EFFECT OF THE FACING DIRECTION OF THE CHARACTER TO THE PLAYER'S IMMERSION WHEN ANIMATION OCCUR

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Chapter 1 Project Introduction

1.1 Motivation for The Project

For the final year project, the field I would like to enhance my skill is 2D animation. I take this project as the chance to experiment with the difference in animation's effect on the player. There are plenty of 2D art styles around the world, but the principles for character animation are the same in any art style. The animation in the game is a part of the communication between the player with the game. Except for increasing the immersion of the player in the game, animation plays an important role in responding to player actions.

In communication, body language and facial expression are both important in delivering human emotion. The emotion could easily spread through these two elements. However, when comes to a small figure, the effect of both elements towards another person, in this case, the player is uncertain. The direction of the figure while emoting might also affect the emotion delivery.

For this project, our team had discussed and chosen 2D cartoony in orthographic view as the art style. The cartoony art style is my comfort zone, while the orthographic view is the camera view that I am not familiar with. This combination allows me to challenge myself to improve meanwhile still being manageable to complete. I hope that I can get to improve remarkably during the final year project.

1.2 Game Introduction

The name of our game project is "Twin's Elude". It is a 2D multiplayer co-op puzzle game. Our game concept is about sharing a split-screen which

enables the pair of players could know each other situation, and work together to solve the puzzles in the game. The game is about the twin's protagonists are thrown into the abandoned well as execution. However, the protagonists manage to stay alive and found an underground dungeon that can lead them back to the land surface. However, the monsters which appear hundred years ago manage to survive in the dungeon, they need to find a way back to the land surface safely.

1.3 Game Objectives

The players as the protagonist in the game are required to solve the puzzle together on every level and escape the dungeon together.

1.4 Unique Game Mechanic

1.4.1 Split screen

In this project, we choose to use a split-screen user interface (UI) as we want to create a unique game experience where the players can always check on the other player and work corporately without voice chat.

1.4.2 Shared Health System

Both players will be using the same health, either one of them is hurt, the health will be depleted, when it reaches zero, both players will lose the game.

1.4.3 Cloaking/Hiding Mechanics

Any of the players will be able to use the hiding mechanic to hide from enemies. This mechanic exists for players to escape from the enemies.

1.5 Aim

From my perspective, my objective towards this project is to study the effect of character facing direction during the animation towards player's immersion. During the project, I will be studying the usage and application of character-facing direction in 2D animation.

1.6 Individual Project Scope

My role in this project is working as an art designer. I will be covering all the art assets including the character and creature design, environmental detail design, and also the User Interface (UI) design and creation.

Character and Creature Design:

1. Design the look of the main protagonists and the creature based on the function and art direction given by the level designer.
2. Animate the characters, creatures, and also the environment details to provide a better understanding of the characters.

Cutscene: Animate for storytelling in the game.

UI Design: Provide a UI design which easy to understand and suit the game theme for the player.

1.7 Research Question

1. Do the player noticed much of the character's facing direction during gameplay?
2. Is the player more immersed when the character animation shown in the front of view? (Where the player can see the character face)

3. Is the player feel the character is communicating with the player when the character animation shown in the front of view?
4. Do changes of the animation orientation (facing direction) breaks the player's immersion in the game?

Chapter 2 Background Study/ Literature Review

2.1 Background Study

Animation has taken an important role in keeping player's immersion as animation is a very natural way for humans to read information due to the human visual system is made aware and observe movement in the environment. Andersen et al. had presented a large scale of study that examine that game aesthetics, including music, sound, and animations influence player behavior in casual game and conclude that the animations have a positive effect on players: in the condition which animations is included in the game, the player played significantly longer than the player in the condition that the game does not include animations.

There is a study shows that the use of high-fidelity graphics in challenging game mechanics improves immersion and the overall impression of a game (Gerling, Birk, Regan & Doucette, 2013). Animation did not only provide aesthetic value to the game but also provided player feedback. As animation is providing information to the player, without the floating text on the icon in the air. It is communicating with the player using the character's body language and does not require the player to even thinking about it, which keeps the player's flow of immersion.

2.2 Game Review

2.2.1 A Way Out

A Way Out is a multiplayer action-adventure game developed by Hazelight Studios and published by Electronic Arts. The game is played from a third-person perspective and it is specifically designed for split-screen cooperative multiplayer, which means that the player must play with another player either local or online.

In the game, players control Leo and Vincent, two prisoners who want to break out of prison. The players need to cooperate in other to progress, and each situation can be approached differently, with both characters taking different roles. The two characters tend to get out of the prison to seek revenge. The whole game is focused on storytelling, giving the player a sense of they are watching a movie. Two characters also show the difference in characteristics in their behaviors: Leo is more violent and action first, while Vincent prefers to talk his way out of sticky situations.

The review for this game is very positive, most of the players think the split-screen mechanism is providing an interesting cinematic experience in this case. They enjoy the story and gameplay. The negative comments are mostly towards the storytelling ending part which they feel disappointed. Besides that, some players think they needed a single-player version. However, the game did offer a "play free online" model such that players will be able to join online sessions - which hosted by the player's friends, whether or not the joining player owns the actual game.

As the game is using a third person following camera which also frequently using cinematic cutscene for a lot of scenes, it mostly does not show the character's front view towards the player.
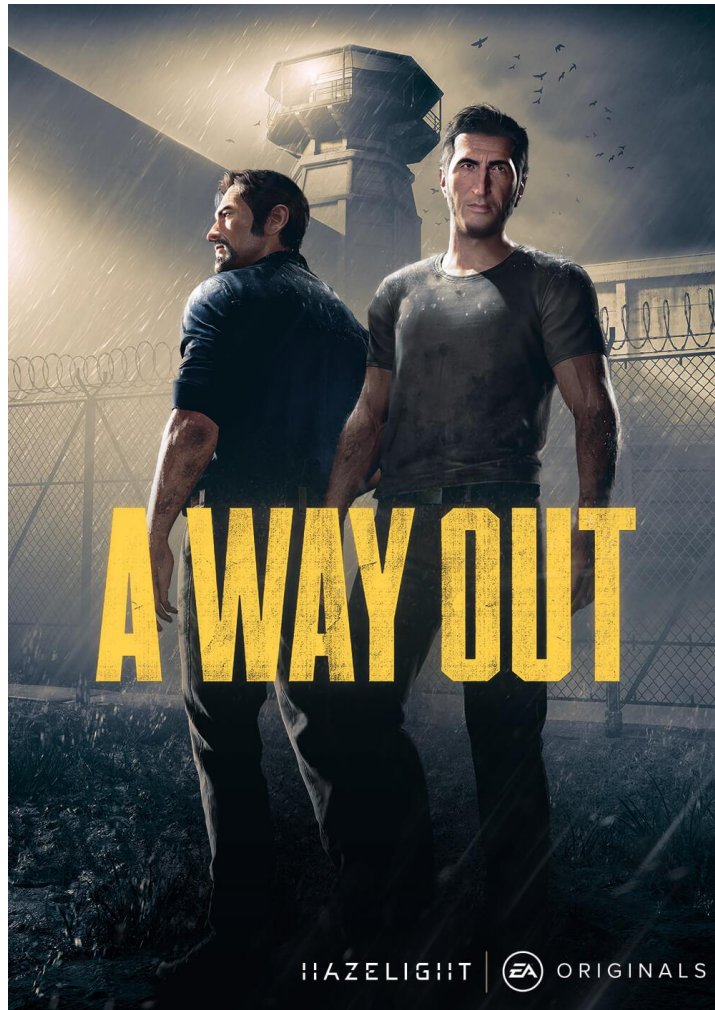
Figure 1 A Way Out promotional material.

Figure 2 Steam reviews of A Way Out.

2.2.2 Sparklite

Sparklite is a 2D action-adventure game developed by RedBlue Games and published by Merge Games. The game is in pixel art style and has a ¾ top-down view, with the character have 8 facing direction in movement. However, in this game, all of the character animations do follow the direction the character facing. For example, the death animation direction follows the facing direction before the character dies.

In the game, the player control Ada, the main character, to travel each zone of the world to stop the pollution made by Baron "Sparklite" – the life force of a planet - and put pay to baron's deadly plans of creating a new world by obtaining the world of Geodia's Spraklite core, which disrupt the world of Geodia.

