**Just Enough: A Game About Finding Utopia**

**Game Design Document**

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**Concept**

The game ‘Just Enough’ is a 2D side-scrolling platformer, aiming to explore the relativity of the term ‘utopia’ to one’s personal circumstances.

The player plays as a young girl, born to the very wealthy family of a mob boss. As the game progresses, each level depicts the girl’s next consecutive birthday, and the player is required in the circumstances presented by the level to ‘find utopia’. However, as the game runs its course, the player character is seen to suffer a gradually declining quality of life, and must find utopia in these worsening circumstances through surmounting increasingly difficult ordeals. These circumstances eventually amount to the player character losing every basic human right and necessity for survival, aiming to interactively show how vast and unfair the spectrum of quality of human life is to the player.

Gameplay will generally consist of having to gather a series of unique items and reach a particular location in the map, which is made clear to the player within the storytelling and gameplay. The player will have platforming capabilities to achieve this; however, the controls will aim to better emulate a more realistic human’s interaction with the levels - as an example, they will be able to jump, but must take a significant running start and cannot change their jump arc midair. This aims to make the player feel the character’s vulnerability, and pivots the focus of the game towards story rather than pure platforming.

The selling point of this game will be its compelling story and style of storytelling. No words or speech are ever used or heard; instead, communication is done visually, through speech bubbles of images and animations. Also, the concept of the player being generally helpless and weak is a vastly underexplored concept in games today, and will make the experience of this game much more unique and memorable to the player.

By its nature, the target audience for this game will be more mature, and will likely require some level of appreciation for story; the game, after all, sets its story as a priority over everything else, and gameplay is there to connect the player to this story more effectively.

**Overview**

**Story**

The game begins in the bedroom of the player character, a wealthy 12-year-old single daughter to a powerful mob boss. Upon finishing changing, she states that it is her birthday, putting on her tiara to commemorate the occasion. She proceeds downstairs to a vast mountain of presents, but one in particular catches her eye - a white fur coat. She puts it on and proceeds to the kitchen to celebrate her birthday with her parents and cake.

After the party finishes, the father is seen mourning a tragically failed deal with another, anonymous figure who will be referred to as ‘Boss’. Boss has declined a deal with the father, which has doomed the family into losing their vast fortune.

The next year, the player again has their birthday - however, the family has at this point lost all of its wealth, and now lives a life of average middle-class standards. The player searches for her tiara in the attic and goes to the basement to find her new present - a coat, this one much humbler than the fur one that is nowhere to be found. The player again celebrates her birthday with cake and her parents.

Sometime within the following year, the father is seen walking through an alleyway, alone and scared. He hears footsteps, and suddenly looks up to see Boss and a lackey approaching. Boss proceeds to demand that the father follow up on an earlier deal, to which the father displays his absolute lack of money to back up his dealings. Boss flies into a fit of rage, eventually pulling out a gun and, along with his lackey, shooting the father to death.

The next year comes, and it is the player’s birthday again; however, the father’s death has left the mother and daughter with no source of income and has driven them out of their home and into the streets. The player and mother are sleeping together in the alley during the day, and the player’s coat that they use as a blanket blows up and away. The player negotiates the broken and separated balconies and stairs along the side of the building to get it back, and goes to the sidewalk to beg for money, using it to buy a single slice of cake. She then discovers her tiara in the bottom of a dumpster and returns with her findings to her mother. The two of them share the cake through the night for the player’s birthday.

Sometime within the year, an unknown individual of high military rank in a radical, Nazi-like army (that we will refer to here as the Foes) decides to lay down some form of attack upon the country that the player and mother are in. (The country is not real.)

Another year passes, and the player and mother are together on a subway, travelling to some unspecified place in the city. Suddenly, a massive explosion is heard on the surface - the entire subway is shaken as a result, and the lights shut down to leave a pitch black scene permeated only by the cries of the surrounding crowd. Soldiers from the local military arrive and evacuate people out of the subway train and to the platform, which has been prepared as a bomb shelter. Explosions continue on the surface whilst the mother and player huddle together on the floor with the rest of the crowd - that is, until the player remembers that their tiara is still on the subway train.

The player climbs down to the rails and makes their way back to the train again, enduring the violent tremors caused by the explosions above. When they reach the train, a particularly massive blast throws them to their knees and causes a slew of debris and sewage piping to collapse through the roof of the subway train. The player navigates through the resulting mess, eventually reaching the front cart, where they find a woman who did not escape and was killed by a falling sewage pipe. The player takes the tiara from her hand and leaves back to the platform, taking one set of rations from the army’s services and a standard issue blanket. The player and her mother then celebrate her birthday with these things gathered in the shelter.

The next morning, gunshots are heard from the stairs into the station as troops of the Foes march in, killing all of the soldiers on the platform. The troops demand that the victims come with them to an unspecified location.

One year later, the player is seen in a bunk bed of a concentration camp with no blanket. The player climbs up to the bed above theirs, where their mother is found. The mother hands the player the ragged sheet she is using as a blanket, which the player wraps around themselves. The player contemplates that it is their birthday today. As soon as this happens, a whistle sound is heard from the left as a soldier commands everyone to leave their beds. The player and the rest of the crowd proceed outside, where the player is made to perform backbreaking labor for the rest of the day; carrying wooden planks, digging pointless holes, and operating a nail making machine in an assembly line are all in a day’s work. The player, at the end of the work, is seen getting bread after waiting in a long line.

Near the end of the day, the troops order the prisoners to come with them to an odd tower somewhere in the camp. When the prisoners arrive, they are shocked to be told that the tower is some sort of lethal obstacle course that they must navigate to retrieve a tiara at the top and bring it back down. One by one, the line of victims walk in, attempt the course, and are seen falling to the ground outside the course to their deaths - much to the amusement of the troops. The mother departs straight before the player, and is not heard from for a while - the player is then instructed to go up themselves.

