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UNMASKED

**AMIRRUL SHAKIRIN
BIN MOHD ZANURRI**

**BACHELOR OF ARTS in 3D ANIMATION AND
DIGITAL MEDIA (HONOURS)**

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Faculty of Computing & Multimedia

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AMIRRUL SHAKIRIN BIN MOHD ZANURRI
AM2311015188

MMC4015

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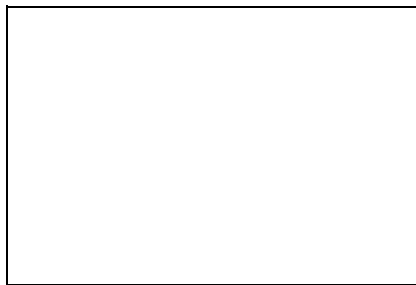
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Abstract

People's actions are often shaped by how much they care about their siblings, and sometimes that love makes them ask: "How far would I go to protect my brother or sister?" When you think about this, you can see how love and duty control someone's choices and who they become. The connection between siblings can lead to brave acts, hard decisions, and sacrifices that matter deeply. If you tell this story using a 2D or 3D animated short film, you can show these feelings in a powerful yet gentle way that really touches people.

Keyword: Sacrifice, Family, Bond, Consequences, 2D Animation, 3D Animation

Table of Contents

| | | |
|---------|--|----|
| 1 | INTRODUCTION | 11 |
| 1.1 | Introduction | 11 |
| 1.2 | Background Study | 12 |
| 1.3 | Problem Statements | 13 |
| 1.3.1 | Sacrifice can lead to self-destruction. | 13 |
| 1.3.2 | Challenges in showing sacrifices in a 3D Animation short film. | 13 |
| 1.4 | Project Objectives | 14 |
| 1.4.1 | To investigate and to identify the impacts of sacrifice. | 14 |
| 1.4.2 | To use hidden element to show sacrifice in 3D Animation. | 14 |
| 1.5 | Project Scope and Limitation | 15 |
| 1.5.1 | Project Scope | 15 |
| 1.5.2 | Project Limitation | 16 |
| 1.5.2.1 | Time | 16 |
| 1.5.2.2 | Technical Hardware | 16 |
| 1.5.3 | Project Target Audience | 16 |
| 1.6 | Project Requirement | 17 |
| 1.6.1 | Software Requirement | 17 |
| 1.6.2 | Hardware Requirement | 18 |
| 1.7 | Conclusion | 19 |
| 2 | LITERATURE REVIEW | 20 |
| 2.1 | Introduction | 20 |
| 2.2 | Research Topics | 20 |
| 2.3 | Related Works | 21 |
| 2.3.1 | Storyline | 21 |
| 2.3.2 | Character Study | 23 |
| 2.3.3 | Environment Study | 27 |
| 2.3.4 | Assets | 29 |
| 2.4 | Analysis | 31 |
| 2.4.1 | Storyline Analysis | 31 |
| 2.4.2 | Character Analysis | 32 |
| 2.4.3 | Environment Analysis | 34 |
| 2.4.4 | Assets Analysis | 35 |

| | |
|------------------------------|----|
| 2.5 Discussion | 36 |
| 2.6 Conclusion | 37 |
| 3 METHODOLOGY | 38 |
| 3.1 Introduction | 38 |
| 3.2 3D Animation Pipeline | 39 |
| 3.2.1 Pre-Production | 39 |
| 3.2.2 Production | 40 |
| 3.2.3 Post-Production | 41 |
| 3.3 Conclusion | 42 |
| 4 PRE – PRODUCTION | 43 |
| 4.1 Introduction | 43 |
| 4.2 Ideation | 44 |
| 4.3 Treatment | 45 |
| 4.4 Script | 46 |
| 4.5 Design | 53 |
| 4.5.1 Character Design | 53 |
| 4.5.2 Environmental Design | 66 |
| 4.5.3 Asset Design | 67 |
| 4.6 Thumbnail | 68 |
| 4.7 Storyboard | 82 |
| 4.8 Animatic | 87 |
| 4.9 Conclusion | 89 |
| Appendix A – Turnitin Result | 90 |
| | 90 |
| | 91 |
| | 92 |
| Appendix B – Log Book | 93 |
| References | 96 |