This game is heavily influencing our aesthetic art choice for our game, in the sense of top-down perspective, certain character animation, and the user interface (UI) design. However, for our game, instead of using pixel art style, we are using typical 2D art style, with a heavy and dark outline for the sprite and simple shadow and highlight for the sprite.
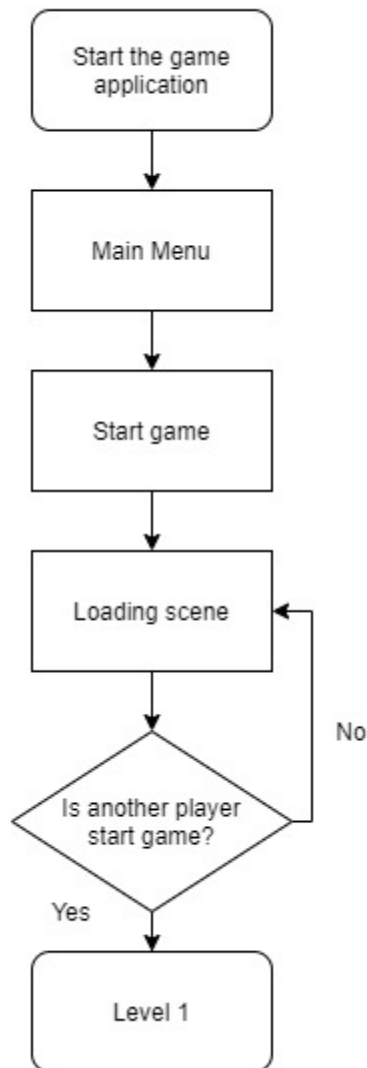

Figure 3 Sparklite promotional material.

Chapter 3 System Specification & Requirement

3.1 Design Structure

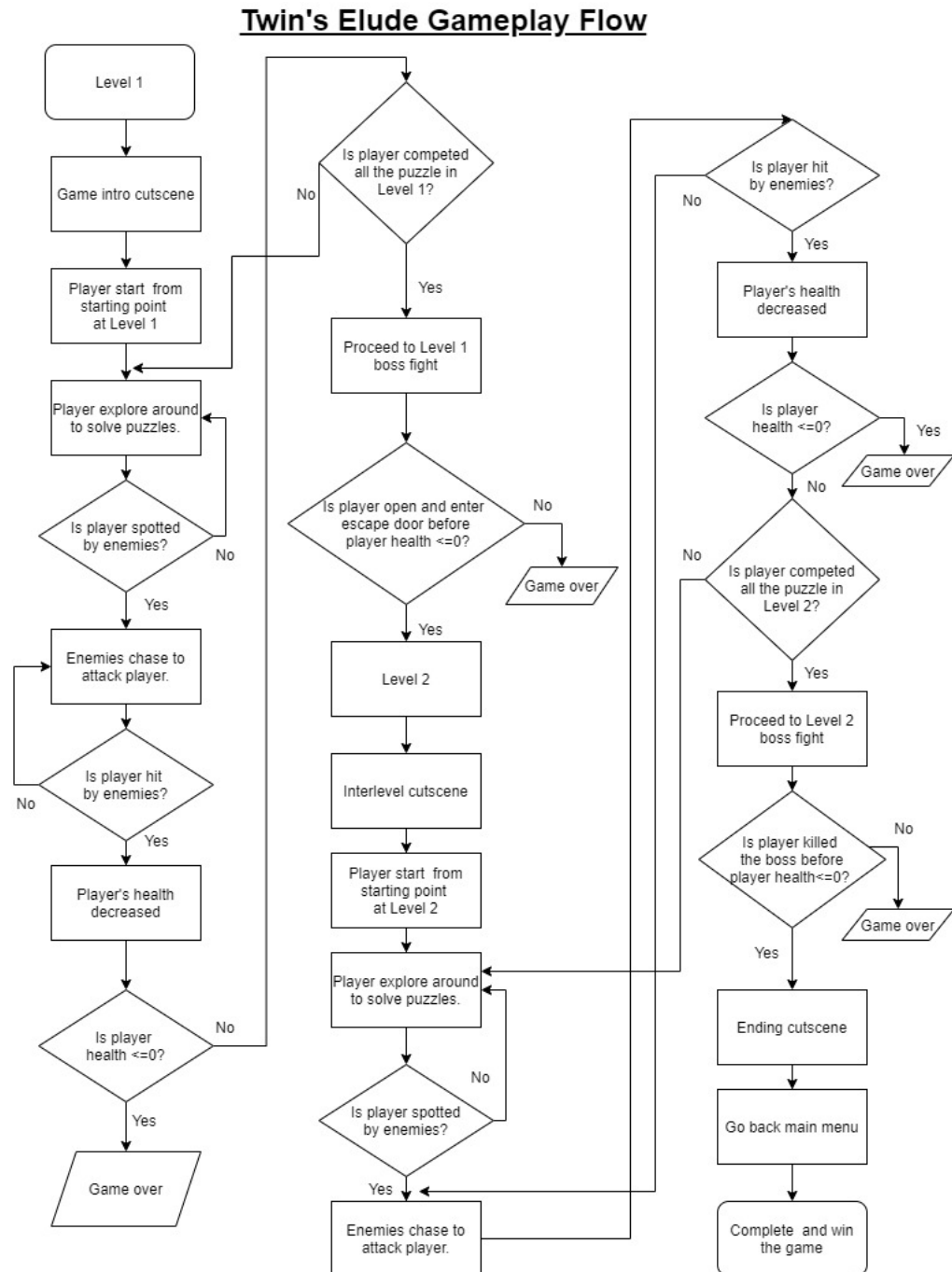### 3.1.1 Main Menu

For the game structure of Twin's Elude Main Menu, it wasn't complex at all, as there is only a start button to press in the main menu. After the player pressed start, the game server will detect whether there is another player that

pressed start. If there isn't, the player will be stayed at the loading scene until another player pressed start before going into the game intro cutscene.

3.1.2 Gameplay

Twin's Elude Gameplay Flow

```
Level 1
   │
   ▼
Game intro cutscene
   │
   ▼
Player start from
starting point
at Level 1
   │
   ▼
Player explore around
to solve puzzles.
   │
   ▼
Is player spotted
by enemies?  ── No
   │ Yes
   ▼
Enemies chase to
attack player.
   │
   ▼
Is player hit
by enemies?  ── No
   │ Yes
   ▼
Player's health
decreased
   │
   ▼
Is player
health <=0?  ── No
   │ Yes
   ▼
Game over
```

```
Is player competed
all the puzzle in
Level 1?  ── No
   │ Yes
   ▼
Proceed to Level 1
boss fight
   │
   ▼
Is player open and enter    No
escape door before  ───────────▶ Game over
player health <=0?
   │ Yes
   ▼
Level 2
   │
   ▼
Interlevel cutscene
   │
   ▼
Player start from
starting point
at Level 2
   │
   ▼
Player explore around
to solve puzzles.
   │
   ▼
Is player spotted   ── No
by enemies?
   │ Yes
   ▼
Enemies chase to
attack player.
```

```
Is player hit
by enemies?  ── No
   │ Yes
   ▼
Player's health
decreased
   │
   ▼
Is player          Yes
health <=0?  ───────▶ Game over
   │ No
   ▼
Is player competed
all the puzzle in
Level 2?
   │ Yes
   ▼
Proceed to Level 2
boss fight
   │
   ▼
Is player killed      No
the boss before  ──────▶ Game over
player health<=0?
   │ Yes
   ▼
Ending cutscene
   │
   ▼
Go back main menu
   │
   ▼
Complete and win
the game
```

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For the design structure of Twin's Elude, the player will need to solve all the puzzles to reach the boss door. The players need to make sure they stay alive with at least 0.5 health in the gameplay, or else they will lose the game.

There is an inter-level cutscene after level 1 boss fight and before level 2 as a storytelling transition between levels. The same goes for level 2, the player needs to solves all the puzzle to reach the boss door. After killing the level 2 boss, an ending cutscene will show to the player to let the player have a complete story for the game.

3.1.3 Creating Art Assets

At the beginning of the final year project, I was assigned to be the lead art designer, responsible for designing and creating the art assets of character sprites, props, environment puzzles, and map tiles for the game. I am also responsible for research in the game art study, and design art style for our game. From the research I have done, there is less ¾ top-down perspective 2D game which is not in pixel art style, so we do not imply pixel art as our art direction.

We had chosen cartoonist style as the game art style and it had been approved. After we decided on the game art direction and art asset size, I start the draft of map tiles, character design in orthographic view, then create the art assets using Adobe Photoshop CC 2019. For the Alpha version, the game art is not focusing on the detail design, only the base color and one layer of shadow contained in the art.