At this point, the player must navigate through a deadly series of traps, jumps and pitfalls as they make their way to the top and retrieve their tiara. They find that their mother has died along the way, killed by one of the traps. Shaken, but not slain, the player makes it to the top and gets back their tiara. There, they sit and watch the sunset for their birthday, enjoying their bread slice through teary eyes.

Some time passes, and the player is shown to have survived with their tiara intact. They are seen sleeping in their bunk as before - only to be shaken awake by the sound of war outside. Rushing out to see what is happening, they find their country’s military storming the camp, as heavy gunfire is thrown to and fro across the landscape. Amidst the confusion and several close calls, the player manages to pass through the ensuing wreckage and escape the camp safely. Much time passes after this as the player hikes through various uninhabited areas, attempting to find civilization all while climbing cliff faces, running from bears in the forest and hiking along endless plains. They are eventually shown to have arrived in an endless desert - only to realize that it is their birthday today.

A seemingly endless walk follows this revelation, as the player sees mirage after mirage of the happiness they enjoyed on each of their past birthdays. As they become strongly dehydrated and tired, they start to slow down, desperately trying to reach something they see in the distance. Walking turns to crawling, which turns to laying and ending with dying. The camera pans a bit further along to show the mirage that the player was reaching so desperately for - an image of the birthday cake in their mansion, with their two parents sitting next to an empty chair. Waiting.

**Objectives**

The objective of each level is relatively simple: the player must gather a series of items and reach a specific location to complete the level. Upon reaching said location, the scene of interest - the player being happy with what they have - will be focused on, and the text ‘You have found UTOPIA.’ will display along the outside of the scene.

**General Level Layout**

The general layout of levels is as follows:

* The level opens with a dedicated cutscene.
* The player is given control, and follows the course of the level, collecting all required items as is made evident through the level’s design and dialogue of characters.
* The player reaches the end location with all required items, and the victory screen is displayed as detailed above.
* The ending cutscene plays for the level, and the next level begins.

Levels will be normally rather linear, but the player is usually capable of performing what few objectives are present in the level in multiple possible orders. (However, in later levels, this capability is removed to signify a loss of control on the player’s part and is symbolic of the character’s helplessness.)

**Level Overviews**

The levels are as follows:

* The Mansion: The player character celebrates their 12th birthday by putting on their tiara, going downstairs, opening their present of a fur coat, and having cake with their parents. This level is incredibly simple and straightforward, and not only introduces all the basic controls and the victory condition but also symbolises the ease of the character’s wealthy lifestyle.
* The House: The player character celebrates their much humbler 13th birthday by collecting their tiara to wear from the attic, getting their present out of storage in the basement, and again having cake with their parents. In this level, the concepts of crawling, climbing and the prospect of more sophisticated platforming are introduced. The level remains simple, but the difficulty curve continues to increase.
* The Alley: The player character spends their 14th birthday begging for money on the streets for money to buy a cake slice, finding their tiara dropped in a dumpster and recollecting their blown away coat from the top of a building. At this point, the game’s level design takes a much larger step towards platforming complexity, requiring the player to employ newly taught running jumps and ledge climbing to negotiate the side of a building. Note that the player cannot die in this level; they will simply fall into a dumpster below if they miss a jump, meaning they will spend this level culminating their platforming skills that will become more direly needed in later levels. Again, the difficulty curve is maintained, but becomes much steeper than before. However, to ease the player, other items to be collected are very simple and require no platforming, giving a dip in difficulty while maintaining the player’s interest.
* The Subway: In the midst of a bombing happening above ground, the player character spends their 15th birthday trekking back to a half-destroyed subway to retrieve their tiara, getting rations from the helping military service and getting a standard issue blanket to go with it. As the previous level stopped the character from getting this far without having reached a certain bar of platforming ability, a minimum skill level can now be assumed and the level can become more complex and difficult. The player character can now die, and several hazards can now be introduced, such as open wires and fast-moving water. The difficulty curve has continued to increase at the same rate as before, but experiences a dip to absolute ease whilst the player retrieves things other than the tiara; this gives a break to the player while remaining in the game itself.
* The Concentration Camp: Through the course of the player character’s 16th birthday, they collect a ragged blanket from their mother, endure backbreaking labor for bread, and traverse the top of a deadly obstacle course to retrieve their tiara. Up to the obstacle course, the difficulty curve returns to zero; the player concurrently observes the monotonous suffrage that their character endures while resting for the next session of platforming at the end of the level. When it does come (the obstacle course), the difficulty has again increased; the player can again die, and obstacles from the previous level are reintroduced in another costume, along with new ones, such as swinging blades and crushing pistons. The level has now become completely linear in nature, a trend that will continue in the next level as well; this signifies the loss of freedom of the character.
* The Desert: The player character, within the following year, manages to escape captivity, enduring the harsh apathy of nature as they search for human civilization, eventually dying in a desert following mirages on their 17th birthday. Platforming difficulty is high at two points: the escape and the cliff face, which are separated by middle parts, being the forest and desert. The difficulty curve, however, begins a rapid decline downwards until the point of simply having to hold down the LEFT key is all that must be done. This allows for a gradual deceleration to the end of the game, while showcasing the weakening of the player character and their unstoppable approach to death as they search for a utopia they are now too far removed from to reach.

