated time for story events, and player exploration.

- First Floor 340 seconds

Level Scale

A Maya base unit for the entire level is 1 foot per unit. Below are some metrics for each room.

Room	Width	Depth	Height
Kitchen	18'8"	25'1"	11'11"
Dining Room	24'1"	54'9"	14'3"
Lounge	27'8"	20'1"	14'3"
Main Hall	59'1"	67'3"	25'1"

Environmental Interactions - Behaviors

Behavior
Spawn Trigger
Open Door
Close Door
Unlock Door
Open Final Door

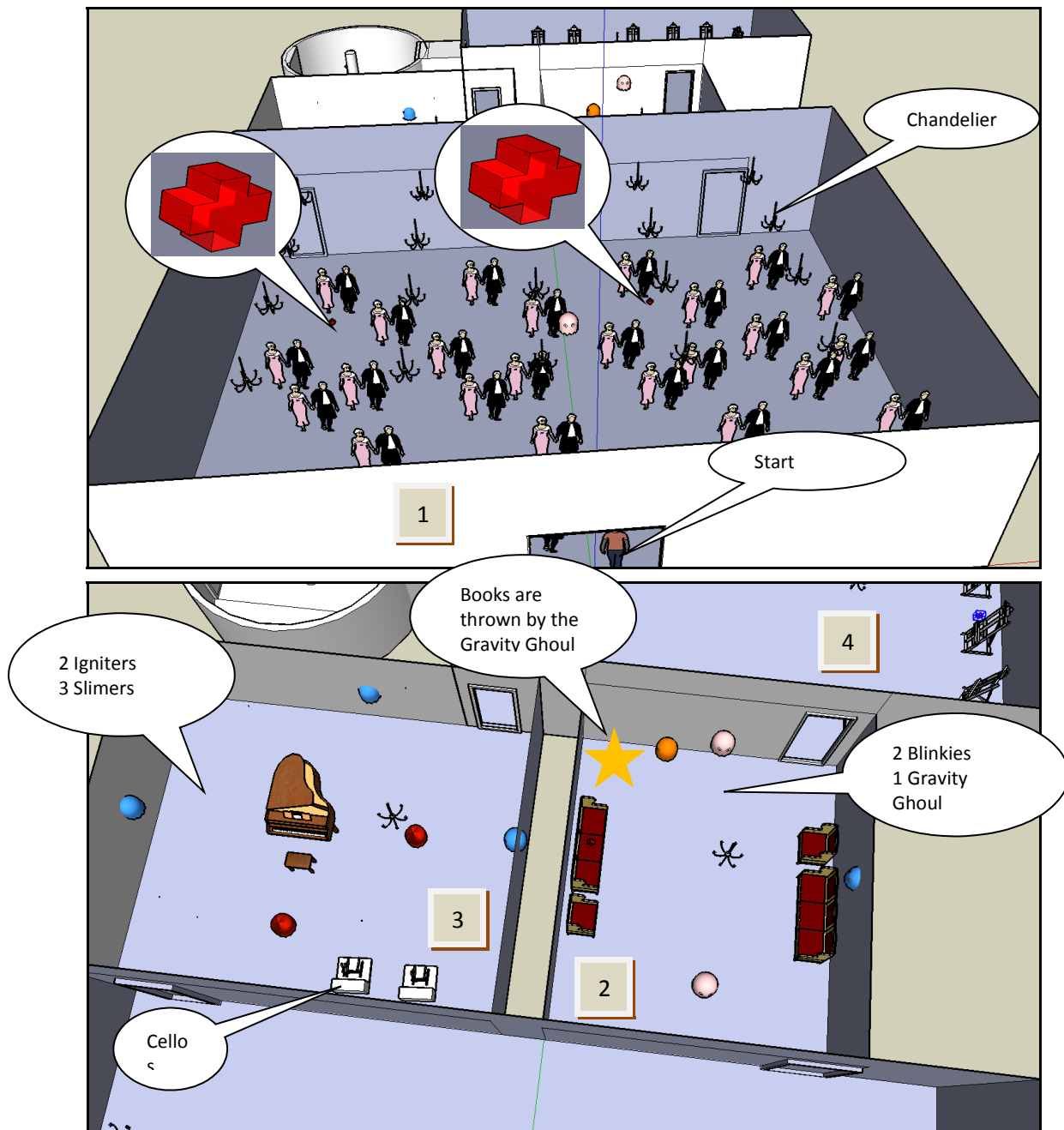
Level Attributes

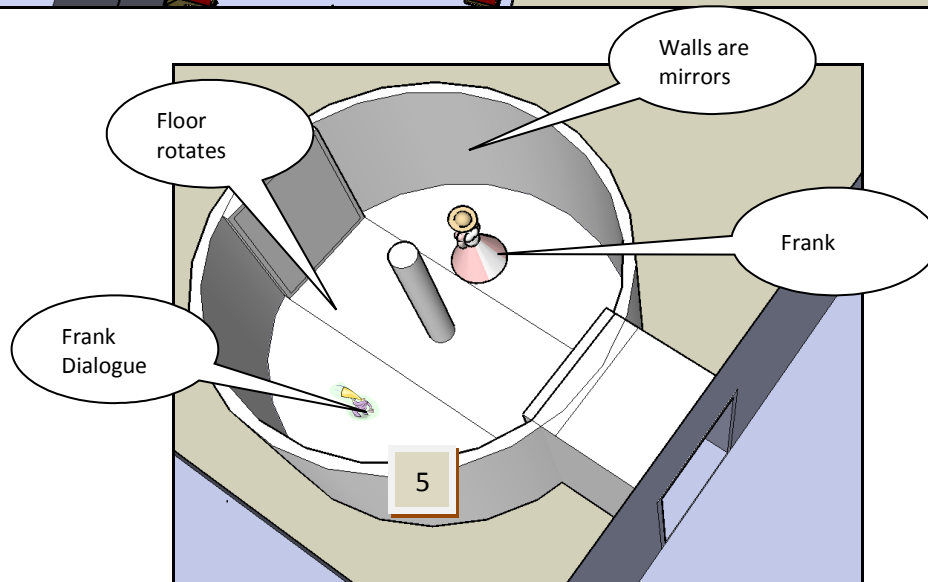
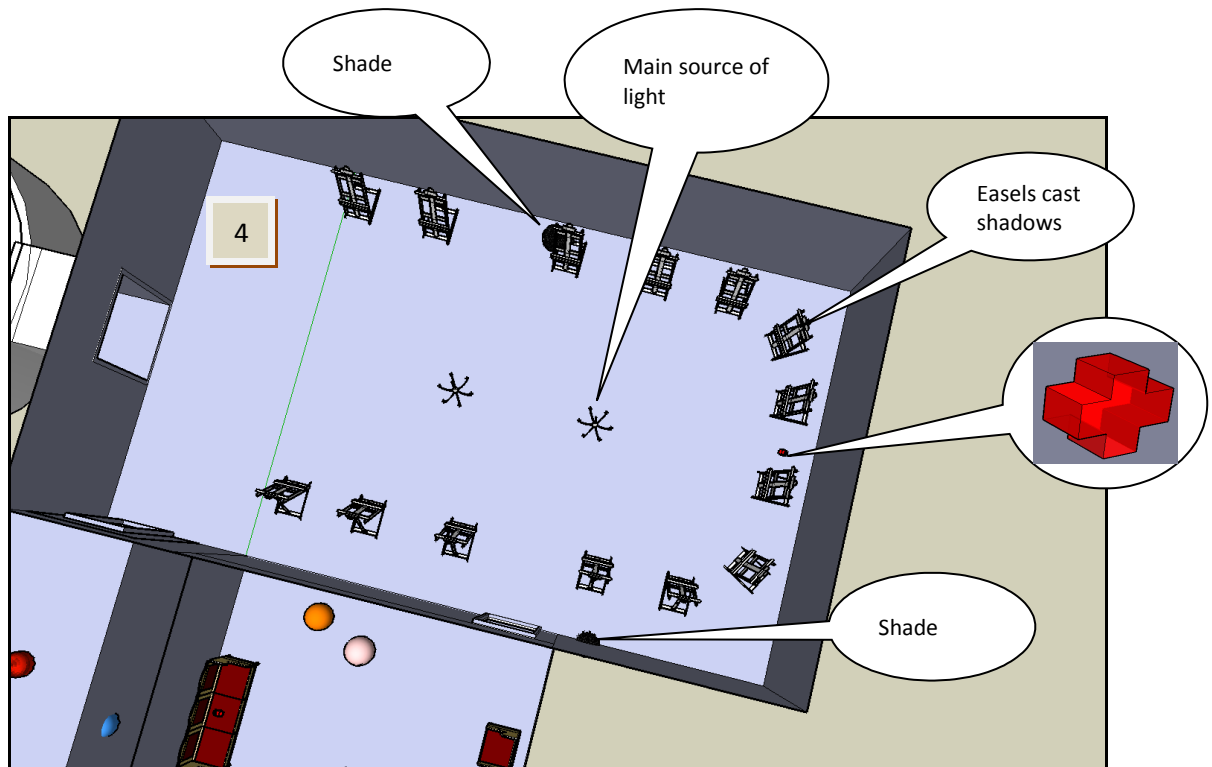
Attribute	Value
Door Open Speed	0.3 seconds
Door Close Speed	0.3 seconds

Level Three: Second Floor

The second floor is much louder, as it is essentially Death's entertainment area. Here you'll see much brighter colors resembling those of Halloween. The point is to draw contrast from the previous levels and for this level to feel more exciting than those before it.

Map





Verbal Map

1. Ballroom

- On the player's left is another check point. Death does not make an appearance.
- When the player enters the room, music starts playing.
- Couples in the room are bobbing up and down as they dance.
- All the faces have Frank's mask on them. This is not yet obvious to the player.
- The player is introduced to a new enemy, the Blinky (See Blinky).
- After the player defeats the enemy. He may choose to proceed through the left or right door in the ballroom.

2. Instrument Room

- This room has 2 Igniters with 3 wisps each, and 3 Slimers spawn and attack the player.
- Defeating everyone will allow for successful progression.

3. Reception Room

- This room spawns 2 Blinkies, 1 Slimer, and a Gravity Ghoul that will toss books at the player.
- Clearing the room of enemies will allow for progression into the next room.
- A Health pickup can be found on the chair to the left.

4. Art Gallery

- The gallery has light coming directly from the middle of the room, casting hard shadows behind each easel.
- The easels are not dynamic objects (See Dynamic Objects). Therefore the shadows will remain constant.
- Two new enemy types, the Shades, will spawn in the shadows. These enemies have the unique ability to teleport from shadow to shadow, those being exclusively cast by the easels.