For the character and enemy's sprite sheets, I first look for the reference on the Internet. I sketch out a pencil draft for the sprite design before drawing it digitally. Once I have done the first sketch in digital, I cross-reference my art assets with the reference art such as Spraklite's art, or any ¾ top-down perspective 2D art to ensure my art assets' perspective is consistent to ¾ or

nearly ¾ top-down perspective. Then, I polished my art assets with shadows and highlights.

After that, I find some animation references whether in real life or 2D animation for referencing the animation key pose and key timing, creating the animation sprite sheets. I draw it frame by frame using the convenience Photoshop layer and Photoshop timeline, and convert it into big sprite sheets at the end using Photoshop script that will arrange each layer into a cell column in the sprite sheet. Then, the sprite sheets are upload into Unity, sliced into frames, and throw into the Unity Animation.

3.2 Hardware & Software Requirement

3.2.1 Hardware Requirement

For this project, our minimum requirement of hardware has Operating System 64-bit Window 7 and above, Processor at least reach 2.4Ghz, Memory at least has 4 GB RAM, Graphics support needs 2GB graphics card, Storage must have 2GB available space and lastly Internet access.

3.3.2 Software Requirement

Next, software requirement that we need has Unity 2019.4.13f1 for building our game, Github Desktop 2.7.2 for version control of our assets and in-game updates, Photoshop CC 2019 to create our game art assets and promotional material, Audacity 2.3.2 for creating or cutting sound effect and background music, and lastly Premiere Pro CC 2019 for creating our game trailer.

Chapter 4 Design and Implementation

4.1 Game Background Setting

The game story is about the humanity was once ruled by the cruel twin demon kings who turned from a human. They obtained their immortality by converting themselves into demons and ruled over the world with brute force for a long period time. However, after a few hundred years, humanity finally managed to defeat the twin demon kings and the world is once again peaceful. Nevertheless, even though they have already obtained their victory, humanity still fears that the same history will repeat itself. Hence, a twin taboo rule has been created to prevent the birth of new demon kings in the future.

In a small village, the twin protagonists were born. They were secretly kept by their parents until the age of 12. When the villagers discovered them, they are thrown into the village abandoned well as executed. However, they manage to stay alive and found that the well is linked to an underground dungeon which fills with monsters. To get back to the land surface, they need to work together.

Our game idea is based on the twin's taboo. When we are doing research, we find that although there is folklore in many old societies that twins bring bad luck to the family. The widest spread taboo which can be found right now is the taboo from the Madagascar Zulu tribe. They tend to abandon one of the twins as they believe that the twins will bring bad luck to their family.

4.2 Character Design

Twin's Elude is a cooperation game, therefore, there are two controllable characters in the game, which are the big brother "Elliot" and little brother "Ayden". The character design is having references from Zulu's culture. The symbol on their hairband represents the meaning of "family surrounded by their home". Although they are expelled by the village, the twins themselves always stay together.
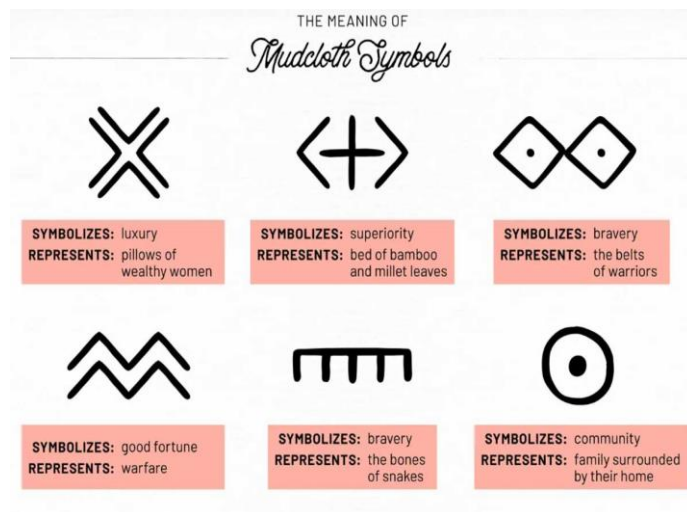

Figure 4 Symbol reference for character's clothing design.

Figure 5 The character design of Elliot(left) and Ayden(right).

4.3 Enemy Design:

As our main focus is not implementing the whole Zulu culture into our world setting, only part of the cultural reference is implemented into our game art elements.

4.3.1 Slime

The slime design is integrated from a typical slime enemy. The design concept is combining slime and grub worm. The grub worm is chosen due to matching the underground theme in Level 1. Grub worm is the larvae of a kind beetle, which lay their eggs in the underground. The grub worm only left the dirt after they pupae and turn into a beetle.

Figure 6 Design of slime enemy.

Figure 7 Referencing the slime from Dragon Quest and grub worm.

4.3.2 Goblin

In Zulu mythology, there is also a dwarf-like sprite creature. But we decided our design is taking more reference from European myth's goblin for artistic purpose. It is to avoid the goblin is having a too similar color scheme with the wall and floor, and make the player is not able to spot the enemy clear enough. The goblin weapon is the bone knife, which is the same as the props that the player able to obtain in the game.

Figure 8 Design of goblin enemy.
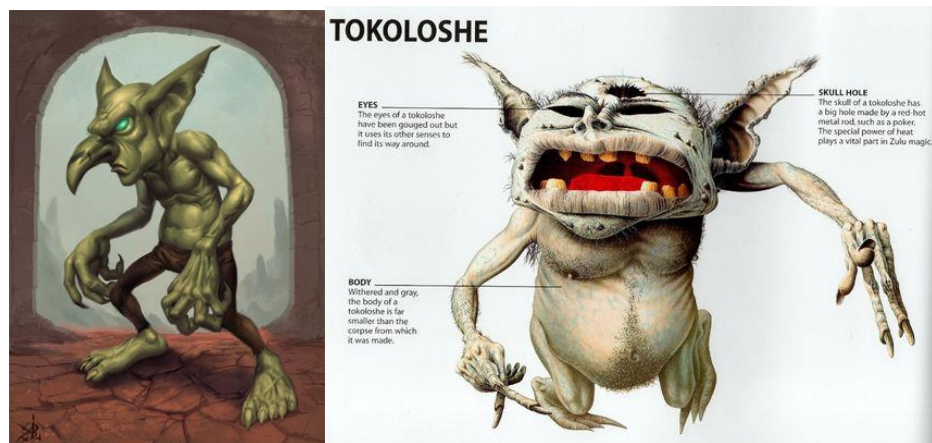
Figure 9 Reference of goblin-creature from Western mythology(Goblin, left) and Africa mythology(Tokoloshe, right).

4.3.3 Beast

A hyena and wolf hybrid beast. When we need a beast enemy which runs fast, we design this hyena and wolf hybrid beast. There is a werehyena myth

among Africa culture. Therefore, the design combined the hyena and the wolf to fit the habitat, which is the dungeon, as the wolf can adapt to more types of habitat.

Figure 10 Design of beast.

Figure 11 Reference image of werehyena.

4.3.4 Rocky

This enemy is designed to have the function of shooting projectiles toward the player during its patrol. The original design concept is a creature similar to rock slime in "Slime Rancher". The design is changed after found it is abit confusing for the player after testing the prototype.

Figure 12 Rock slime from Slime Rancher.

The final design used in the game is integrated from hedgehog and sea urchin, as it has spikes on its back.

Figure 13 Design of rocky.

Figure 14 Reference of hedgehog and sea urchin.

4.4 Boss Design

4.4.1 Level One – Minotaur

In level one, the boss is integrated from the Greek mythology Minotaur, bull head with a human body creature. In our design, the human body designs it

to be more beasty like a bear, in order to fit our humanoid chibi character design in the game.

Figure 15 Design of Minotaur boss, and reference picture for Minotaur.

4.4.2 Level Two – Fire Ball

In level two, the boss design is taking reference from the fire bomb in Final Fantasy XIV. The boss in the setting is a lava fireball that will shoot fire projectile to the player. In order to fit with the boss room theme, lava, the outer of the boss is designed to have a sluggish look, represent the slow movement of lava. The boss color scheme is reduced to a more pastel color in order to let the boss more obvious in visual and does not blend into the maptile.

Figure 16 Design of Fireball boss and fire bomb from Final Fantasy XIV.

4.5 Storyboard for the game

Before the actual story cutscene is produced, story board planning and storyboard sketches are done for each cutscene. The planning and sketches are for development reference usage and will be different in details compared with the actual cutscenes.