**Characters**

The following characters are present in the game:

* Player: The player’s controlled character. Starting out 12 years old and dying at age 17, she is the daughter of a powerful and incredibly wealthy mob boss. She is blonde-haired, of average height and is well-kempt and attractive - however, her appearance gradually fades from this to one of filth and poverty. She is determined and willing to face danger, a trait that becomes more and more evident as circumstances turn against her. However, her character is largely left empty to be filled by the player through their play style.
* Mother: The mother of the player character. She shares the same blonde hair as her daughter, and carries the appearance of a model. At the beginning, she is shown to be wealthy and potentially somewhat vain - however, as the story progresses, her undying love for her daughter takes precedent and completely defines her later character. She represents the player’s source of guidance and love; her death later in the game is symbolic of the player character’s loss of these privileges.
* Father: A powerful and influential mob boss, he is the father of the player character. His appearance is one of a tall, thin man, wearing a bowler hat, black trenchcoat and shiny leather shoes. He is immediately shown to be a troubled character as a result of his failed dealings with Boss. He represents the player character’s source of wealth and shelter; his death is, in a similar strand to the mother, symbolic of the loss of these privileges. As well as this, his unhappy demeanor is intended to concurrently represent the inability of wealth to compensate for a more fundamental lack of happiness.
* Servant(s): The servants to the player character’s family in the first level. They are simply aesthetic, emphasizing the power of the family and the subsequent loss of said power upon their disappearance.
* Boss: The criminal character whom the father makes a failed deal with, Boss is later responsible for the father’s death. He is much larger and wider than the father while wearing a similar getup - this is to display an implied power imbalance between the two characters, and make Boss seem to be an impassable obstacle in the family’s life. He is never directly seen, only through shadows and silhouette in speech bubbles, which emphasizes his anonymity and thus his intimidation factor. He is intended to represent the volatility of wealth as a source of pleasure, and how the competitive and relative nature of power (him being simply bigger than the father) makes it dangerous to consider as a way to happiness, as his actions indirectly cause the loss of both fortune and shelter for the player character very early on in the game.
* Lackey: The lackey to Boss who helps him kill the father in a back alley. He is simply aesthetic, acting as a shadow to Boss in order to emphasize his intimidation factor.
* Soldiers: The soldiers are members of the country’s local army. They are all generally similar in appearance, wearing camo clothing and stern expressions. Their introduction showcases the loss of a peaceful environment, emphasizing this luxury being stripped from the player character. Their death later on at the hands of the Foes symbolises a loss of protection and choice for the player character and their ultimate subjection to linear, controlled subservience.
* Helpless Victim: The victim is a young woman, who is killed in the subway by a falling sewage pipe. While dying, she hands the tiara of the player back to her when the player goes back to retrieve it; this, in a sense, taints the tiara with the underlying concept of death and represents the childish innocence of the player character as represented by the tiara being completely abolished and stripped from the character in the most brutal way possible.
* Foe(s): The militant Nazi-like enemy army that is behind the bombing of the town the player is in, the killing of the soldiers, and the transfer of the player, mother and several others into a horrific and brutal concentration camp. They, much like the soldiers, represent the introduction of great conflict into the player character’s life, along with the loss of basic human rights. Their getup is very similar to Nazi wear - they are, however, seen to wear red and black clothing with a white armband, showing an image of a chain link instead of a Swastika. This is intended to represent their role as the player’s loss of freedom and control.

**Art / Music Style**

The art style will be pixel art; this is due to an interest in somewhat sped up development, as the quantity of art required is rather large for the target development time. Characters will look rather stereotypical (eg. the Foes are a close depiction of Nazis), which is intended to inflate the singular and primary roles that they represent - however, on a larger scale, art should attempt to appear more realistic to complement the somewhat realistic controls and setting.

Dialogue, however, is a slightly different issue; characters do not communicate through text or audible speech, instead using speech boxes that contain brief animations depicting visually the concept they wish to get across. This method allows for more terse ‘dialogue’ and keeps the game’s minimalist style intact. The art in these dialogues should be done in black and white, and doesn’t need to be pixel art like the rest of the game - art in handmade pencil animations or Flash would be workable here.

Music is, when present, usually in the style of the classical, using piano, string, and woodwind instruments along with a timpani for more dramatic scenes. Several levels, however, will simply use ambient noise with no music, such as certain points in the alley level. Upon completion of a level, when the ‘You have found UTOPIA.’ screen is displayed, a short music box-esqe song will play - this is intended to drive home the player’s innocent nature in the context of their generated utopia. However, in scenes where death is shown, such as the helpless victim and mother’s deaths, the music box music can be played in a distorted, slowed down form to drive home the event’s destruction of the player’s innocence.

**Gameplay**

**Controls**

The player’s controls are meant to be realistic to some extent, incorporating things like delays while turning direction when running and not being able to change a jump arc while in midair. The full list of button controls are as follows:

* Left and right arrow keys to walk left/right
* Left shift to run
* Down arrow key to crouch when on ground
* Left/right while crouching to crawl
* Space to jump, Space after walking gives moving jump, Space while running gives farther and faster running jump
* Crawling/crouching at edge of platform makes player hang off edge
* Up while hanging off edge makes player climb up, down makes player fall off
* E to interact
* Escape key to enter pause menu, up/down arrows to scroll between menu options and E to select

**World Interaction**

The player has many opportunities to interact with different characters and aspects of the environment, performing actions such as taking items, opening doors and moving debris.

Interactive regions will be defined by an invisible interactive hitbox; when the player collides with the hitbox, an ‘E’ will be displayed above the character, prompting them to attempt interacting with the region. If the player presses ‘E’ at this point, the interaction script will be run and the ‘E’ will vanish during the interaction, potentially returning afterwards if the action can be performed again.

If the player interacts with a person to initiate speech, a nonsensical speech sound effect will play and a speech bubble will fade into existence over their head, containing a brief black-and-white animation portraying their dialogue visually and silently. The option to interact with them will vanish until the speech bubble has disappeared again; this simply amounts to the interaction hitbox temporarily vanishing, allowing the player to continue walking around while the person talks if that is desired. (Some special dialogue or other interactions will require the player sprite to perform reaction animations, which will halt player controls until the sequence has finished.)