List of Figures

| | |
|---|----|
| Figure 1: MSI GF63 THIN Gaming Laptop | 18 |
| Figure 2: XP PEN Deco 01 V3 Drawing Tablet | 19 |
| Figure 3: Arcane (2021) | 21 |
| Figure 4: Code:Geass (2006) | 21 |
| Figure 5: Cyberpunk: Edgerunners (2022) | 22 |
| Figure 6: Kagura (Gintama, 2006) | 23 |
| Figure 7: Kuchiki Rukia, (Bleach, 2004) | 24 |
| Figure 8: Tsunemori Akane (Psycho-Pass, 2012) | 24 |
| Figure 9: Lelouch (Code Geass, 2006) | 25 |
| Figure 10: Gojo Satoru (Jujutsu Kaisen, 2020) | 26 |
| Figure 11: Sung Jin Woo (Solo Leveling, 2024) | 26 |
| Figure 12: Cyberpunk Alleyway (Pinterest) | 27 |
| Figure 13: Zaun, Arcane (Pinterest) | 27 |
| Figure 14: Fantasy Stylized Land (Pinterest) | 28 |
| Figure 15: Emotion masks (Pinterest) | 29 |
| Figure 16: Nichirin blade (Pinterest) | 29 |
| Figure 17: Bamboo katana (Pinterest) | 30 |
| Figure 18: Wanted Poster (One Piece) | 30 |
| Figure 19: Riven character concept | 53 |
| Figure 20: Riven character concept | 53 |
| Figure 21: Riven character description | 54 |
| Figure 22: Riven character orthographic view | 54 |
| Figure 23: Riven character colour palette | 55 |
| Figure 24: Riven character colour palette | 55 |
| Figure 25: Riven character expression | 56 |
| Figure 26: Riven character expression | 56 |
| Figure 27: Riven character poses | 57 |
| Figure 28: Riven character poses | 57 |
| Figure 29: Riven character mouth chart | 58 |
| Figure 30: Riven character mouth chart | 58 |
| Figure 31: Riven character mouth chart | 59 |
| Figure 32: David character concepts | 59 |
| Figure 33: David character concepts | 60 |
| Figure 34: David character profile | 60 |
| Figure 35: David character orthographic view | 61 |
| Figure 36: David character color palette | 61 |
| Figure 37: David character color palette | 62 |
| Figure 38: David character facial expression | 62 |
| Figure 39: David character facial expression | 63 |
| Figure 40: David character poses | 63 |
| Figure 41: David character poses | 64 |
| Figure 42: David character mouth chart | 64 |
| Figure 43: David character mouth chart | 65 |
| Figure 44: David character mouth chart | 65 |
| Figure 45: City Alleyway | 66 |
| Figure 46: City Rooftop | 66 |
| Figure 47: David's Mask | |
| Figure 48: Nichirin Blade | 67 |
| Figure 49: Bamboo Sword | 67 |
| Figure 50: Unmasked thumbnail page 1 | 68 |

| | |
|---|----|
| Figure 51: Unmasked thumbnail page 2 | 68 |
| Figure 52: Unmasked thumbnail page 3 | 69 |
| Figure 53: Unmasked thumbnail page 4 | 69 |
| Figure 54: Unmasked thumbnail page 5 | 70 |
| Figure 55: Unmasked thumbnail page 6 | 70 |
| Figure 56: Unmasked thumbnail page 7 | 71 |
| Figure 57: Unmasked thumbnail page 8 | 71 |
| Figure 58: Unmasked thumbnail page 9 | 72 |
| Figure 59: Unmasked thumbnail page 10 | 72 |
| Figure 60: Unmasked thumbnail page 11 | 73 |
| Figure 61: Unmasked thumbnail page 12 | 73 |
| Figure 62: Unmasked thumbnail page 13 | 74 |
| Figure 63: Unmasked thumbnail page 14 | 74 |
| Figure 64: Unmasked thumbnail page 15 | 75 |
| Figure 65: Unmasked thumbnail page 16 | 75 |
| Figure 66: Unmasked thumbnail page 17 | 76 |
| Figure 67: Unmasked thumbnail page 18 | 76 |
| Figure 68: Unmasked thumbnail page 19 | 77 |
| Figure 69: Unmasked thumbnail page 20 | 77 |
| Figure 70: Unmasked thumbnail page 21 | 78 |
| Figure 71: Unmasked thumbnail page 22 | 78 |
| Figure 72: Unmasked thumbnail page 23 | 79 |
| Figure 73: Unmasked thumbnail page 24 | 79 |
| Figure 74: Unmasked thumbnail page 25 | 80 |
| Figure 75: Unmasked thumbnail page 26 | 80 |
| Figure 76: Unmasked thumbnail page 27 | 81 |
| Figure 77: Unmasked thumbnail page 28 | 81 |
| Figure 78: Unmasked storyboard page 1 | 82 |
| Figure 79: Unmasked storyboard page 2 | 83 |
| Figure 80: Unmasked storyboard page 3 | 83 |
| Figure 81: Unmasked storyboard page 4 | 84 |
| Figure 82: Unmasked storyboard page 5 | 84 |
| Figure 83: Unmasked storyboard page 6 | 85 |
| Figure 84: Unmasked storyboard page 7 | 85 |
| Figure 85: Unmasked storyboard page 8 | 86 |
| Figure 86: Unmasked storyboard page 9 | 86 |
| Figure 87: Animatic animation in Adobe Photoshop | 87 |
| Figure 88: Choose sound effects in YouTube | 87 |
| Figure 89: Convert the sound effect in YTMP4 | 88 |
| Figure 90: Animatic editing in Adobe Premiere Pro | 88 |