4.5.1 Introduction Story

<u>4.5.1.1 Storyboard Planning</u>

Scene 1: World overview

Scene 2: Twin demon kings sitting on throne

Scene 3: Humanity victory

Scene 4: Village overview

Scene 5: Twin baby born

Scene 6: Twin discovered by villager

Scene 7: Villager storm twin's house, the twins hugging each other feeling scared with the villagers shadow covering the opened door.

Scene 8: Twin thrown inside the well

4.5.1.2 Storyboarding Sketches
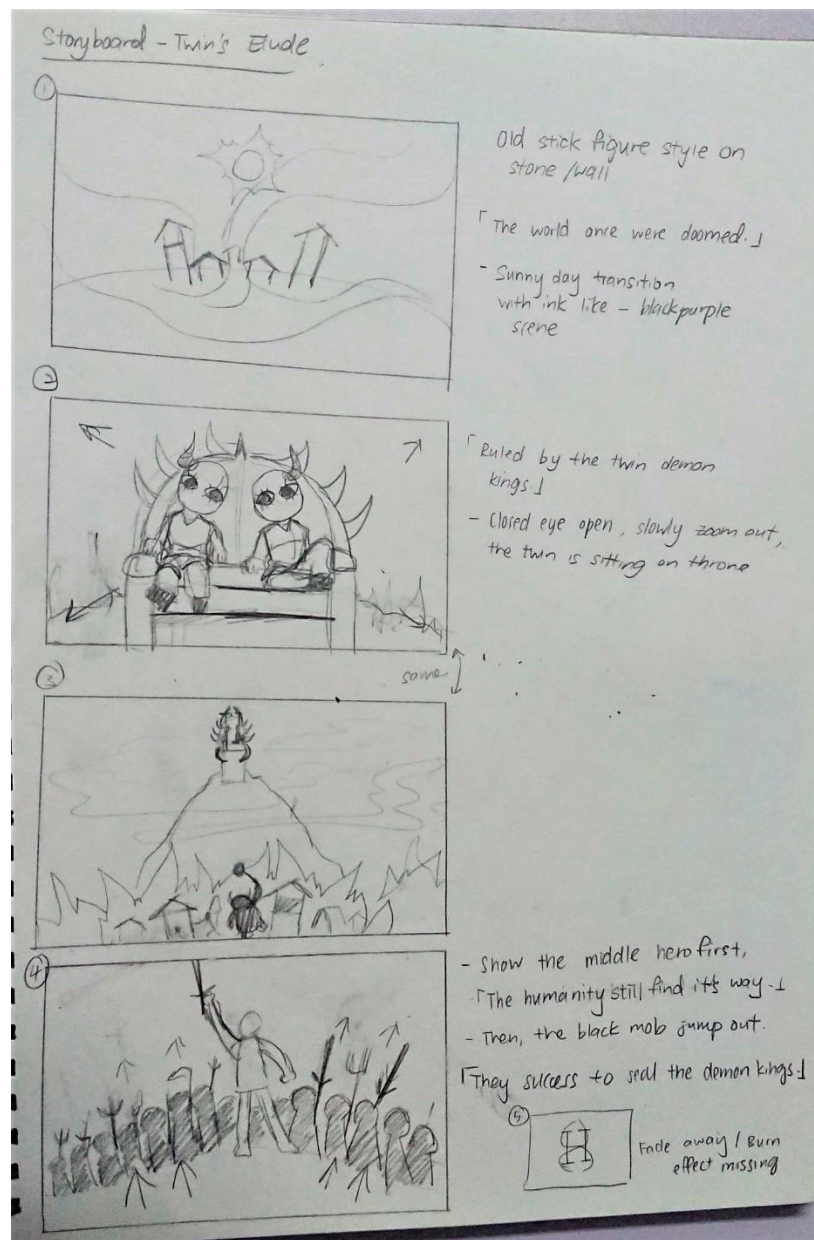
Figure 17 Storyboard of intro cutscene - 1/2.
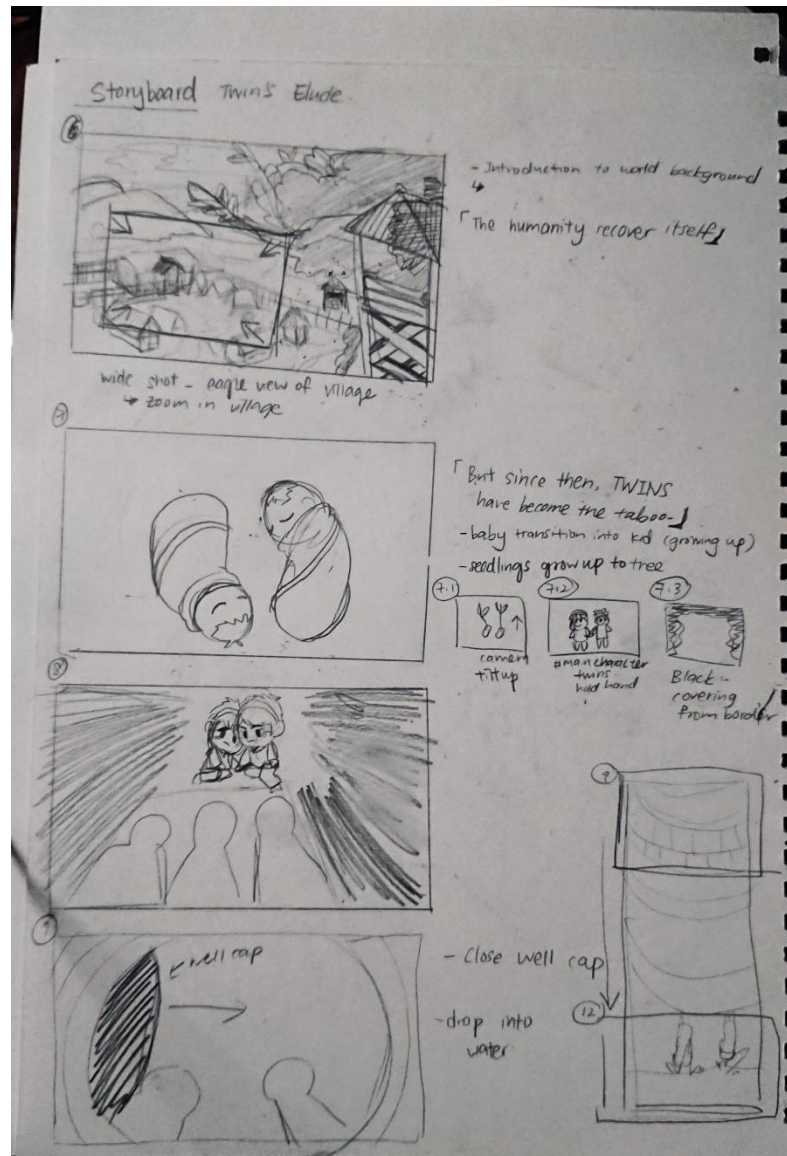
Figure 18 Storyboard of intro cutscene - 2/2.

4.5.2 Level 1 – Level 2 Transition Cutscene Story

4.5.2.1 Storyboard Planning

Scene 1 : Looking behind at the door they open from stair up while in rush state with Minotaur staring at them from the lower part of the stairs.

Scene 2: Run till the top and found another door and brothers have chat about the dungeon.

Scene 3: Both brothers open the door and proceed to next level.