Sometimes, cutscenes will be run to further linear aspects of the plot, usually only at the start and end of each level. When they are initiated, the screen will enter a widescreen mode, and player control will be completely ignored for the cutscene’s duration. Cutscenes can be skipped with ‘Esc’, an option which will be displayed at the top right corner for a short while at the start of each cutscene.

**“Death” Mechanic**

The player will, for the first half of the game, be completely unable to die, as such a capability will be reserved for when the player has the platforming skills to deal with such a deficit.

Death can be caused by either falling out of the level or hitting a ‘kill’ hitbox. Note that falling out of the level will, in the alley, simply cause you to fall into a dumpster below the building side room.

In reality, ‘death’, if it ended the level, would detract from the flow of the story - instead, death will simply cause a short fade to black, and a fade back to the player being at the start of the room they died in.

**Menus**

There are three main menus: the start menu, the pause menu and the level selection menu. Their design should be minimal and simplistic in nature.

The main menu displays the options to start a new game, quit, or begin a specific level that has already been reached. It should be black in color, and show the name of the game across the top - Just Enough - illuminated by a solitary candle on a birthday cake in the middle. The options should run across the bottom, from left to right - left and right arrow keys should identify changing selection, and ENTER should allow for selecting an option. Throughout the duration of the main menu screen being up, the same music box music as for the victory screen in levels should be used, and bleeping noises should play if the player changes selection or selects something with ENTER, which will cause the selection arrow to grow slightly.

If the player selects to start a new game, the main menu will fade to black and the opening cutscene of the game will play, followed with the rest of the game. If the player selects the level selection option, a quick fade to black and back will be followed with the respective menu screen. This screen will consist of six images, 2 down and 3 across; these will represent the six levels that can be chosen from, in chronological order. The image displayed will be that of the starting screen of the level, but will be blacked out and replaced with the text ‘LOCKED’ in red if the player has not yet completed this level. Underneath each image of a level, the text ‘Level X: The Y’ will be displayed, with X being the level number and Y being its name. This can be navigated with the arrow keys. If the player continues down the screen, they will reach the options ‘Back to Menu’ and ‘Quit’.

The pause menu will be as simple and nonintrusive as possible, merely being the level being played quickly darkened down to half brightness and the options ‘Resume’, ‘Main Menu’ and ‘Quit’ being available. Whatever music is being played during the level is stopped during the pause menu, and the user can navigate with the up and down arrow keys to maneuver a selection arrow to the left to their desired choice. ‘Resume’ will cause a quick fade back to original brightness and the continuation of game updates, ‘Back to Menu’ will cause a longer fade to black and the menu to fade in, and ‘Quit’ will simply shut down the game as per usual.

**Specifics**

**Player Controls**

Here, we provide a more comprehensive review of the player’s control mechanics.

**Walking and Running**

If the player is standing and begins to move in one direction, the player will experience a quick acceleration from nothing to their final walking speed for 0.4s, during which the walking animation will begin slowly until it reaches full speed. Likewise, if the player lets go of the left or right arrow, the player will slow their walking animation until they reach the frame with both feet on the ground, and will then return to their idle animation.

If the player is walking left and presses the right arrow, the game will treat this identically to letting go of the left arrow key. If the player then releases the left arrow key, the character will start moving to the right. In general, the game will respond to the button presses changing from one state to only one of left and right being currently pressed.

If the player is walking to the left and transitions from pressing only left to pressing only right within 0.2 seconds, the character will decelerate down to no movement and start moving to the right over the course of 0.5s. This amounts to the character slowing their sprite framerate to half speed, flipping horizontally, then speeding back up to full speed.

If the player presses left shift while walking in any direction, they will speed up to 1.5x speed over the course of 0.3s. Halfway through this, they will transition from the walking cycle to the running cycle, starting running on the foot they were closest to in their walk cycle previously. Likewise, if the player lets go of the left shift button while running, the exact reverse will happen.

If the player is standing and starts pressing left shift and afterwards either left or right, the player will take 0.5s to get up to full speed, going straight to a running cycle at gradually increasing framerate, starting with the frame having both feet on the ground.

While running, if the player shifts direction suddenly, they will stay on a ‘skid’ frame while slowing down to a halt for 0.55s before returning to equivalent speed in the other direction. Dust will kick up at their feet while they skid and will stop once they reach zero velocity; the running animation in the other direction will start as soon as they start moving in that direction at a slow rate that gradually increases to full. The distance they skid will be about half their body width.

During transitions between standing, walking in either direction and running in either direction, the transition will be completed animation-wise regardless of alternate user input. However, if the user stops pressing a certain key, the character’s movement in that direction should grind to a halt anyways; the aforementioned movements in either direction should be multiplied by 1 if the user is pressing the respective movement key, and by a decaying factor that decreases linearly to 0 for 0.35s if it has been released. Also, if the player is slowing down, the transition animations needn’t bother display the player’s running/walking animation speeding up in the other direction, as they can simply transition to their idle animation at this point.

The player can interact while walking, but not while running; if the player does this, they will essentially revert to standing while player control is removed and the interaction will occur as per usual.

**Crouching and Crawling**

If the player presses left CTRL while standing still, they will transition into a crouching position on all fours. A short transition animation should play of the player descending to this position; if the player releases the left CTRL button during this, the animation should halt on its current frame and play in reverse from where it is back to the idle animation. Note that the player can be forced to crouch at certain points in the game, such as after strong ground-shaking explosions or while in a tight space - in these cases, left CTRL can be left unpressed.

The player, while crouching, can press the left and right arrows to crawl to the left and right. The player will move at 0.5x walking speed, but will have no transition between crawling to the left and right, simply changing direction instantaneously.

The player can revert to a crouch while walking, but will essentially revert to standing and then to a crouch in a scripted sequence. The reverse is also true - letting go of left CTRL while crawling outside of a tight space causes the character to stop (no slowing down doing this), stand up, and begin walking. If user controls shift while this sequence happens, the scripted sequence should stop at whatever state the user is currently in.