List of Tables

| | |
|---|----|
| Table 1: Final Output Specification | 15 |
| Table 2: Software Requirement | 17 |
| Table 3: Hardware requirement laptop for creating the short animation. | 18 |
| Table 4: Comparison of Storyline | 31 |
| Table 5: Comparison of Protagonist | 32 |
| Table 6: Comparison of Antagonist | 33 |
| Table 6: Comparison of Environment | 34 |
| Table 7: Comparison of Assets | 35 |

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1 INTRODUCTION

1.1 Introduction

Sacrifice is a strong human feeling, and it shows how far someone is willing to go for the people they love. Parents often give up their own time, goals, and comfort to raise their children, and this kind of sacrifice shapes their happiness and the choices they make. (Zhang, J., Chen, G., Hu, Y, 2024) Sometimes, an older brother or sister may have to grow up too fast, giving up their own future plans to take care of a younger sibling when the parents cannot. Research shows that while being willing to sacrifice can make relationships stronger, the actual act of giving up something important can lower a person's own happiness. (Zikic J., 2022) Scientists also found that even in nature, siblings share resources during hard times, which means the idea of helping family even when it costs you something is part of our biology. (Garay, J., López, I., Varga, Z, 2024) But sacrifice can also feel heavy, especially when someone feels like their effort is not noticed or appreciated. (Ziyuan, W., 2021) All of this shows that sacrifice is both beautiful and painful. It comes from love, but it also asks for a lot from the person who chooses to give.

"Unmasked" is the title of the short animation that will be produced by this project. The project animation will be focus on 3D animation, the story of Riven, a young woman who enters a crime city to find her missing brother, David, who disappeared a year ago without realizing the danger ahead. The city is full of fear, as criminals are being hunted and even innocent civilians would've get caught in the mess. Many people are talking about the Masked killer. There are some people call him a hero, while there are also others call him a monster. While Riven tries to find him, she found out that the killer is her brother. David actually sacrifices his own life just to destroy the world, correcting it and to create a safer world just for his sister to live in peace.

In this project, it will be done in 3D animation. The software I'll be using is Autodesk Maya to make models, adding textures, setting up rigging and animate. Adobe Premiere Pro use for edit and sound. The city and people show ideas like sacrifice, hard choice, and family love. The animation shows Riven feelings and how love and duty make people do hard things, even if it turned sad.

1.2 Background Study

The main issues with sacrifice, family bonds, and love are central aspects of human relationships that can reflecting how individuals will prioritize the well-being of others over their own needs. According to research, parents often give up their personal time and comfort to care for their children, and this type of sacrifice significantly shapes both their happiness and the decisions they make (Zhang, Chen, & Hu, 2024). Similarly, older siblings may have to mature quickly, setting aside their own ambitions to support younger family members when parents are unable to provide guidance (Zikic, 2022). Studies also indicate that even in nature, siblings share resources during difficult times, suggesting that the instinct to help family members at a personal cost is deeply rooted in human biology (Garay, López, & Varga, 2024).

Even though we know that the acts of sacrifice can strengthen family relationships and closer bonds, the research also shows that giving up something meaningful can reduce the individual own well-being. Sacrifice can feel particularly tired, draining when efforts go unnoticed or unappreciated, highlighting the emotional cost that often accompanies acts of love and devotion (Ziyuan, 2021). These findings are also suggested that family bonds and love are maintained not only through shared experiences but through the willingness to make sacrifices, illustrating that love and responsibility and often demand both emotional and personal investment. Sometimes, one sided sacrifice can corrupt the individual good intentions.