4.5.2.2 Storyborading Sketches
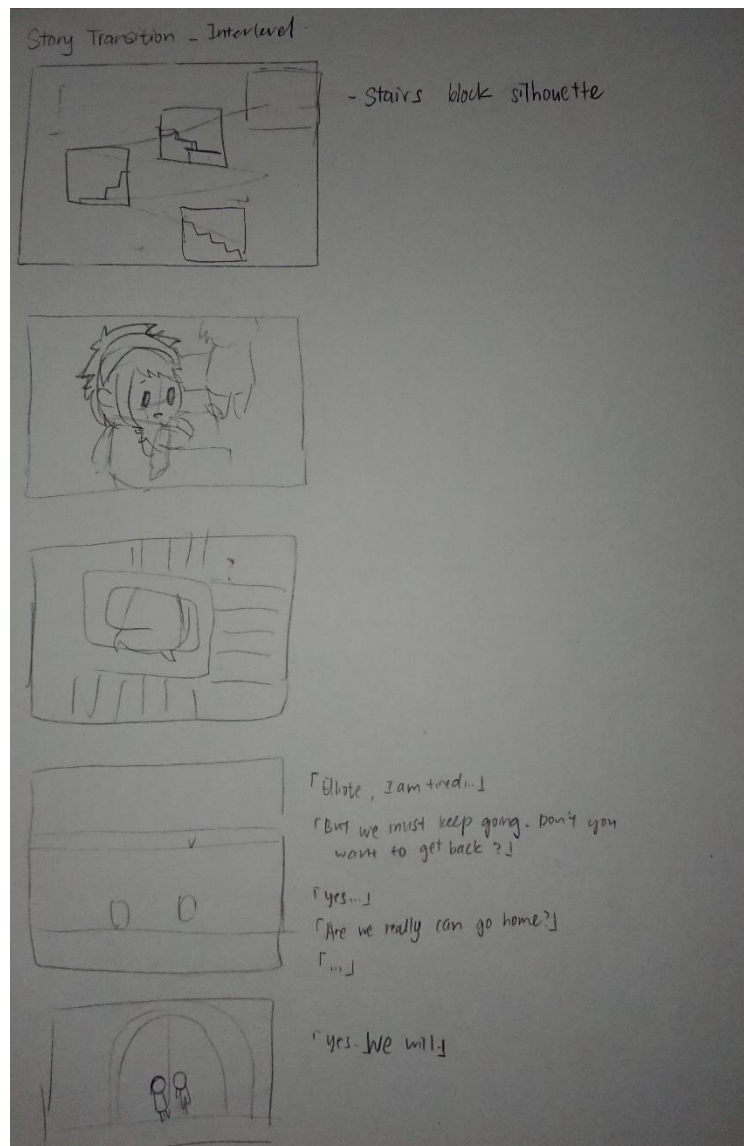
Figure 19 Storyboard of inter level cutscene 1/1.

4.5.3 Ending Story

4.5.3.1 Storyboard Planning

Scene 1: They saw ladders in the end of the road after the level 2 boss.

Scene 2: They climb up ladders(few frame, with different background transition (gradient from brick wall to modern sewer).

Scene 3: They saw sewer cap and open (a cap with light around).

Scene 4: Outside world(sewer cap opened), brother head out.

Scene 5: See several people around with modern cloth.

Scene 6: Saw a pair of twin(children, teen)- that look alike with the demon king.

Scene 7: The twins smile at them.

4.5.3.2 Storyboarding Sketches
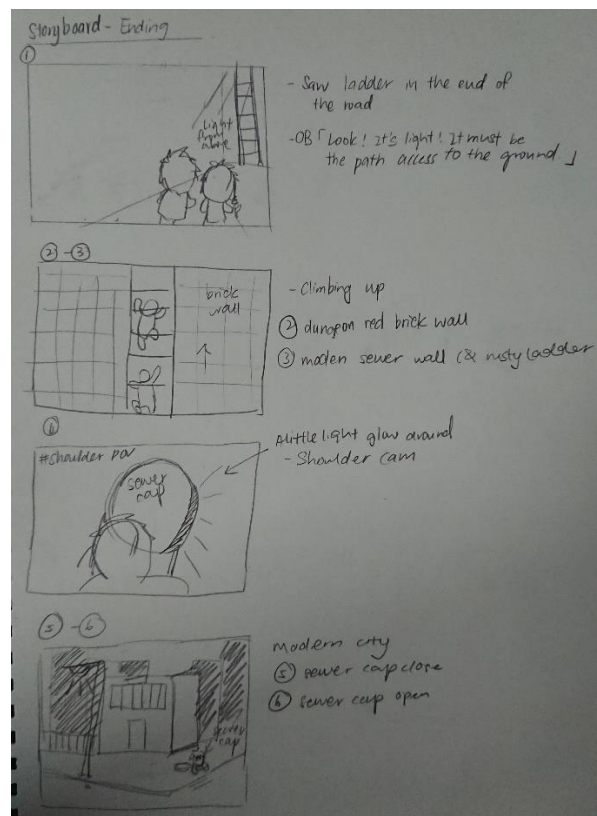
Figure 20 Storyboard of ending cutscene - 1/2.
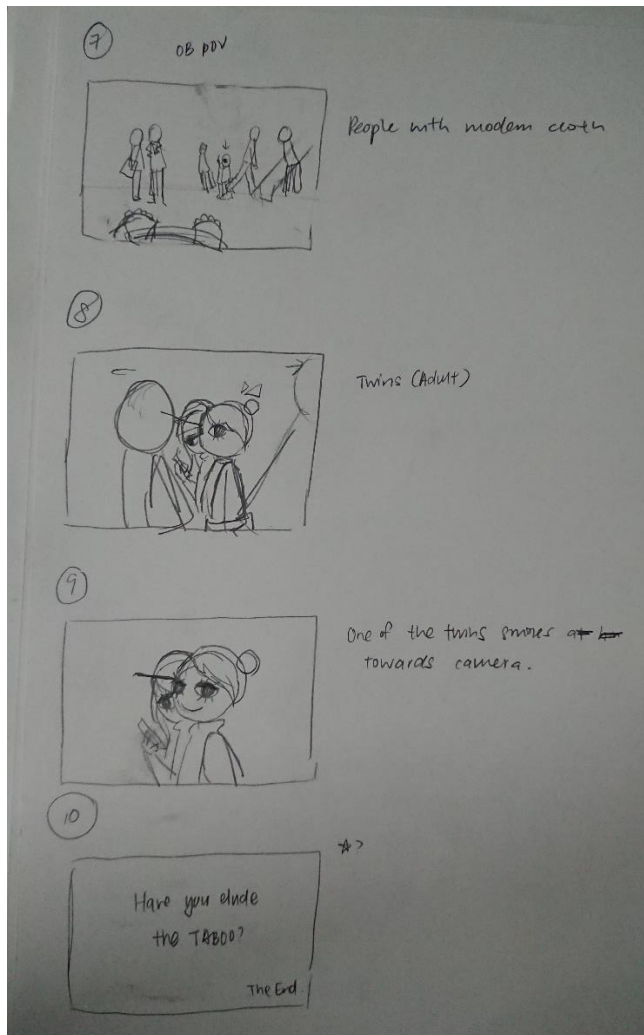
Figure 21 Storyboard of ending cutscene - 2/2.

4.6 Environment design

The environment design is referenced to a typical fantasy dungeon. The color selection of level one and level two maptiles is based on the boss in each level. In level one, the boss is a Minotaur, the Minotaur is brown color-based, to match his theme, I designed the maptile to be yellowish, dirt color scheme.

Figure 22 Level 1 maptile color scheme.

In level two, the boss is a Big Fire Ball, to match its theme, I designed the maptile to be a red color scheme, to make it looks hot in temperature, and lava floor tile is also added into maptile.

Figure 23 Level 2 maptile color scheme.

4.7 Props

The props design in the whole game is trying to be more tribal-like. It is because in the background story the humanity had been tortured before, cause their technological development to lose track, so their tools are mostly wooden, or stone-made props, with limited metal. Even the knife is based on a bone knife.

Besides that, there are fantasy magical elements in the game, which there is a light orb that is able to glow all the time, and a light absorber that is part of the door opening mechanic.

Figure 24 The preview of part of the props in the game.

4.7.1 The sacred tree

The sacred tree is one of the magical props in the game. Only one fruit will grow on the tree at one time. After the fruit is picked, the sacred tree will wither.

In one of our hidden lore in the game background, the sacred tree is actually given some special power to the twins. The previous twin is given the mighty power to rule the world, which became the twin demon kings; and the new twin is given the power to walk through time.

Figure 25 The sacred tree art asset.

4.8 UI design

To make the UI have contrast with the low saturated maptiles, the UI is more vibrant and saturated in color. The UI is given a purple-ish gray color scheme to represent a stone-like UI to match the fantasy dungeon theme. Due to the character design is based on blue and red as their represent color, purple is used as the UI to have the meaning of the twin's combine and cooperate, as blue add red in pigment theory is equal to purple. A lot of buttons also reference the stone and wood color schemes use in the game.

Figure 26 The UI elements in the game.