The user will be able to intersect interaction hitboxes at foot height while crouching and crawling, but not while walking, standing and running. In this case, ‘E’ appears above the player’s now lowered head.

**Jumping**

Jumping while standing is done by pressing SPACE. Doing this causes the player character to jump 0.75x their height straight up into the air, and remain in the air for 1s. Unlike walking and running, once a jump has been initiated, it cannot be stopped and all user control will be ignored until the character hits the ground again and is standing; this means that jump arcs cannot be changed midair, which is intended to simulate a more realistic and thus vulnerable character.

Leading up to a standing jump, the player will perform a setup animation on the ground for 0.4s, then transition into their jumping animation for the duration of the jump. Once the character has fallen further than the height at which they started, they will transition into a falling animation, which revolves around the last frame of the jump animation. Upon hitting the ground, the character will play a recoil animation and return to standing. Player movement control is not possible until after this animation has finished.

While walking, the player can press SPACE to jump to one side. This cannot be done during transitions between states of walking. If this is done, a different transition animation will play for 0.3s and the player will leap the same height as before, this time moving at walking speed to the left. The midair jump animation while walking remains the same as with standing. Upon hitting the ground, however, a different recoil animation will play than standing; the character will default back to walking in their previous direction after this animation, at which point player movement control will again be accepted.

While running, the player will also be able to jump, albeit slightly higher and much farther. Upon pressing the SPACE key, a running jump setup animation will play as with walking, but at 2x speed; the jump animation will be different to standing and walking, being more of a one-footed bound than a hop, but ending with the same falling animation. When hitting the ground, the character plays a recoil animation and defaults back to running, at which point user movement control is again accepted.

The player has no capability to jump while crouching. In this situation, pressing SPACE simply does nothing.

**Ledges**

While the player is jumping, the character is able to latch onto nearby ledges in the way of their jump arc. This will happen automatically as, otherwise, the character would rather awkwardly collide with ledge walls and plummet to the ground if the user failed to press a key at the right time.

Ledges are defined by a special hitbox placed with its center at the corner of the ledge. The hitbox must always be the same size to correlate with a realistic grabbing animation.

The height at which the player hits the ledge is of importance, and will decide which animation out of 3 will be played. If the player hits the ledge at a point where the ledge is at the bottom of the player’s hitbox (top of ledge hitbox is waist down), they will stop against the wall below the ledge and ‘walk’ with their feet down the wall with their hands on the ledge, lowering to dangling height; if no such wall exists, they will catch the ledge as their waist hits it and lower down with arm strength alone. If the ledge is at torso height (waist-to-neck height), the player will simply fall slightly and catch the ledge. If the ledge is above the neck up to one head above the player, the player will throw their arms up and just barely catch the ledge; how late in the sequence of sprites this animation starts depends on how high the ledge is above the player (skips more frames if higher). All animations take 0.2s to play.

Ledges can also be clambered down onto by approaching the ledge while crouching or crawling. If this is done, the player will drop down onto the ledge for 0.2s.

Ledges can be climbed up or down when the player is hanging on them by pressing the up or down arrow keys. If the player presses up, a climbing animation will play for 0.4s, and the player will reach a crouching stance before control is granted again. If the player presses down, the character will simply go straight to their falling animation after a standing jump and start falling straight down. As jump arcs cannot be controlled, if the player attempts to let go above certain death, the game will refuse to allow it, playing a deep buzz sound effect in response to each press of the down arrow key.

Interactions are allowed to occur while the player is hanging on a ledge.

**Interaction**

An interaction is defined as a hitbox of variable size and a respective interaction script. The player, upon colliding with these hitboxes, will set the interaction to the ‘READY’ state, and the player will see a square white ‘E’ key about the size of their head hovering one head above their own, slowly oscillating up and down at a frequency of about 0.1 oscillations/s, and with an amplitude of about 10 pixels. Upon entering the hitbox, the ‘E’ will fade into existence quickly for about 0.1s, and upon exiting the hitbox will vanish at the same rate.

If the player presses ‘E’ at this time, the hitbox script will be run concurrently with the rest of the game while the ‘E’ vanishes during the interaction. There are several possible main interactions that can be done:

* Gathering items
* Dialogue
* Physical interactions

Gathering items amounts to the player snapping to the exact location of the item, the item disappearing from the map, and the player performing an animation of grabbing the item and putting it on or away before returning to their initial state. Player control is not possible at this time, but neither will the player fall or move around undesirably (unless this is part of the script).

Initiating a dialogue interaction will, if another character is speaking, cause them to potentially enter a talking animation and display a white speech bubble about 1/16th of the screen. The bubble will enter by sliding downwards about ¼ of its height and fading in for about 0.4s. Inside the bubble, a black and white Flash animation will play while the player plays a nonsensical talking sound (the sound does not loop while the character talks). It is not possible to interact with the speaking character while they talk, and the disappearance of the overhead ‘E’ will signify this. However, player control will be possible at this time, and the player can move around as they wish. Once the character has finished talking, ie. the animation has stopped, the animation’s last frame will fade to white and the speech bubble will then fade away in the opposite way it appeared.

If it is the player conversing, then control will be abstained while the dialogue happens, with what was stated above happening to the player before control is returned.

If the player performs a different, physical interaction, the player will usually not have control - this will be indicated by the player performing a special animation or not. Other than that, such interactions follow the same rules as other interactions.

**Rendering**

The game’s images are displayed on a multitude of layers, consisting of the following:

* Background (layer 1)
* Back layer (layer 2)
* Middle layer (layer 3)
* Player layer (layer 4)
* Front layer (layer 5)

The background will be a large unvarying image at the back of the game. It will be used for things like sky, faraway hills, and the sun. The background moves at 0.05x the rate of the player layer across the screen, giving a parallax.

The back layer consists of anything that cannot be interacted with behind the player, such as the back wall of an alley or windows in a room. The back layer will move at the same speed as the player layer across the screen.