5. Spinning Music Room

- When the player enters, the room is empty, and the floor is not spinning.
- Frank introduces himself through dialogue.
- Frank fades in.
- The room starts spinning (counter clockwise)

Level Goal

The player is introduced to each enemy type. The goal is to defeat Frank and ascend up.

Ambient Environmental Aspects & Objects in Level

This floor is marked by vibrant contrasts of reds, yellows, oranges, purples, whites and blacks. It is shiny and new compared to the previous floors. The background music is Grisly Reminder by Midnight Syndicate.

Audio

Music	Description
grLevel3Music	Music for the level. Queues when the level loads

Sound Effects	Description
grLvl4FrankDia1	Frank introduces himself
grGearRotation	Inside the Music Room

Level Objects

Objects	Description
Dancing Couples	Have Frank's masks on them as they bobble up and down
Easels	Cast hard shadows onto the floor
Spinning Floor	In the music room.

Game Time

Below are expected play time for level completion. This is based off of the estimated time for combat as shown in Interactive Rhythm section, the estimated time for story events, and player exploration.

- Second Floor 450 seconds

Level Scale

A Maya base unit for the entire level is 1 foot per unit. Below are some metrics for each room.

Room	Width	Depth	Height
Balroom	45'6"	61'1"	15'5"
Reception	21'3"	25'	10'
Instrument Room	30'5"	25'1"	10'
Art Gallery	27'1"	45'	14'
Music Room	18'	18'	10'

Environmental Interactions - Behaviors

Behavior
Spawn Trigger
Open Door
Close Door
Unlock Door
Open Final Door
Floor Rotate