4.8.1 Tutorial

In order to improve the immersion of the game, the tutorial of the game is inter placed at the starting spawn point of level 1.
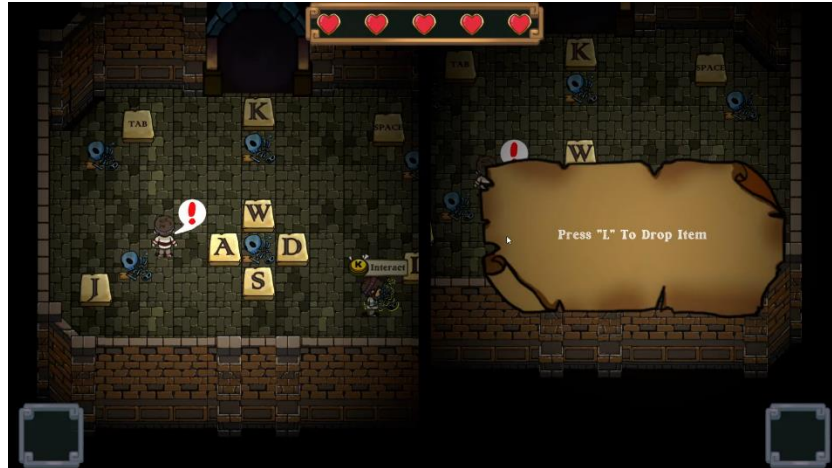
Figure 27 Tutorial that show at the spawning point in Level 1.

4.8.2 Game Over Scene

In the game over scene, there is 2 small-sized skull that represents the twins are dead in the game. The level only restarts if both players choose "Yes" to restart the game.

Figure 28 The game over UI once the player's health <=0.

4.9 Puzzle Map Design

The map is originally designed in a huge area map, we change it to become a smaller room for the map design. The room becomes smaller it makes the environment less empty and fewer art assets need to be drawn to fill in the space. This decision not only help to have better planning in level design, but it also helps to save time and effort in creating art assets.

4.10 Animation

In this game, the art assets are using an 8 directional in animation, which is Bot, Top, Left, Right, Bot_Left, Bot_Right, Top_Left, and Top_Right. This is to let the player have smoother control for the character, also able to set some little control trick in level design. For example, one of the levels required the player to dodge in Bot_Left or Bot_Right in the direction to pass through the spike trap safely.

Instead of directly flip the character sprite, there is detail in 8 direction sprites to sketch out the detail in character appearance design. For example, the little brother has a small pigtail on his right side.

The only exception is the death animation. The death animation only has one direction in the animation, which is facing the player (Bot). This is one of the experiments in this game that is the facing direction will break the player's immersion in the game due to this method of animation transition.
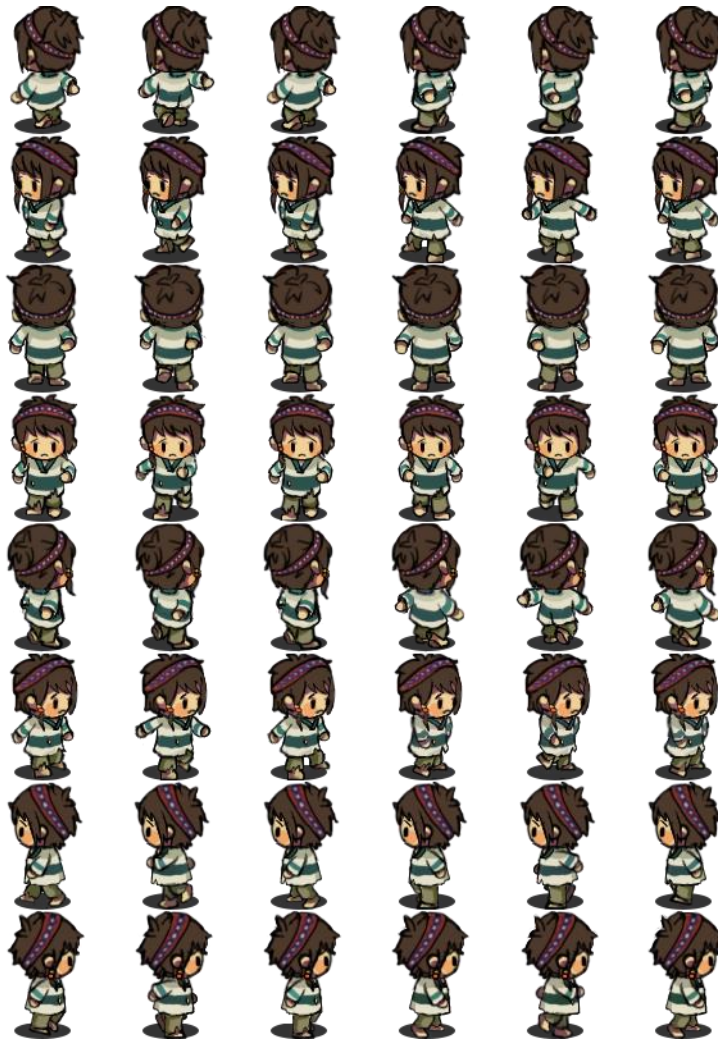
Figure 29 The 8 directional sprite sheet of the character.

Figure 30 The death animation that only have one facing direction.

Chapter 5 Result and Evaluate

5.1 Testing and Feedback

For our game testing, we tend to ensure the networking works fine and the puzzle is challenging but understandable and playable for the player. We did find our supervisor for game product and course-mate to test play our game and getting feedback from them. We did receive some useful feedbacks such as amendment in art assets details for better polishing, reconstruct our intergroup workflow for smoother production and resizing the level map. Some advice is taken, some are not based on our workflow priorities, the lowest priorities in art assets are the animation in the environment map tile such as the lava movement animation in the level 2 boss room.

Interestingly, based on the playtest feedback from others, only 54.5% of people noticed the facing direction of the death animation differs from others.
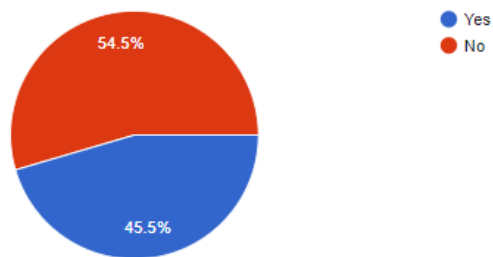
Figure 31 Extract from playtesting feedback, whether the player notice the difference in the animation.

Mostly of them does not think the orientation/facing direction of the animation break their immersion in this game.

Do the animation orientation break your immersion in this game? *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

Do the animation orientation break your immersion in this game?
11 responses
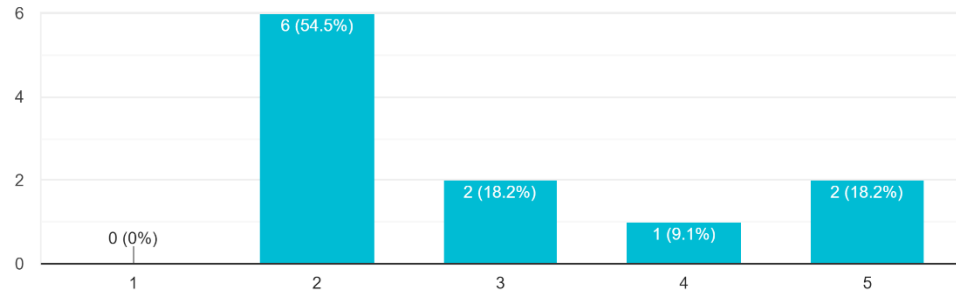
Figure 32 Extract from the playtesting feedback, do the animation facing direction in this game break the player's immersion.

5.2 Troubleshooting

At the beginning stage of the development of our game, I did struggle in correcting the sprite sheets' top-down perspective. The initial version is mostly look too flat or the perspective somehow a bit off compared with other art assets. We did do checking before officially implement the art assets into the game, and there is an "Update" and "Final" folder for the art assets for easier reference for everyone in the team to know which art assets are usable.

5.3 Issues and Constraints

5.3.1 Issue with the overall art design workflow

A lot of settings and designs are added in or amend halfway through the development process, which causes certain amendments of art assets will become huge progress. For example, the setting of the older brother can carry

heavy bricks (Strength), and the little brother can go through small holes (Agility).

In a more optimized state, the design of the twin should have this kind of difference in their body shape character design. However, due to our workflow in art assets, the concept is not implemented into our character sprites due to our priorities of the completion of the game above the polishing in animation.

5.3.2 Issue with sprite workflow

We choose to use 8 directional sprites and do not use flip to work with the details in character. But it seems a little unoptimized in our game workflow because fewer assets are created to do the detailing of character sprite at the beginning, and hard to make design amendments at the later stage.

5.3.3 Issue with art assets creation workflow

Due to our animation is done in the method of frame by frame. At the beginning of the creation, spreading the animation sprite frame make the Photoshop work file have a bigger size until several hundred MB or even GB. This has caused the workflow is slow down due to the duplicate effort on arranging the sprite frame into sprite sheet format which average takes 15 minutes to complete a single character animation and also the Photoshop lagging issue.