The middle layer holds most objects with hitboxes (physics, death or interaction). These include items to pick up, platforms, and other characters. The middle layer is drawn just after the player, but is treated on the same plane physically as the player so that the player’s features always appear when the player’s sprite and another overlap on the middle layer. It moves at the same rate as the player layer across the screen.

The player layer simply holds the player character. It is essentially syntactic sugar for drawing the player after drawing the middle layer.

The front layer signifies things in closer to the camera than the player, such as doors in the front of the scene. These will have a 50% transparency so that the player can see them, but is not obstructed by their presence blocking important things. (Normally, nothing important or interactive will be behind front layer objects anyway.) Things in the front layer cannot have physics hitboxes, but can have interaction hitboxes. The front layer moves at the same rate as the player layer.

**Levels**

**Level 1: The Mansion**

* Opening cutscene
  + Player starts changing behind changing wall, can see silhouette, comes out from side in dress and spins in it impressively
  + Small speech bubble appears above her head, displaying her blowing out candles on a birthday cake
* Starts in player’s bedroom
  + Contains bed to right, changing wall behind it, closet to left, window door at back to left of bed
  + Is colored pink
  + Tiara is on top of closet, need to hang on closet side to initiate cutscene get it
  + Window door goes out to balcony
  + Door to left goes out to hallway
* Balcony
  + Faces out from back of balcony out to mountain range (akin to Switzerland), white pillars
  + Translucent door in front of everything goes back to previously exited bedroom
* Hallway
  + Several large portraits along wall of family members
  + Door to mother’s bedroom to right of player’s bedroom
  + Door to father’s bedroom to right of mother’s bedroom
  + Stairs down to left goes down to central room
* Mother’s bedroom
  + Same setup as player’s room, but light blue
  + Window door goes out to balcony
  + Door to left goes out to hallway
* Father’s bedroom
  + Same setup as player’s room, but reversed and light green
  + Window door goes out to balcony
  + Door to left goes out to hallway
* Central room
  + Consists of two sets of stairs from left and right going down to middle, meeting and going out to stairs towards screen down to ground level
  + At ground level, two doors in back at left and right lead to dining room
    - Guarded by servants, If player tries to enter before collecting all items, will be blocked off and told to go open presents first
    - Otherwise, will be standing to sides of doors
  + Translucent door in front layer in front of middle stairs go to outside court
  + Door to left at top of leftmost stairs locked
  + Door to left at ground goes to living room
  + Door to right at ground goes to living room 2
* Dining hall
  + Consists of long dining table in middle of room w/ many chairs, birthday cake at left part of table if have interacted w/ butler
  + Head of table at left = player’s chair
    - Can be interacted with, sit with E
    - If player gathers all items and attempts interaction, will start ending cutscene for level
  + Two translucent doors in front of left and right parts of table go to central room
* Living room
  + Consists of two couches to left and right of coffee table, with fireplace behind and large tall windows
  + Door to right leads to central room
* Outside court
  + Front of house (white, fills up entire backdrop, windows allow vision into central room on left + right of door)
  + Floor = driveway
  + If player enters outside court with all items, will see car w/ father standing behind, talking to a mobster
  + Door behind player in middle of court leads to central room
* Living room 2
  + Identical structurally to first living room, but mirrored
  + No furniture, instead a massive pile of presents
    - One is in front and is sparkling, red bow on white box, can be interacted with
      * Contains expensive white fur coat, is put on
  + Door on left leads back to central room
* Ending cutscene
  + Shows player with parents, blowing out candles and parents clapping
    - Goes all black except circle around middle of screen encompassing this scene, text “You have found UTOPIA.” types slowly across top of screen w/ word ‘UTOPIA’ on bottom middle
    - Happy music-box music plays in background
  + Fades to black and back to dining room, cake eaten and father sitting alone
    - Is in a state of distress, head in hands
  + Speech bubble appears over father’s head of him and another man talking
    - Other man shakes his head and tells him to leave
    - Father starts crying, speech bubble vanishes
  + Fades out, speech bubble drawn onto black screen of a dollar sign with a red X then drawn onto it

**Level 2: The House**

* Starting cutscene
  + Player is laying down on bed looking up, speech bubble of birthday cake appears again over her head (same as in first opening cutscene)
  + Player then jumps off of bed and is standing in middle of room
* Player starts in their bedroom
  + Same layout as first room, but much humbler design, green color
  + Door to left leads out to hallway
* Hallway
  + Short hall with door to player’s room
  + Stairs to left lead up to attic
  + Stairs down to right continue to ground floor
    - Door behind player leads to living room
    - Door to right leads to porch
* Living room
  + Door on front layer to right leads to hallway
  + Stairs down on back layer to right leads to basement
  + Door to left leads to kitchen
  + Door behind to left leads to dining room
  + Father is sitting inside
    - Is gloomy, silently moping
    - Can be interacted with, will tell player that their tiara is in the attic
* Kitchen
  + Door to right leads to living room
  + Mother is inside, baking a cake
    - If interacted with, will tell player to go get their present (a coat, light brown, humbler than first white fur coat) in the basement storage
* Dining room
  + Small table in middle, same layout as mansion’s dining room
    - Player’s chair to left, mother’s and father’s chairs to its right
  + Door in front at left leads to living room
  + Will have birthday cake on it once items have been collected
    - If chair interacted with at this point, initiates ending cutscene
* Porch
  + Door to left leads to hallway
  + Grass porch, fence behind, several identical houses continuing on behind own house to left
  + Sidewalk and road in front, can occasionally see a car drive down
* Attic
  + Hatch on ground to left leads to left hallway
  + Many boxes of storage, must jump over and climb boxes to get tiara in topmost box
* Basement
  + Stairs up to right lead to living room
  + Many boxes of storage like attic, must crawl through spaces and jump over boxes to get to present at end
* Closing Cutscene
  + Shows player blow out candles again w/ parents clapping, shows text “You have found UTOPIA.” as before w/ same music
  + Fades to black, fades in to father walking alone in an alley
    - Light of buildings in front of him shining on him
  + Suddenly looks up after some walking, footsteps come from right
    - Camera pans up, displays black shadows of all people on wall from light from front building instead of people directly
  + See same silhouette as in first level’s ending cutscene with another, thinner silhouette having conversation with father
    - Right man demands money from father, father shakes his head and says something apologetic
    - Right man becomes furious, starts yelling at father
  + Right man and man behind him pull out pistols, right man says some sort of goodbye to father before shooting
    - Screen turns black and series of white flashes with gunshot sounds play to signify shooting (~15 shots)
  + After end of shooting, in middle of black screen, shaking speech bubble appears with house having house image crossed out in red (akin to first level’s ending cutscene)