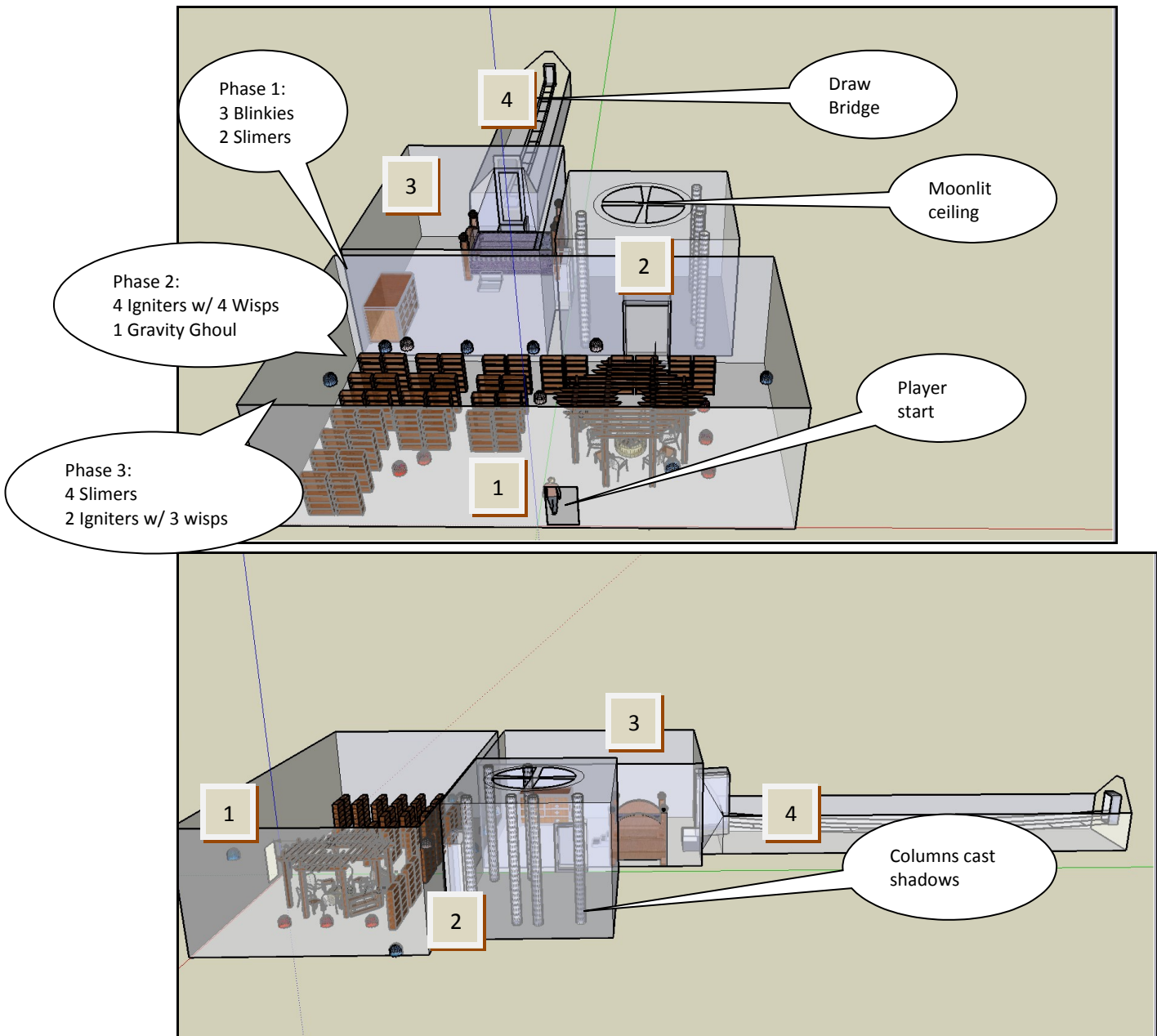
Level Attributes

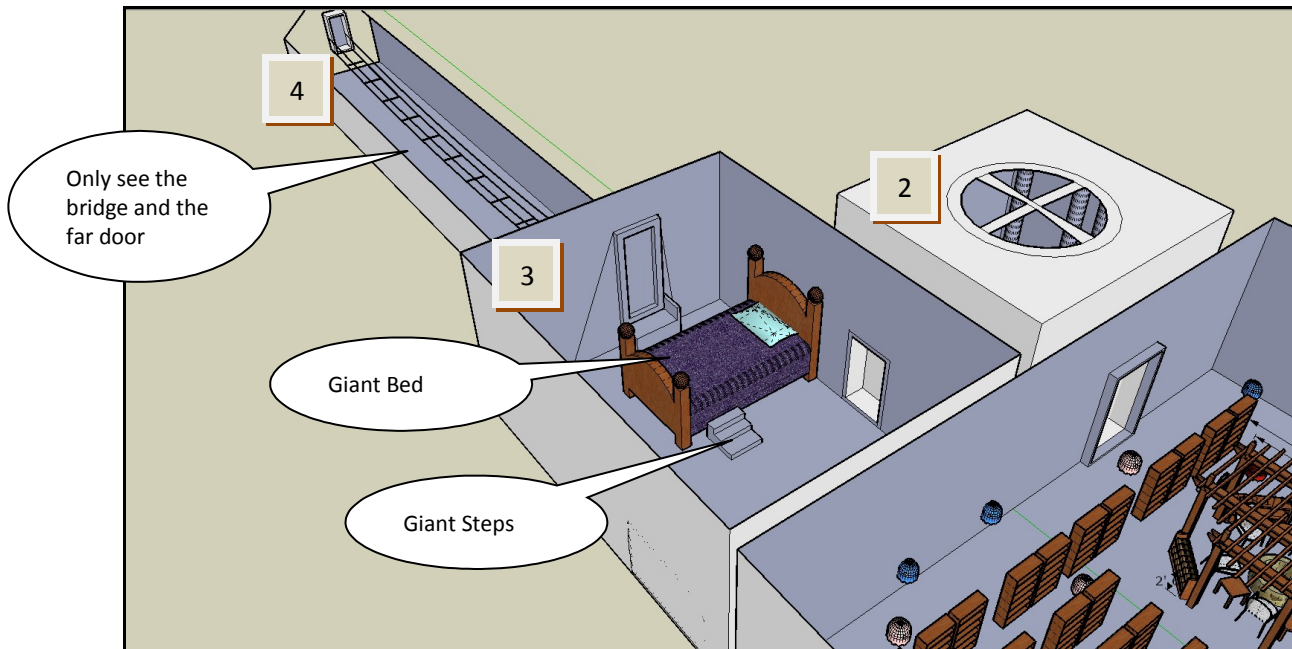
Attribute	Value
Door Open Speed	0.3 seconds
Door Close Speed	0.3 seconds
Floor Rotation Speed	45 degrees a second
Floor Rotation Direction	Clockwise or Counter-clockwise

Level Four: Third Floor

Level four takes the player outside the comfort zone. The player will begin to feel like he's truly in the netherworld, the architecture becomes more abstract, and the rooms that much weirder. The primary colors are black, red, and white.

Map





Verbal Map

1. Library

- The room is lit with candles, and vines surround the bookshelves, floors, and ceilings. There are three phases in the library.
- The first is a Slimer that will phase in from the floor, and three Blinkies that will rush towards the player.
- The second phase will have three Igniters, each with 4 wisps making them especially difficult to deal with, along with another aggressive enemy type the Gravity Ghoul that will fade in from the air and toss the various books in the library at the player.
- The third phase will have four Slimers spawn from the right wall and try to overwhelm the player with miniature seeker spawns. Also accompanied by two slightly weaker Igniters w/ 3 wisps to keep you at bay.
- After defeating all the enemies, the player may proceed to the next room.

2. Moonlit Room

- Here the room is illuminated from the circular glass ceiling where a cartoony moon shines to illuminate the room.
- Eight columns cast static shadows on the walls. From these shadows spawn five Shade ghosts.

3. Giant Bedroom

- In the middle of the room stands a bed, where the player should feel very small.
- Unlike the previous rooms, this room has no requirements to fight and the player is free to try and run through the room and dodge attacks from all the spawns that instantly lock onto the player.

4. Drawbridge

- This is hardly a room at all, where everything is pitch black with occasional glowing eyes, thunder, chains rattling's, and voices of people screaming. It is an enemy-less area, where the mood is set before loading the final level with Death himself.

Level Goal

The objective of the third level is to introduce the player to the varying combinations of enemies, and let him experience a bit more of the core game play before facing the player off against Death himself.

Ambient Environmental Aspects & Objects in Level

The Hungarian Suicide Song by Rezso Seress truly sets the tone for the forth level. The environment should feel distorted and out of this world. The primary colors are blacks and reds with heavy emphasis on contrast. The rooms are much more abstract, and the sounds louder and more surprising.

Audio

Music	Description
grDeathFightP1	When you engage with death, after the mirrors close in.
grDeathFightP2	When death reaches 50% the music changes, to a faster beat of the previous.