With Autodesk Maya will be use as the primary software for producing the 3D models and animations, this project will be gone through a 3D animation workflow. However, some of the scene in this animation will be 2D + 3D animation only in certain scenes. Adobe Photoshop will be used to sketch the storyboard, concept designs, and animatic. Maya will be utilized for modelling and rigging, while Substance Painter will be used to provide fine textures. Adobe Premiere Pro and After Effects will be used to add sound effects, add background music, VFX components, and perfect colour correction, to enhanced the final view of the short animation so it can deliver a cinematic experience.

1.3 Problem Statements

The problem statement of this project is more focuses on challenges and difficulties of sacrifices that relate to love and family bond that is present in these days. Through the plot in this animation, it represents the larger sacrifice that ended up with a harder decision to make.

1.3.1 Sacrifice can lead to self-destruction.

Acts of sacrifice or driven by love and loyalty can sometimes harm the individual if taken too far. Parents and older siblings may give up own desire or goals for their family, which can lower their own happiness and their mental state of well-being (Zikic, 2022; Zhang, Chen, & Hu, 2024). Even good intentions can carry emotional and affect themselves badly (Garay, López, & Varga, 2024).

1.3.2 Challenges in showing sacrifices in a 3D Animation short film.

Depicting sacrifice in 3D is difficult because it is an abstract idea, not a physical object. It requires narrative, symbolism, and strong visuals to convey the emotional and relational weight, or else the concept may feel unclear to the audience (Ziyuan, 2021; Zikic, 2022).

1.4 Project Objectives

The project's objectives are to create a huge impact of message about sacrifice that is focusing on family bond, love and responsibility especially among the teens and adults audiences. The project seeks to highlight the value of following instructions, to help each other and not act alone, and learns how to control self-emotion from corrupting your actions with using engaging storytelling approaches, visual metaphors, and in 3D animation.

1.4.1 To investigate and to identify the impacts of sacrifice.

To examine how acts of sacrifice affect individuals and their relationships, and to explore ways to balance love, responsibility, and personal well-being so that selfless actions do not become harmful. Research shows that parental and sibling sacrifices, while strengthening bonds, can reduce personal happiness and cause emotional strain if taken too far (Zhang, Chen, & Hu, 2024; Zikic, 2022; Garay, López, & Varga, 2024).

1.4.2 To use hidden element to show sacrifice in 3D Animation.

To help audiences understand and emotionally connect with the concept of sacrifice through clear and impactful 3D animation visuals. Since sacrifice is an abstract idea rather than a tangible object, narrative, symbolism, and strong visuals are essential to communicate the emotional and relational weight of selfless acts (Ziyuan, 2021; Zikic, 2022).

1.5 Project Scope and Limitation

The animation story focuses on Riven, a 14 years old girl travel alone looking for her missing brother. Her effort to find David leads her to the place that David always wanted her to avoid the most, the danger that he's been keeping it secret from her just to not making her worry. As a result of her findings leads her to the truth of what have been happening to the world around her.

Through the journey she had, the story shows how David trying his best to protect her away from the danger and not even wants her to think about it by not talking about it to her. But in the end, the selfish sacrifice of David fell apart after Riven disagreed with his way of acts. The moral of the story is that, we as a human must know our limits, not everything is worth sacrificing even though it's the most important being in your life, set a limit to yourself so you won't be losing any of it and left with nothing in the end.

1.5.1 Project Scope

The project will focus on making a short-animated film about sacrifice, using both 2D and 3D animation. The film will be around 4 to 5 minutes long, but I hope it can still create a strong emotional impact and raise awareness about the issue. The animation will mainly be in 3D, with some 2D elements added for style and effect.

The final outputs will be the completed short film, a promotional teaser or trailer, and a poster. However, this project will not cover live-action filming, sequels, or the distribution and promotion of the film. The table below shows the detailed specifications of the animation short film.

The table below is the final output specification:

| Specification | Description |
|-----------------|------------------------------|
| Resolution | 1920 x 1080 pixel |
| Video Format | MP4 in x264 codec |
| Duration | 4-5 minutes |
| Type of Content | 3D + 2D Animation Short Film |

Table 1: Final Output Specification

1.5.2 Project Limitation

The following are some of the project limitations that I will face when finishing this type of short animation film such as time constraints, budget limitations and level of skill.

1.5.2.1 Time

Every process of making a 3D animation short film is such as modeling, rigging, adding textures, animating, and rendering, must be done carefully to avoid problems or crash and keep the project smooth. These steps will help to show the character's feelings, actions, and how she works with others. Doing it properly makes the animation look better and also shows the main ideas of the story, like sacrifice and responsibility.