This issue is optimized around Week 6 in FYP 2 when discovered Photoshop script that helps to spread and arranging the sprite automatically and in seconds. This had helped the workflow to be smoother and faster compared with the previous workflow. The only concern is the sprite framework files and sprite sheet work files have to save in different PSD files to keep a complete

backup. This is because the script requires the sprite frames to be a single layer for each frame before it can help to arrange it.

5.3.4 Limitation of player number

The biggest limitation for our game is the player numbers limitation. Each game build can only allow 2 players to open the game at the same time. Once the number exceeds, there will be bugs and the third player could not run the game. This is due to the network framework we use, to have a stable built.

5.4 Bugs

In this project, there still have some bugs regarding the networking of the game, which leads to the wrong display of the game object on different player's screens and unable to solve the puzzle. Of course, there still has some minor bugs that we couldn't fix, because most of them are hard to recognize and recreate, which may overlook by us.

Chapter 6 Future Work and Conclusion

6.1 Future Work

In the future, the game can be updated with variant idle animation or more details in animation such as eating the fruits and pick up an item to have the animation to make the character livelier. More deep and detailed research in design is needed to make the elements in the game more consistent and relevant in the design elements implemented into the game. Besides that, the network framework is preferably to change so it will enable more players to run the same built of the game.

The workflow of art assets creating also need to rearrange the priorities, as the characters' sprite sheet is not that priorities to be over detail in differentiating which horizontal direction it faced. The sprite sheets can be flipping horizontal to fasten the workflow, to produce more animation variants for the character to add in the aesthetic details for the gameplay.

6.2 Conclusion

To create a good 2D game animation that keep the player's immersion, there is a lot to consider. Some details are not important for the player to keep them immersive, the facing direction of the character does not seem that important enough to break their immersion as long as the animation is high-fidelity enough.

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Appendixes

Appendix Playtest feedback form

The Influences Of Game Level Design On Player's Immersion

This section will be focusing on the player immersion aspect when they are playing the game levels.

Does the game platform where you play the game affect your immersion? *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

If the game level has repetitive level design mechanics, will it ruin your immersion? *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

When a game is too hard, will it break your immersion when playing the game level? *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

Does the game graphic affect how you feel about the level design? *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

After section 3   Continue to next section

Effect of the facing direction of the character to the player

This section will be focusing on the animation aspects for the game.

In Twin's Elude, the character is using a 8 orientation(facing direction) animation to portrait a smoother animation for top down gameplay.

Have you notice the death animation only have one orientation compared with other animation? *

○ Yes

○ No

Do you think that the orientation of animation affect player's immersion in this game? *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

Do you agree that the character is communicating with you when the animation orientation is face towards you? *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

Do the animation orientation break your immersion in this game? *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

After section 4   Continue to next section   ▾

Twin's Elude Playtesting Feedback Form

The Effect of Puzzle Design on Player's Experience

This section will be focusing on the player experience regarding the puzzle design of the game.

Q1. Are you able to guess / know what you need to do when solving the puzzles below? Tick the checkboxes below if your answer is yes.

☐ (Level 1) Stepping Puzzle

☐ (Level 1) 8x8 Pixel Drawing Puzzle

☐ (Level 1) Simple Light Mirror Puzzle

☐ (Level 2) 10x10 Pixel Drawing Puzzle

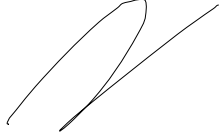☐ (Level 2) Full Light Mirror Puzzle

☐ (Level 2) Three Rotator Puzzle

41
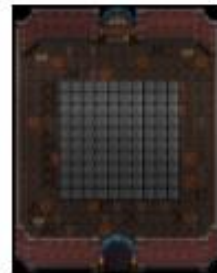
Q2. Are the puzzles below too challenging for you? Tick the checkboxes below if your answer is yes. Answer Q3 only if any of the checkboxes is **ticked**.

☐ (Level 1) Stepping Puzzle

☐ (Level 1) 8x8 Pixel Drawing Puzzle

☐ (Level 1) Simple Light Mirror Puzzle

☐ (Level 2) 10x10 Pixel Drawing Puzzle

☐ (Level 2) Full Light Mirror Puzzle

☐ (Level 2) Three Rotator Puzzle

Q3. Please elaborate which parts make you feel too challenging to solve.

Your answer

Q4. Do you play collaboratively with another player to solve the puzzles below? Tick the checkboxes below if your answer is yes. Answer Q5 only if any of the checkboxes is **unticked**.

☐ (Level 1) Stepping Puzzle

☐ (Level 1) 8x8 Pixel Drawing Puzzle

☐ (Level 1) Simple Light Mirror Puzzle
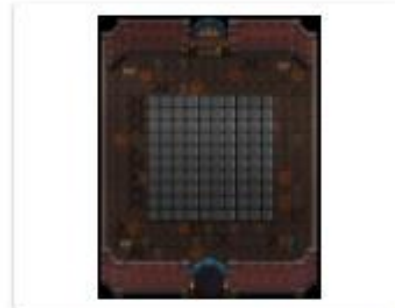
☐ (Level 2) 10x10 Pixel Drawing Puzzle

☐ (Level 2) Full Light Mirror Puzzle

☐ (Level 2) Three Rotator Puzzle

Q5. Please elaborate how you able to solve the puzzle(s) without collaboration with other player.

Your answer

Q6. Do the puzzles below make logical sense to you? Tick the checkboxes below if your answer is yes. Answer Q7 only if any of the checkboxes is **unticked**.
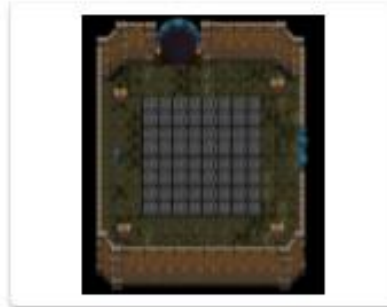
☐ (Level 1) Stepping Puzzle

☐ (Level 1) 8x8 Pixel Drawing Puzzle

☐ (Level 1) Simple Light Mirror Puzzle

☐ (Level 2) 10x10 Pixel Drawing Puzzle

☐ (Level 2) Full Light Mirror Puzzle

☐ (Level 2) Three Rotator Puzzle

Q7. Please elaborate on which part(s) of the puzzle(s) do not make sense for you.

Your answer

Q8. Rate your level of satisfaction after the puzzles are solved. *

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
(Level 1) Stepping Puzzle	○	○	○	○	○
(Level 1) 8x8 Pixel Drawing Puzzle	○	○	○	○	○
(Level 1) Simple Light Mirror Puzzle	○	○	○	○	○
(Level 2) 10x10 Pixel Drawing Puzzle	○	○	○	○	○
(Level 2) Full Light Mirror Puzzle	○	○	○	○	○
(Level 2) Three Rotator Puzzle	○	○	○	○	○

Q9. In your opinion, what is still lacking in the puzzles, and how can the puzzles improve to become better? (optional)

Your answer

Appendix A

Project Paper Consultation Logbook	
Project Title	Twin's Elude
Student Name	Koh Wan Yee
Student ID	1801385
Year/Semester	Y3S2
Supervisor	Dr. Aloysius Yapp, Mr. Benedict Ng

WEEK 01	
Comments: •Agreed with groupmate for 2D art style - preferable 2.5D top down view •Discussed about the game story, character design sketches is needed •Research on the related game art	Supervisor signature:
Progress (please circle the feedback) 1 2 3̶ 4 5 Poor Satisfactory Good	Date: 30/10/2020 2/11/2020

WEEK 02	
Comments: -More visual support needed to help explaining the game content -UI, concept art sketches are lacking. -Problem with local multiplayer - the CMCO might still extend and causing problem to showcase/test play local multiplayer game. Consider online multiplayer instead. -So far, the twin's game(first idea) looks more interesting.	Supervisor signature:
Progress (please circle the feedback) 1 2 3̶ 4 5 Poor Satisfactory Good	Date: 4/11/2020

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WEEK 03	
Comments: - Based on supervisor, both game idea seem ok and can proceed. Our group chosen the first game idea,Twin's Elude. - Environment concept art shown seem a bit empty in sketches phase, need to give extra effort on environment misc. design during the production phase. - For my parts, I will need to fixing the orthographic view accuracy for the maptiles, start designing the environment misc.	Supervisor signature:
Progress (please circle the feedback) 1 2 (3) 4 5 Poor Satisfactory Good	Date: 11/11/2020

WEEK 04	
Comments: The environment seem too dark in tone. Need to either adding light source or changing the light tone of the full environment. Asset's art direction seem random, rediscuss with groups which art direction/ props is required and priority for the current building level. Speed up with the animation/ sprite sheets, at least the character animation need to be there.	Supervisor signature:
Progress (please circle the feedback) 1 2 (3) 4 5 Poor Satisfactory Good	Date: 18/11/2020

WEEK 05

Comments:	Supervisor signature:
Character Sprite looks great.	
Maptiles are good enough for alpha version.	*Ng*
Need to decide which part of the art assets should be simplify and which parts are priority to complete more asstes for the alpha version.	
Priority:Puzzle Props, Boss sprite,Enemy sprite(Slime and Goblin)	
Please prepare yourself with the presentation on week 7 12/12/2020 10am – 3pm FYP1 Alp Remember to prepare chap1 until chap3 for research writing.	a.