Sound Effects	Description
grLvl5DeathDia1	“So you’re here for your prize?” “Sorry but you can’t have your cake and eat it too” “I wouldn’t be very good at my job if I let you go now” “The rules of the netherworld, simply don’t allow for it” “I didn’t honestly think you’d make it this far, I suppose I’ll have to deal with you myself, come step inside”
grLvl5DeathDia2	“I’ll swallow your soul!!” – Death screams when he reaches 50%
grLvl5DeathDia3	“GraaaAhhhhhhhh” – Death screams when he is destroyed.

Level Objects

Objects	Description
Giant Bed	Used to climb up to the exit in the Bedroom.
Draw Bridge	A rope bridge that sways left and right before the final fight.

Game Time

Below are expected play time for level completion. This is based off of the estimated time for combat as shown in Interactive Rhythm section, the estimated time for story events, and player exploration.

- Third Floor 900 seconds

Level Scale

A Maya base unit for the entire level is 1 foot per unit. Below are some metrics for each room.

Room	Width	Depth	Height
Library	60'1"	31'7"	17'11"
Moonlit Room	25'4"	19'8"	19'8"
Bedroom	27'5"	37'5"	18'1"
Drawbridge	10'	10'	72'9"

Environmental Interactions - Behaviors

Behavior
Spawn Trigger
Open Door
Close Door
Unlock Door
Open Final Door

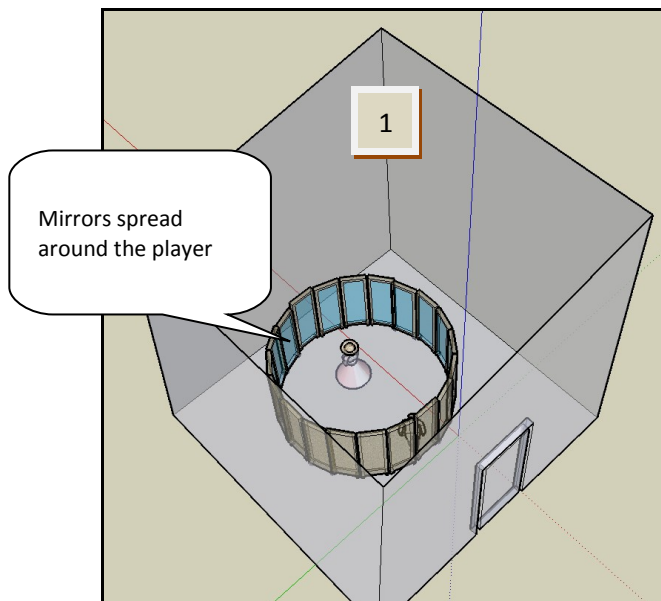
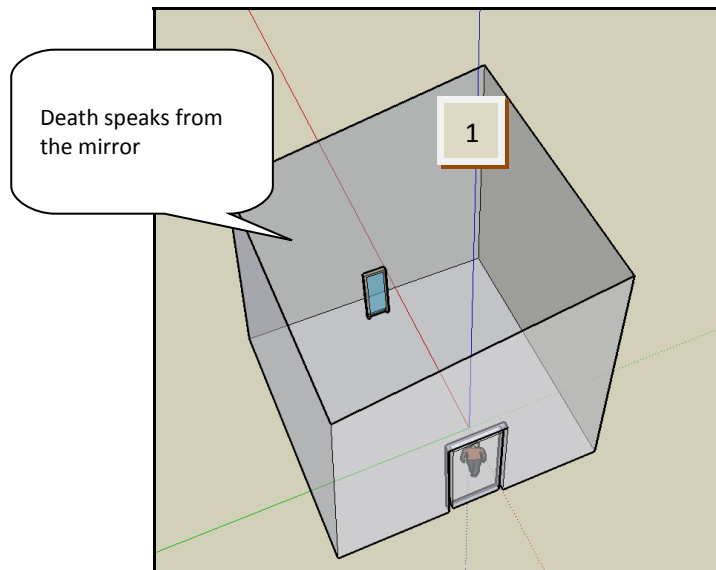
Level Attributes

Attribute	Value
Door Open Speed	0.3 seconds
Door Close Speed	0.3 seconds

Level Five: The Attic

The final level has the player face off against Death himself. He is in a dark room surrounded by mirrors. The objective is to beat Death.

Map



Verbal Map

1. The Attic

- Upon entering the room, the player is faced with Death in a single mirror in the center of the room.
- Death begins by explaining how Jim Howler's reincarnation isn't possible according the rules set out by the netherworld, and Howler's arrogance is more than he can bear. Death turns around, and claims that he'll kill him once and for all.
- The mirror then begins to replicate, spawning into 16 mirrors that move to surround the player, locking him in the room.
- Death begins to attack the player.
- If the player defeats Death, the game ends with a short cutscene, after which the credits begin to roll.
- Upon user input, the player returns to the main menu.

Level Goal

Defeat Death.

Ambient Environmental Aspects & Objects in Level

This is a continuation of the previous level in theme and style. The attic is rusty, filled with cob webs and you can see the moonlight peer through the small window on the ceiling.

Audio

Music	Description
grDeathFightP1	When you engage with death, after the mirrors close in.
grDeathFightP2	When death reaches 50% the music changes, to a faster beat of the previous.