1.5.2.2 Technical Hardware

Regarding technical hardware, the production process will be slower with the present low-spec laptop while rendering 3D animation. Furthermore, the low-spec laptop that is currently owned may also cause some technological issues, such as software crashes.

1.5.3 Project Target Audience

The target audience for this project is teenagers of from ages 12 to 18 and young adults of ages from 19 and above. The topic about sacrifice is actually a sensitive topic to be brought on especially in front of children with lower understanding but this topic is usually something we happened to face every single day not only as a parent, it can also be as a teacher, as an older sibling, and even as a normal human being we also use to sacrifice for something we thought worth sacrificing. Since these age groups frequently use to the word and act of sacrifice, this are also relevant to them.

1.6 Project Requirement

1.6.1 Software Requirement

The animation process involves several programs that are utilized at various stage, some of these programs are utilized throughout the process, while the majority are utilized solely for a particular task that calls for specialized tools that other programs lack.

Table 2 shows all the software requirements that will be used for the project.

| Software | Description |
|---------------------|--|
| Adobe Photoshop | Drawing software for pre-production for this project to create storyboard, concepts design for character and environments and also animatic. |
| Autodesk Maya | 3D software that will be used for creating 3D character modelling, rigging, lighting, props, background, and 3D animation. |
| Substance Painter | An Adobe 3D painting program that lets artists paint directly onto 3D models in a realtime viewport to produce realistic, stylized, or complex texture and materials. |
| Adobe After Effects | An application for digital compositing, motion graphics, and visual effects. For video, film, and web material, it is utilized to produce motion graphics, visual effects, and other cinematic components. |
| Adobe Premiere Pro | Editing software for post-production for this project will combine all the outcomes of the 3D animation. It has tools for adding effects, colour grading, audio mixing, and titles, as well as a timeline-based interface for organizing graphics, audio, and video. |

Table 2: Software Requirement

1.6.2 Hardware Requirement

The projection time must be finished with sufficient computer performance. A specific portion of the processing power is needed for each step of the animation workflow.



Figure 1: MSI GF63 THIN Gaming Laptop

Figure 1 shows is a gaming laptop that will be used for creating this project.

| Description | Recommended Specification | Purpose |
|-------------------------------|---|--|
| Central Processing Unit (CPU) | Intel(R) Core™ i7-9760H CPU (9 th Gen) | Processing unit for rendering and modelling 3D models. Preparation for rendering 2D animation. |
| Graphic Processing Unit (GPU) | NVIDIA GEFORCE GTX 1650 | Improve the editing and rendering process. |
| RAM | 32 GB | Software stability is improved with more power. |
| Storage | SSD 1TB | Space needed to hold all required files and programs. |

Table 3: Hardware requirement laptop for creating the short animation.



Figure 2: XP PEN Deco 01 V3 Drawing Tablet

Figure 2 is drawing tablet that will help with the pre-production process.

1.7 Conclusion

In conclusion, this project highlights the theme curiosity and addiction through the story of Cindy, a maid robot who discovers the consequences of breaking rules and giving in to temptation. The animation aims to show real-life situations in which addiction, like video games, may interfere with responsibility and self-control, while curiosity can lead to discoveries but also difficulties if unchecked. The initiative aims to amuse teens and young adults while imparting important moral lessons by showcasing these themes in a 3D animated short film. This project is a creative investigation and a crucial step in the development of professional skills in the animation business because it also offers hands-on instruction in the 3D animation workflow, which includes story development, character creation, modelling, and post-production.

2 LITERATURE REVIEW

2.1 Introduction

This literature review offers different sources, materials, and references that are related to the animation project. It explains the process behind the scene and shows to the audience of the proper way how this project is made with clear plan. The review also acts as a guide to understand the concepts used in creating the short 3D animations. The purpose of it is not only to explain the design choices but also to give deeper meaning into the detail of the project. By doing this, it helps the target audience to understand the meaning, purpose and value of the animation.

2.2 Research Topics

Sacrifice is an emotional expression that reflects how far individuals are willing to go for the person they love. It often appears in families, where parents give up their own time, comfort, and goals just to support their children, raising them with love and considering the choices they make in life to prioritize the children (Zhang et al., 2024). In other situations, older siblings may be forced to mature quickly, setting aside their own ambitions in order to care for their younger brothers or sisters when parental support is limited. Research suggests that although the willingness to sacrifice can strengthen relationships, the reality of losing something valuable can reduce a person's individual happiness (Zikic, 2022). Studies in biology also reveal that the instinct to sacrifice goes beyond human relationships, as siblings in nature share resources during difficult conditions, showing that helping family members even at a personal cost is deeply rooted in our evolutionary behaviour (Garay et al., 2024).