**Level 3: The Alley**

* Starting cutscene
  + Fades into filthy alley, no music to start off with, mother and player both sleeping propped up against building side
    - Mother is in sleeping bag, player has ragged version of coat from last level thrown over her
  + Strong wind blows in, blows coat over player up and away to upper left of screen
  + Player wakes up, looks around, speech bubble signifying birthday appears again but this time smaller and shaking slightly
* Start in right alley
  + With mother, who is huddling within a sleeping bag
    - If spoken to, mother will ask daughter to beg for money on street for a cake slice
    - If have cake slice and then speak to mother, will give her slice and she will look up and notice a coat on top of building
    - If have coat and then speak to mother, will initiate ending cutscene
    - Mother is sick, coughing occasionally
  + Can walk to right to sidewalk
  + Can walk to left to center alley
  + Music = quiet, echoed jazz music
* Sidewalk
  + Sidewalk goes down screen
  + Road to right, cars are going down it continuously
  + People walking down right side of sidewalk
    - All are wearing business outfits, with pitch black anonymous faces, ignoring player
  + Player cannot move out of crawl here
    - Player slows down asymptotically when approaching people on right of sidewalk, moving to left = same speed though
  + Player can interact with crowd when close enough
    - Will cause player to beg, will remain in this position until player presses E again or until 8 collections of money made
      * Prompt to left of player with arrow to left + E
      * Once money has been fully collected, player will walk down street away from screen, will fade out and player will have cake slice and no money
    - Player will sit holding hands out, hands will gradually fill with money
      * Sun will move a bit in background with each amount of money received
      * Sound of coins dropping with each piece of money gained
    - Music becomes slow music box
  + Music = same as alley, but louder and not echoing
* Center alley
  + Can walk to left to left alley
  + Can walk to right to right alley
  + Stairs on building in back leads up to building side
  + Dumpster to left in back can be interacted with
    - If this is done, player will jump into dumpster
    - In dumpster, can see several garbage bags and twinkling in one location on left floor
    - When moving around in dumpster, bags move around player and twinkling icon stays at floor
    - If crawl next to sparkling icon, will fade into tiara, can be interacted with to put on
    - Can press E while standing at any point to get out
  + Music = quieter and less echoey version of right alley music
* Left alley
  + Can walk to right to center alley
  + Dead end to left
  + Ladder on left = too high to reach, goes up and off screen
    - Goes up to left of building top, reached by ladder at top
    - Serves as way back from top of building
  + Music = almost silent, echoed version of center alley music
* Building side
  + Stairs down at bottom lead to center alley
  + Goal = reach top of building
    - Have to traverse jumps up across balconies and railings along side of building
  + As player progresses up side of building, music goes from silent to ambient, quiet chillstep
* Top of building
  + Ladder down center leads to building side
  + Ladder down left leads to left alley
  + On top of satellite antenna in middle left, can see a coat hanging, fluttering in wind
    - Same coat as in normal house, but more ragged and worn
    - Can be interacted with, player will put on coat when E is pressed
  + Background = same as sidewalk, sun will be in same position as in sidewalk
* Ending cutscene
  + Is night time, shows mother and player in original positions eating halves of cake slice
    - Mother looks over at player, smiles, strokes her head and resumes eating
    - “You have found UTOPIA.” shot composition as in first ending cutscene w/ same music
  + Fades out, fades back in again to top-down perspective on a military map with various small items on it
    - Map looks nothing like real world
  + An arm holding a red pen moves over board and draws a red ‘X’ over a single land region
    - Arm is wearing a long red/black army-like sleeve, has a banner over bicep with a logo of chain (member of Foes)
  + Fades out again, speech bubble appears over middle with picture of Peace sign being crossed out in red (akin to first level’s ending cutscene)