Sound Effects	Description
grLvl5DeathDia1	"So you're here for your prize?" "Sorry but you can't have your cake and eat it too" "I wouldn't be very good at my job if I let you go now" "The rules of the neatherworld, simply don't allow for it" "I didn't honestly think you'd make it this far, I suppose I'll have to deal with you myself, come step inside"
grLvl5DeathDia2	"I'll swallow your soul!!" – Death screams when he reaches 50%
grLvl5DeathDia3	"GraaaAhhhhhhhh" – Death screams when he is destroyed.

Level Objects

Objects	Description
Tall Mirror	16 Mirrors surround the room.

Game Time

Below are expected play time for level completion. This is based off of the estimated time for combat as shown in Interactive Rhythm section, the estimated time for story events, and player exploration.

- Attic 145 seconds

Level Scale

A Maya base unit for the entire level is 1 foot per unit. Below are some metrics for each room.

Room	Width	Depth	Height
Attic	23'7"	23'7"	22'5"

Environmental Interactions - Behaviors

Behavior
Mirror Slide
Death Aggro

Level Attributes

Attribute	Value
Mirror Slide Radius	5 feet from Death
Mirror Slide Speed	0.5 seconds

Combat System

Ghostly Manor is a first person shooter that involves real time combat where the player has a cross hair and aims it towards the other objects in the environment and uses the left or right mouse button to fire. Hit detection will be done for the entire object as a whole. There will be no area sensitive damage. Characters in the system will have a number of hit-points (hp) that will represent how much damage they can take before death. The player will have 100 hp while the enemies will have varied health based on their type (See Characters). When an enemy dies it will be removed from the game in a visual style unique to each enemy (See Characters). After an enemy (not including bosses) dies, you will automatically channel that enemy type's ability (See Channeling).

Enemies

- Enemies (ghosts and bosses) each attack you with their unique abilities (See Characters and Weapons).
- Enemies also have unique AI patterns that govern how they will attack and interact with you. (See Characters)
- Battles with bosses are each in their own separate room in the house. None of the five common ghost types will appear in the boss rooms. To proceed in the game you must defeat the boss. In Death's case you win the game by defeating him.
- When enemies get hurt, visual and/or auditory feedback unique to each enemy (See Characters) will be given to let the player know this has happened. To account for if the enemy is being damaged very frequently, this feedback will be limited to occurring once every 2 seconds per enemy.

Player

- The player will be able to use his available channeling abilities against enemies, provided he has ammo (See Weapons for ability descriptions).
- When the player gets hurt, visual and auditory feedback (See Jim Howler in Characters) will be given to let the player know this has happened. To account for if the player is being damaged very frequently, this feedback will be limited to occurring once every 2 seconds. This feedback doesn't include the player's health bar which will update in real time.
- When the player dies the screen will fade to black and will go to the loading screen. The screen will fade over a 1 second period. After the level is done loading you will be brought back to the last checkpoint encountered in the game. All the enemies, world objects, and health pickups will be reset, and your health will be restored back to full.

World Objects

- World objects (aka dynamic objects) can injure both the player and enemies if they are moving fast enough and collide with them. For example, if the Gravi-Ghoul tosses a world object at the player like a table and that table hits the player fast enough, damage will be dealt to the player (See Algorithms for the damage calculation).

Channeling

Channeling is one of the core gameplay features in Ghostly Manor. Channeling is a combination of gaining new abilities and/or ammo from enemies. You can channel abilities from the five ghost types, not including any boss characters. To channel an ability from a ghost you must first kill that ghost. After you've killed the ghost the channeling is done automatically. A little orb of energy appears where the ghost was and floats towards you at 12 feet per second. So if you kill a ghost that is 24 feet away from you, as long as you don't move, the orb will reach you 2 seconds after it appears. Once you absorb the orb, you gain that ghost's power. For example, if you kill an Igniter you gain the fire ability and can now shoot fire wisps. If you kill a new type of enemy you've never encountered before, that ghost's ability will be added to your available ability types that you can cycle through. That ability is now permanently in your available ability types for the rest of the game even if you run out of ammo for that ability. Of course, if you run out of ammo for that ability you won't be able to use it until you channel more of that ability ammo from the corresponding ghost. If you kill an enemy type of which you already have, the ammo will just be added to that ability type's slot. Every time you channel an ability, whether it is the first time or the fifth time, 20 of that ability's ammo will be added to the corresponding ability's ammo count. If you reach the maximum amount of ammo for a certain ability no more ammo will be added. Subsequent energy orbs will have no effect until you use some of that ammo.

Here are the five types of abilities you can channel from the corresponding ghosts(See Weapons for descriptions):

- Fire Wisps
- Goo
- Gravity
- Ectoblast
- Shadow Energy

Game Logic, Algorithms, & Rules

Interaction Matrix

	Player	Enemies	Dynamic Objects	Static Objects	Weapons	Pickup Items
Player	X					
Enemies	Deal Damage	X				
Dynamic Objects	Collide (may deal dmg)	Collide (may deal dmg)	Collide			
Static Objects	Collide	Collide	Collide	X		
Weapons	Deal Damage	Deal Damage	Collide	X	X	
Pickup Items	Upgrade or add to Inventory	X	X	X	X	X

(See Glossary for terms)

Key Algorithms

Physics Objects Damage

This will be the formula to determine how much damage a character should take when colliding with a physics object.

$$\text{Damage} = \text{Velocity} * \text{Mass} * \text{Heuristic}$$

Gravity Ghoul Object Throwing Picking

These are the steps to take to decide which object the Gravity Ghoul Throwing power should throw.