Progress (please circle the feedback)	Date: 25/11/2020
1 2 (3) 4 5 Poor Satisfactory Good	

WEEK 06

Comments:	Supervisor signature:
- Animation indicator for certain actions such as take damage, attack...etc is priority now. - Some amend on Young Brother side view sprite to avoid confusion. (Hair) - Spike trap can make some amend to make it more obvious is dangerous and not so symmetry (bigger spike etc..) - Need to implement the art assets into the game, to have better overview of how the game will looks.	*Ng*

Progress (please circle the feedback)	Date: 3/12/2020
1 2 (3) 4 5 Poor Satisfactory Good	

WEEK 07

Comments:	Supervisor signature:
- Prioritize implementation of animation into the game first for the presentation purpose - Spike trap and dodge animation need to have changes to make it more logical at the future, but is ok to maintain current version for alpha presentation first. - Separate the floor color within the dungeon and outside the dungeon to reduce confusion.	*Ng*

Progress (please circle the feedback)	Date: 11/12/2020
1 2 3 (4) 5 Poor Satisfactory Good	
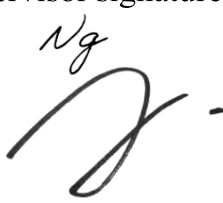
Appendix B
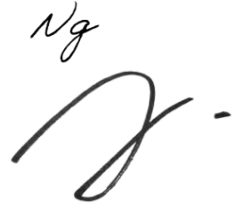
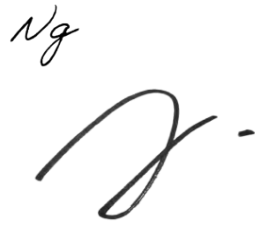| Project Paper Consultation Logbook	
Project Title	Twin's Elude
Student Name	Koh Wan Yee
Student ID	1801385
Year/Semester	Y3S3
Supervisor	Dr.Aloysius Yapp, Mr.Benedict Ng

WEEK 01	
Comments: - Take in mind details of art assets - Shadow for character - More environmental decoration to fill in the floor space(less empty) - Speed up for progress - Consider the lighting in environment	Supervisor signature:
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 22 Jan 2021
WEEK 02	
Comments: -Reschedule the workflow - Environment Misc. to fill up space -Level 1, UI and enemy animation...etc to be done asap to enable the game have the overall aesthetic feel	Supervisor signature:
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 28 Jan 2021

WEEK 03	
Comments: - try and get proceed with level 2 - Environmental deco start by this week. -Instruction important, better apply early for the play test purpose. - A bit lack of visual feedback(Eg. Take damage - health UI need more obvious, or work with the invulnerable character animation make it more obvious) - detailing in environment animation related to game logic.	Supervisor signature:
Progress (please circle the feedback) 1 2 3 ④ 5 Poor Satisfactory Good	Date: 4/2/2021
WEEK 04	
Comments: -Discover problem with sprite sheet alignment, Unity editor sliced will have more 0.5 pixel in view, need to realign and resliced all current sprite sheet available to avoid some black pixel at the sprites edge. - Continue work on player walk and enemy idle animation	Supervisor signature:
Progress (please circle the feedback) 1 2 3 ④ 5 Poor Satisfactory Good	Date: 11/2/2021

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WEEK 05	
Comments: - Continue with player dodge animation(replace), player idle, wolf animation - Work on global UI - Some environment decoration, such as bones(for hint),campfire	Supervisor signature:
Progress (please circle the feedback) 1 2 ③ 4 5 Poor Satisfactory Good	Date: 19/2/2021

WEEK 06	
Comments: - continue with leftout animation for wolf and player dodge, death animation - need focus work on maptiles(L2), environment,some props variation, and some adjustment in UI assets. - discussion on L2 puzzle and new function assets	Supervisor signature: Ng
Progress (please circle the feedback) 1 2 3 ④ 5 Poor Satisfactory Good	Date: 26/2/2021

WEEK 07	
Comments: - Consider the real puzzle map for the mirror puzzle- Light Orb need to be more obvious - Start level 2 props art assets. - Replace the Level One mapriles with the new maptile set	Supervisor signature:
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 3/3/2021

WEEK 08	
Comments: - Need to fix some wall tiles slicing and gridding problem in Unity- Floor tiles - Complete L2 puzzle(mirror, rotation puzzle, drawing puzzle prop by next week)	Supervisor signature:
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 12/3/2021

WEEK 09	
Comments: - Need changes to rotate puzzle shadow, reduce skeleton size, do some detail changes in props. - Consider show visually Older brother stronger and young brother is weaker for the indication of their ability(pick up heavy stuff and go through wall gaps) - Continue work with remaining props assets - Next 3 week work plan to complete the game	Supervisor signature: *Ng*
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 17/3/2021
WEEK 10	
Comments: - Continue with L2 remain props assets and UI.(Priorities these first for complete gameplay showcase) - Start some L2 Boss Design and Animation.	Supervisor signature: *Ng*
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 25/3/2021
WEEK 11	
Comments: Consider have between cutscene(Having a more complete story telling for the game) Continue with L2 boss animation and other arts.	Supervisor signature: *Ng*
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 3/4/2021

WEEK 12	

Comments:
  To make a complete game version, with cutscene, intro, and ending animation implement.
 The Cutscnes can use placeholder of storyboard sketch first.
  -Target: Complete cutscenes between level1 and level2 , and 80% of Intro cutscene
	Supervisor signature:

Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 9/4/2021
WEEK 13	
Comments: Continue with ending and promo material. Some details to take care of (Blending switch, throw stone ani, Red X UI, color gems)	Supervisor signature:
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 21/04/21
WEEK 14	
Comments: Done ending cutscene Continue with the promotional material, potrait ver can use for CD, landscape ver can use for poster Namecard design to chage to more playful color scheme or design	Supervisor signature:
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 27/04/21

Final Project Title Form
Fill in the information below as detailed as you can after confirming project title.

Project Type:

✓ Product Based Project

   Research Based Project

(tick the appropriate box)

Student ID	Student Name	Email & Contact no
1705608	Muhamad Elias Bin Mohd Alif Leong	elias.leong@outlook.com 016-2001 707
1801385	Koh Wan Yee	aruyuxbl@gmail.com 011-2643 1374
1600825	Tan Wei Yon	tanweiyon@hotmail.com 017-2188 425

Supervisor:___ Dr. Aloysius Yapp, Mr. Benedict Ng_____

Project Title:

Twin's Elude

Project description:-

Twin's Elude is a 2D multiplayer co-op puzzle game. Our game concept is about sharing a split screen which enable the pair of players could know each other situation, and work together to solve the puzzles in game. The game is about the twin's protagonists are thrown into the abandoned well as an execution. However, the protagonists manage to stay alive and found an underground dungeon which can lead them back to the land surface. However, the monsters which appear hundred years ago manage to survive in the dungeon, they need to find a way back to the land surface safely.

Student name	Individual Project Scope
Muhamad Elias Bin Mohd Alif Leong	-Game Design Document -Items/Props Design & Behaviour -Enemies & Player Design & Behaviour -Level Design -Props Placement & Spawn Rate -Character Animation Adjustment -Bug Tester -Narrative -Game Mechanics -Game Trailer -Game Lightning & Fog Effects -Sound Effects & BGM -Manage Overall Project Progression
Koh Wan Yee	-Character & Enemies Sprite Sheets -Items/Props Sprite Sheets -Character & Enemies Animation -Game UI Design -Cutscene Storyboard -Game Cutscene -Bug Tester - Promotional Material including poster, design board, namecard, CD cover & CD image
Tan Wei Yon	-Player Functions -AI / Boss Fight Functions -Item Functions -Animation Functions -Screen Functions -Networking -Puzzle Functions -Narrative Functions -Sound Functions -UI Functions -Manage Github