**Level 4: The Subway**

* Starting cutscene
  + Player and mother are together on a subway, is moving from right to left
    - Mother wearing dirty plain clothes and backpack, player wearing ragged coat
    - No music playing, just crowd murmur and subway moving sound
    - Large number of people on subway in front and back layers, form dark crowds of dark blue and black
    - Subway is jostling up and down occasionally, crowds move perfectly with it as do mother and daughter
      * Jostles ~ every 5-10s at random once
  + Suddenly, muffled explosion is heard overhead, entire subway starts shaking
    - Lights flicker out, entire room becomes pitch black
    - Can hear crowd screaming and several more explosion noises are heard, along with loud siren alarms from above ground (muffled same as explosions)
    - Player and mother both jump back and start holding each other just before lights go out
  + Sounds of footsteps running from right, flashlights shine into subway from right, sound of subway doors being kicked down
    - See soldiers come in from left, shout at people in subway waving for them to go to right, speech bubble appears over soldier’s head of arrow to right
  + Fades in and out again and again of player, mother, soldiers and crows running through subway tunnel as explosions are heard and rubble falls down from ceiling w/ each explosion
  + Eventually longer fade to black, fades into player and mother with crowds sitting on floor of subway platform as explosions are heard overhead
    - Speech bubble appears over gloomy player of birthday cake, same as in first level but smaller and shaking slightly
    - Mother comments with speech bubble of tiara that zooms out to subway, exclamation mark appears over shocked player who bolts up
* Start in subway platform
  + Player and mother in middle of anonymous crowd together
    - Mother sitting on ground, wearing a new grey blanket distributed by army
    - Can give her a ration once obtained
      * If player has already gotten tiara, goes to ending cutscene
      * If not, player will display speech bubble of subway that zooms in to show tiara inside
  + Anonymous crowd = all sitting down, can hear much murmuring and talking amongst crowd, occasional baby crying can be heard
  + Can hear occasional explosion from above ground
    - ⅕ of explosions are 1.5x as loud with slight shaking of ground and rubble falling from ceiling
  + Large empty floor with many anonymous crowds
    - Some benches (filled with people)
    - A subway map
  + Stairs out of subway to right are blocked off by army troops
    - Two are talking to each other with a series of speech bubbles of them arguing
    - If approach right, army soldier will tell player to leave with speech bubble of arrow to left
  + To left, wall with table of soldiers behind and rations on table
    - Soldier is talking to anonymous crowd member about something, speech bubble is just of two of them talking
    - Can interact with table, will take one ration, after doing this cannot interact again
  + Slightly to right, ladder goes down to subway rails behind platform on back layer
    - Can interact with E to climb on, will cause platform to fade away to transparent while on ladder, is a transition to subway rails at platform
      * Can press E at top to get onto platform that will fade in again if this is done
* Subway rails at platform
  + (NB: Technically same room as subway platform, but some changes so is considered unique here)
  + Murmur of crowd is slightly dimmed in the distance, explosions are same
  + Same backdrop as subway platform, but continued further downward
  + No unique features, nothing inside rails
  + Can go to left down subway rails, right direction blocked off by a soldier
    - Soldier blocking path to left is tending to a victim laying on ground, will ignore player
    - Soldier to right has same response to close player as soldier on platform blocking right stairs
* Subway rails left
  + Noise of crowd is now inaudible, still no music
  + Gradually darker and darker w/o lights until almost impossible to see
    - Lights overhead flicker on and off periodically, but turn off for few seconds when large explosion plays
  + Explosions are more and more intense and frequent further down tunnel, more rubble and harsher shaking
    - Near end, player falls to ground on very loud and much longer scripted explosion and is permanently in crawl for rest of level until they reach region further to right of level again
      * Explosion causes much more rubble to fall through and much flickering of lights, eventually can hear breaking of rock and screeching of metal as sewage pipes and road overhead smash through ceiling over subway, can see traces of this in ceiling above subway to left
  + Player can climb up onto right side of subway to left of level and enter open door
    - Lights within subway are also flickering, asynchronous with lights in tunnel
* Rightmost subway cart
  + Explosion has caused sewage pipes to fall/smash through subway ceiling, creating a somewhat complex obstacle course
    - Roof of both subway and tunnel demolished, much space vertically for platforming
  + Some windows in back are smashed, roof is practically obliterated, lights are flickering on and off randomly
    - Lights are never off for >0.25s, never on for >4s
    - When lights are off, entire subway is pitch black
    - Can see some electric sparks falling from one broken light in middle region
  + Player must crawl through to left to get to center cart
    - Door is open, can crawl through
  + On way back from center cart, explosion will have shifted obstacles to allow straight course back to left tunnel
* Center subway cart
  + Same situation as in left subway cart, must jump past fallen debris and pipes to get to leftmost cart
  + Can hear wails and crying from left cart when left door approached, not audible until ⅝ of way to left of cart
  + Door is this time blocked with a sheet of metal fallen on it, press E to remove it and open door
    - Metal is moved in small cutscene of player struggling to pry it off and eventually succeeding
  + On way back from leftmost cart, explosion will have shifted obstacles to allow straight course back to rightmost cart
* Left subway cart
  + Light is much more continuous now, will not go pitch-black anymore, only half lit
  + Explosions become quieter and less frequent at this point, shaking of ground and rubble = less noticeable (no music)
  + Only one pipe has fallen through in this subway
    - Has been cut in half while smashing through subway ceiling and has stabbed through a young woman
    - Young woman sees player approaching, reaches out with tiara in hand and collapses again, dead
  + Tiara is in woman’s hand, can be interacted with
    - Will cause player to take tiara out of hand and sit silently in front of woman, continuing to hold her hand
    - Sudden louder explosion will jolt player out of silence, causing them to turn right to leave
  + Player must now backtrack through carts again
* Ending cutscene
  + Player will sit down with mother, put on tiara and quietly open rations while mother smiles and adjusts tiara on player’s head
    - “You have found UTOPIA.” composition
  + Fades out to black, fades back in with everyone sleeping in the bomb shelter
  + Suddenly, shouting and machine gun shots can be heard to left of screen, along with dying noises
    - Soldiers have been shot and killed by enemy troops from same army as arm in last ending cutscene
  + Several soldiers come from left with same getup as arm in last ending cutscene, march up to crowd
    - One yells at crowd while pointing behind to left, speech bubble appears showing arrow to left, is shaking
  + Fades into black as soldier’s voice is still heard, speech bubble appears in middle with image of broken chain being reconnected with red lines (similar to ending cutscene of last level)

**Level 5: The Camp**

* Opening Cutscene
* Bunker
* Outside Bunker
* Work Site
* Assembly Line
* Bread line
* Death tower entrance
* Tower ground level
* Tower middle level
* Tower top level
* Tower roof
* Ending Cutscene

**Level 6: The Desert**

* Bunker
* Outside Bunker
* Collapsed Tower Left
* Collapsed Tower Right
* Outside collapsed tower
* Broken fence
* Forest
* Cliff face
* Desert