1. Find all Physics Objects within 9ft of the thrower
2. Prune objects above 50Kg
3. Prune objects that have a direct vector through the player to reach the target position
4. Pick closest remaining object

Lily Maximum Bouncy Balls

This formula represents how many bouncy balls Lily should attempt to maintain in the world at a given time.

$$\text{maximum_balls_out} = 100\% - \text{Lily_Life_}\% / 25\%$$

Fats McGee Miss Effect Location

This is how to calculate where the bullet effect should appear to indicate that Fats has missed a shot.

1. Calculate the normalized vector from Fats to the Player's base
2. Align the vector to be parallel with the plane the player is standing on
3. Rotate the vector along the plane's normal axis by the a rotation amount between 22° and 338° (this leaves a 45° arc behind the player that would be where the bullets would have hit the player)
4. Scale the vector by 10% of the planar distance between fats and the player
5. Final aim toward spot is player position + vector
6. Ray cast from Fats to the Final position
7. Effect should appear at first point the ray intersects with geometry.

Fats McGee Check for Cover

McGee attempts to interpret if the player is under cover.

1. Raycast from Fats McGee to target position
2. If the cast is obstructed, the player is under cover.

FAQ

1. What are the minimum specifications for your game?

Operating System:	Windows XP
RAM:	128 mb
Processor:	1 GHz
HDD Space:	1GB
Video Card:	64 MB DirectX 9.0-compliant card with Shader Model 2.0 or higher.
Sound Card:	DirectX 9.0 Compliant Sound Card
Input:	Keyboard and Mouse

2. How long will it take an average player to complete the game?

The game was designed to last between thirty minutes to an hour depending upon the players skill.

3. Will this game feature multiplayer at all or be implemented in the future?

No, this game was designed solely as a single player game. There are no intentions of adding multiplayer support into the game now or in the future.

4. What different APIs does your game use?

For graphics, sound, and input we use the DirectX API. We use the Lua scripting API for different events in the world. To make dynamic objects appear to have realistic physics we use the PhysX API.

5. What is the official website?

The official game website is located at <http://www.ghostlymanorgame.com>.

6. Will your game be released on a platform besides the PC?

At this time in development we are focusing mainly on releasing this game on PC. But since we are using DirectX, we have not ruled out a possible release of our game on Xbox Live Arcade.

7. Will there be check points in the game? If so how will they be activated?

Check points will be located throughout every level. Upon death the level will reload and the player will restart at the check point. Check points will be activated when the player is in a certain radius of a "Death Mirror", which is a mirror that Death appears to talk to you for a short amount of time. After Death appears in the mirror the player will be set to check point until they reach the next check point.

8. How can the player restore his health?

The player starts off with a default weapon; the primary fire of this weapon is a small damaging shot. But the secondary fire of this weapon will give the player back a small amount of health; this secondary fire has a set amount of ammunition for it. Throughout the level the player will be able to collect ammunition for this secondary ability.

9. How will level transitions work?

The next level will be loaded up whenever the player crosses the level load boundary designated on each level.

Reference of Key Elements

Scoring

The game has no scoring system and progress is marked through the linear progression in the house.

Winning/Losing

The player wins the game after defeating Death in the attic.

When the player reaches 0 health he dies, and he returns back to the last checkpoint.

Transitions

Levels and rooms are loaded into memory based on spatial partitioning and triggers near doors and inside long hallways. If a level didn't have enough time to load, it will display a loading bar.

The player has the option for quick saves, or he may rely solely on checkpoints (marked by Death's communication mirrors).

Rewards

The player is rewarded through story elements, and upgrades to his arm.

Art and Production Design

3D Art & Animation Deliverables

Reference the Visual Design section of the specific 3D art.

Filename	Description
gr_HandDefault.x	This is the model for the hand whenever the player has the Default ability equipped.
gr_HandWisp.x	This is the model for the hand whenever the Fire Wisp ability is equipped.
gr_HandSlimer.x	This is the model for the hand whenever the Slimer ability is equipped.
gr_HandGravity.x	This is the model for the hand whenever the Gravity ability is equipped.
gr_HandEctoBlast.x	This is the model for the hand whenever the EctoBlast ability is equipped.
gr_HandShadow.x	This is the model for the hand whenever the Shadow ability is equipped.
gr_GhostIgniter.x	This is the model for the Igniter ghost.
gr_GhostSlimer.x	This is the model for the Slimer ghost.
gr_GhostBlinky.x	This is the model for the Blinky ghost.
gr_GhostGravity.x	This is the model for the Gravity ghost.
gr_GhostShadow.x	This is the model for the Shadow ghost.
gr_BossLily.x	This is the model for our first boss Lily.
gr_BossFats.x	This is the model for our second boss Fats.
gr_BossFrank.x	This is the model for our third boss Frank.
gr_BossDeath.x	This is the model for our final boss Death.
gr_Level1.x	This is the world geometry for our first level.
gr_Level2.x	This is the world geometry for our second level.
gr_Level3.x	This is the world geometry for our third level.
gr_Level4.x	This is the world geometry for our fourth level.
gr_Level5.x	This is the world geometry for our final level.
gr_DeathMirror.x	This is the mirror that Death uses to communicate to the player.
gr_Box.x	The generic box that is placed throughout the level.
gr_Book.x	The generic book that is placed throughout the level.
gr_Furnace.x	The furnace is an important part of the first tutorial level.