However, sacrifice also give a huge emotional impact to the individual, especially when the effort made is overlooked or unacknowledged. This feeling of being unseen can create emotional strain and make the effort feel like a burden or waste of time (Ziyuan, 2021). This is show that sacrifice is both beautiful and painful expression of love that strengthens bonds, yet demands significant personal cost from the one who decides to give. In the end, the research finds that sacrifice is a meaningful human experience made from duty, affection and the emotional consequences that close to giving up something important.

2.3 Related Works

2.3.1 Storyline

I. Arcane



Figure 3: Arcane (2021)

Arcane is a Netflix animated series debuted in 2021 by Riot Games and Fortiche Production. The series is an adaptation of the video game League of Legends. The protagonists of the show are two sisters, Vi and Jinx, who later in the show are separated due to a tragedy in the undercity of Zaun. As the sisters grow apart, Vi steps up as a champion for what she thought is justice, while Jinx goes further down the wrong path. Their conflict is leading them into the turmoil brewing between Zaun and the upper city Piltover, which tests their sisterly ties.

II. Code:Geass



Figure 4: Code:Geass (2006)

Code Geass is a Japanese anime released in 2006 by Sunrise. The story follows Lelouch, a former prince who receives the power of Geass, giving him the ability to control anyone. With this power, he starts a rebellion under the mask of Zero, hoping to change the world for his sister's sake.

III. Cyberpunk: Edgerunners



Figure 5: Cyberpunk: Edgerunners (2022)

Cyberpunk: Edgerunners is a Japanese animated science fiction series released in 2022, produced by Studio Trigger and CD Projekt. The story follows David, a teenager living in Night City, who implants powerful cyberware after losing his mother. He joins a crew of mercenaries called edgerunners and soon falls in love with Lucy, a netrunner who dreams of escaping to the moon. As David takes on dangerous jobs and pushes his body beyond its limits, he struggles to protect Lucy's dream, leading to a tragic end where he sacrifices himself so she can live free.

2.3.2 Character Study

i- Protagonist: Riven

Riven is a 14-year-old girl, 160 cm tall, who lost her brother during a tragedy on her island, finding only his bamboo sword with a trace of blood. She keeps an armband from him on her left arm as her last reminder of him. Even after a year, she believes her brother is still alive, so she trains herself in the sword skills he once taught her. When she leaves for the city, she begins to discover a secret unrevealed in the city full of criminals while also searching for clues about her brother. But near the end of her journey, she learns a truth that shatters everything she believed.

For this character, based on the references that I've been researched, Riven has a trait of a clingy, innocent and independent younger sister would have. For those traits, I use the characteristics from Figure 6 and the facial expression as well. But from the Figure 7, I refer this from the character traits of a strong woman and an innocent younger sister, also the color palette from the character as well. Lastly from Figure 8, I use this character for the style references of her haircut, body shape and body figure suitable for a young character.



Figure 6: Kagura (Gintama, 2006)



Figure 7: Kuchiki Rukia, (Bleach, 2004)



Figure 8: Tsunemori Akane (Psycho-Pass, 2012)

ii- Antagonist: David

David is a 17-year-old boy, 170 cm tall, and Riven's older brother. Known for his cheerful spirit and devotion to protecting her, he always stood to sacrifice it all for his sister. One night, he fought off a masked group called the Yakultza who invaded their island, but the attack made him fear for his sister's safety. To protect her, he left the island and became a vigilante, disguising himself with a stolen mask. From then on, he's been venture all by himself, destroying the cities, slaying corruption lands like he's trying to destroy this world and recreate it just for his sister to live in peace.

For this character, based on the references that I've been researched, David has a trait of a brave, strong and a dependable older brother, he would do anything just to give everything for his sister. For those traits, I use the characteristics from Figure 9 and the concept of wearing mask as well. But from the Figure 11, I refer this from the character traits of a strong man and an ideal body figure of a strong older brother who would fight anything all by himself. Lastly from Figure 10, I use this character for the style references of his outfit that is suitable with the story background.