2D Art (HUD/Menu/Particle/Textures) Deliverables

Filename	Description
gr_ParticleFire.png	fire particle texture
gr_BgMenu.png	This is the background image displayed on the main menu.
gr_MnuNavCorner.png	Top corner of our main menu selector.
gr_MnuNavVertLine.png	Vertical line of our main menu selector.
gr_MnuNavHorLine.png	Horizontal line of our main menu selector.
gr_MnuNavFont.png	This will be our bitmap font for the main menu items.
gr_StudioLogo.png	This is the studio logo that will be displayed when the game first starts up.
gr_TeamLogo.png	This is the Ghost Riders logo that will be displayed when the game first starts up.
gr_GameLogo.png	This is the game logo that will be displayed on the main menu.
gr_OptContainer.png	This is the base gui container for the options menu
gr_OptInnerFrame.png	This is the inner frame of the options menu, this is where the options will appear.

gr_OptTabSel.png	This image is when the tab of the options menu is selected
gr_OptTabDis.png	This image is when the tab of the options menu is not selected
gr_MnuButUp.png	This is the up state of the menu interface button.
gr_MnuButDwn.png	This is the down state of the menu interface button
gr_LoadContainer.png	This is the base gui container for the load game menu.
gr_MnuStatusBar.png	This is the image for the status bar at the bottom of the menus.
gr_CredContainer.png	This is the base gui container for the credits window
gr_PaulConBar.png	This is an image for the bar at the top of the pause menu which holds the players health and weapons/ammo.
gr_IconDef.png	This is an icon for the default weapon for the pause menu.
gr_IconWisp.png	This is an icon for the Fire Wisp weapon for the pause menu.
gr_IconSlime.png	This is an icon for the Slimer weapon for the pause menu.
gr_IconGrav.png	This is an icon for the Gravity weapon for the pause menu.
gr_IconEctoBlast.png	This is an icon for the EctoBlast weapon for the pause menu.
gr_IconShadow.png	This is an icon for the Shadow weapon for the pause menu.
gr_AmmoContainer.png	This is a storage container for the ammo on the pause menu.
gr_HealthContainer.png	This is a storage container for the players health on the pause menu.
gr_LoadBG.png	This is a splash screen image for the loading screen.
gr_LoadIcon.png	This is the animated icon for the loading screen to let the player know that the level is still loading.
gr_HudReticule.png	This is the reticule in the center of the screen.

Sound Effects Deliverables

Filename	Description
gr_MnuNavConfirm.ogg	This is the sound that will play whenever the user selects a menu item.
gr_MnuNavSelect.ogg	This is the sound that will play when you select a new menu item.
gr_OptSliderSFX.ogg	This is a test sound that will play whenever the user is adjusting the SFX volume option.
gr_OptSliderDia.ogg	This is a test sound that will play whenever the user is adjusting the Dialogue volume option.
gr_IgniterHitFeedback.ogg	Reference the Igniter Visual Description
gr_SlimerHitFeedback.ogg	Reference the Slimer Visual Description
gr_BlinkyHitFeedback.ogg	Reference the Blinky Visual Description
gr_ShadeHitFeedback.ogg	Reference the Shade Visual Description
gr_GraviGhoulHitFeedback.ogg	Reference the Gravi-Ghoul Visual Description
gr_LilyHitFeedback.ogg	Reference Lily's Visual Description
gr_FatsHitFeedback.ogg	Reference Fat's Visual Description
gr_FrankHitFeedback.ogg	Reference Frank's Visual Description
gr_DeathHitFeedback.ogg	Reference Death's Visual Description

Music Deliverables

Filename	Description
gr_MnuBgMusic.ogg	This is the background music that will continuously play while the user is in the menu. The theme of this music should be sort of upbeat similar to the Scooby Doo theme song.
gr_CreditsMusic.ogg	This is the background music that will loop while the credits are being displayed. Example Music: Dream Theatre – Forsaken
gr_Level1.ogg	Refer to Level 1 description for musical theme and example.
gr_Level2.ogg	Refer to Level 2 description for musical theme and example.
gr_Level3.ogg	Refer to Level 3 description for musical theme and example.
gr_Level4.ogg	Refer to Level 4 description for musical theme and example.
gr_Level5.ogg	Refer to Level 5 description for musical theme and example.
gr_BossLilyMusic.ogg	This music will have a subtle tone with a childish theme (i.e. Lullabies, Nursery) but still needs to be creepy.
gr_BossFatsMusic.ogg	This music will have a hard core funk tone.

gr_BossFrankMusic.ogg

This music will be fast action percussion style music.

gr_BossDeathMusic.ogg

This music will be Dragonforce type music but only instrumental.

Cutscenes/Pre-rendered scene Deliverables

Scene	Description
Opening Cutscene	The scene starts out with Jim Howler exiting Angels Hope Hospital and getting in his car. The scene cuts to Jim at a railroad stop when his car ends up stalling on the tracks. As Jim attempts to start his car he gets hit by the train and the whole screen goes black.
Closing Cutscene	This cutscene will play after the player has defeated Death. It will open with a player staring into a mirror, the player realizes that he is looking into Deaths' house and that he is in the black void on the other side of all the mirrors he has seen.
Team Logo Cutscene	This will be a pre-rendered cutscene to display our team logo. The environment of this cutscene will be in a war type of environment with possible explosions going off. The camera will be centered on a flag pole, and the flag, which will have our logo on it, will be flowing in the wind. After a couple seconds bullets will fly through the flag and rip bullet holes in it.