Figure 9: Lelouch (Code Geass, 2006)



Figure 10: Gojo Satoru (Jujutsu Kaisen, 2020)



Figure 11: Sung Jin Woo (Solo Leveling, 2024)

2.3.3 Environment Study

My animation background is inspired by a fantasy island, a cyberpunk nightcity and an underground city of Zaun from Arcane. The city full of luring criminals that been disturbing the peace of the innocence civilians, the lighting of the city came from the lights, fog and moon light reference can be observed in Figure 12, 13 and 14.



Figure 12: Cyberpunk Alleyway (Pinterest)



Figure 13: Zaun, Arcane (Pinterest)



Figure 14: Fantasy Stylized Land (Pinterest)

2.3.4 Assets

An accessories masks in Figure 15, a Japanese katana or known as Nichirin blade in Figure 12, a bamboo sword in Figure 13, and concept of wanted poster Figure 14, are among the animation's assets. Everything has their own value within the context of the story to let the audience understand of the situations and the mood. These items are essential components that for Riven to notice throughout the story especially the masks.



Figure 15: Emotion masks (Pinterest)



Figure 16: Nichirin blade (Pinterest)



Figure 17: Bamboo katana (Pinterest)

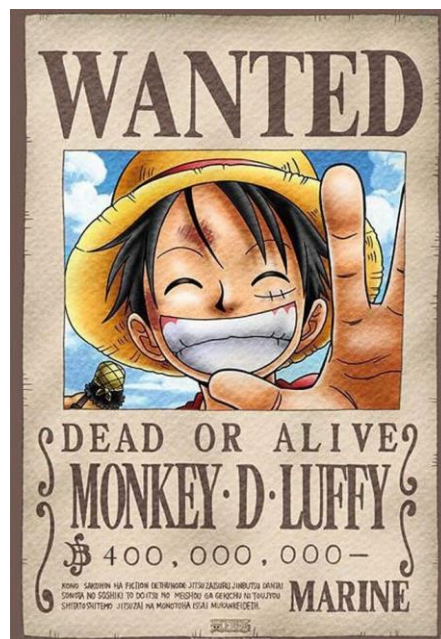


Figure 18: Wanted Poster (One Piece)

2.4 Analysis

2.4.1 Storyline Analysis

| Criteria/Movie | Arcane | Code:Geass | Cyberpunk: Edgerunners |
|----------------|---|--|---|
| Duration | 18 Episodes | 50 Episodes | 10 Episodes |
| Background | Slumps, Alley, Underground city. | Tokyo city | Nightcity, Alley, Arasaka Tower |
| Storyline | Vi and her sister Powder grow up in Zaun, but after a tragedy they are separated. Years later, Vi tries to protect the city while Jinx (her sister Powder), broken and angry, becomes a criminal. As Piltover and Zaun move toward war, the sisters face each other, torn between love and hate, with their choices changing both cities forever. | Lelouch, a hidden prince, gains the power of Geass and becomes the masked rebel Zero to fight the Britannian Empire and create a better world for his sister Nunnally. But as he leads battles against Britannia and faces his former friend Suzaku, his choices bring sacrifice and tragedy, ending with a plan that changes the world at the cost of his own life. | David, a street kid in Night City, joins a crew of edgerunners after gaining powerful cyberware. He falls in love with Lucy, a skilled netrunner who dreams of escaping to the moon. As David takes on more dangerous jobs and pushes his body to the limit, he fights to protect Lucy's dream, even as the cyberware slowly destroys him. In the end, he sacrifices himself so Lucy can live free. |

Table 4: Comparison of Storyline

2.4.2 Character Analysis

- **Protagonist - Riven**

| Movie/ Aspect | Character A (Kagura) | Character B (Rukia) | Character C (Akane) |
|---------------------------|--|--|--|
| Character Design | Human slender Chinese woman featured character | Human Japanese short cute and slender woman | Human adult with childish looks wearing suits and an ideal body figure |
| Character Emotion | Expressive with both funny and serious expression. | Expressive, used to laugh loudly, many facial features and even sad one. | Gentle, innocence, scared expression, loyal and willing to overcome her fear |
| Environment Design | Chinese kingdom | Japanese Edo style | Futuristic environment with modern gadgets and a gun |
| Animation Style | 2D Japanese anime | 2D Japanese anime | 2D Japanese anime with CGI |
| Rendering Quality | TV-level 2D, bold outlines, bright colours | Cinema level 2D, modern animation style | TV-level 2D, Modern Japanese Anime style, gloomy colours |
| Tone & Theme | Teen, sibling, energetic, stubborn | Independent, loneliness, love, loyal and strong | Innocence, sacrifice, overcome her own limits |

Table 5: Comparison of Protagonist

- **Antagonist - David**

| Movie/ Aspect | Character A (<i>Lelouch</i>) | Character B (<i>Gojo Satoru</i>) | Character C (<i>Sung Jin Woo</i>) |
|---------------------------|---|---|--|
| Character Design | Human man with a slender body but brilliant brain. | Human man with tall body figure , strong and iconic | Human man with mysteriously strong aura, with an ideal body figure |
| Character Emotion | Egoistic, expressive and serious of all time | Expressive, Joker but always serious | Limited face, used to hide the face with serious expression |
| Environment Design | Modern city with Robots and Airship | Japan modern with superpowers. | Modern Korea with fantasy gate popping everywhere |
| Animation Style | 2D Japanese anime with CGI | 2D Japanese anime with CGI | 2D Japanese anime with CGI |
| Rendering Quality | TV-level 2D, bold outlines, bright colours | High end 2D Cinema level Japanese Anime with bright colours | High end 2D Cinema level Japanese Anime with bright colours |
| Tone & Theme | War, dark, control, Sacrifice, destroying the world, become a villain | Hope, humanity strongest, dark, fantasy | Hope, vigilante, hero, world strongest |

Table 6: Comparison of Antagonist

2.4.3 Environment Analysis

| Criteria/Movie/ | Environment A <i>Cyberpunk</i> | Environment B <i>Arcane</i> | Environment C Figure 14 |
|-------------------------------|--|--|---|
| World Type | Sci-Fi Neon City | Underground Sci-Fi City | Fantasy nature island |
| Environment Style | Highly stylized with bright neon colours | Stylized with gloomy colours | High stylized with bright colours |
| Colour Palette | Vibrant, neon tones, high contrast | Cold neutral tones, high contrast | Bright tones |
| Details & Textures | Stylized but details | Stylized but details | Stylized but details |
| Lighting | High-contrast neon glow, dark base with vibrant highlights | Gloomy place with cold tones with low lighting | Warm ambient lighting, natural daylight from window |
| Interaction with World | Characters explore the city | Characters explore the city | Characters is from the island |

Table 6: Comparison of Environment

2.4.4 Assets Analysis

| Criteria | Asset A Accessories Emotion Masks | Asset B Nichirin Blade | Asset C Bamboo Sword | Asset D Wanted Poster |
|----------------------|--|---|--|-----------------------------|
| Character Models | N/A | N/A | N/A | N/A |
| Texturing Style | Plastic rubber with glassy effects to reflect lights | Metallic, shiny with rubber holder and a wooden cover | Metallic, shiny and wooden bamboo cover | Vintage paper texture |
| Props and Objects | Serves as the icon for the main story | For the uses of David | For the uses of Riven | Visual clue |
| Environmental Assets | Wore by the criminals in the city | City setting | City setting and surrounding with fire | In front of the tv shop |
| Rigging Complexity | Simple (parent) | Simple (arm / disarm & parent) | Simple (arm / disarm & parent) | N/A |
| Effects Assets | Shiny and reflective to lights if its light color | Shiny and reflective to lights, have sword trail | Shiny and reflective to lights, have sword trail | Thunder flash |

Table 7: Comparison of Assets

2.5 Discussion

According to the analysis, the plot is based on three major animations. Arcane inspired the gloomy and dark yet interesting and fun atmosphere and the idea of the background concept, Cyberpunk: Edgerunners provide the idea of walking in the modern nightcity with full of cybernetics and futuristics surroundings, and lastly Code Geass served as the inspiration for the concept of sacrifice. These references provide the growing flow for the narrative, guideline towards sacrifice and love.

In terms of character design, all of the references showed as the inspiration for the emotion of love and the will to sacrifice, while for Riven, most of the references are more likely to show how innocent the character is going to be, the way she needs her beloved brother back. A strong body figure that fits the narrative role of this story with actions move and sword fighting is suit with their appearance. This method provides a good impression and a likable character that fits the topic of the story flow.

The environment creates a huge impact between the happy, dark gloomy and the suspense, danger moment during certain scenes, suits with the mood. For the storytelling tools, assets like the weapons, lucky charm, and the mask give the audience the idea of the hidden meaning that the story or lore that are remain untold in the story. These visual choices come together to form a great scene and background that fits the mood during the certain scenes.

2.6 Conclusion

The inspiration and progression of the FYP animation project have been examined in this research, starting with an analysis of reference series including Code Geass, Arcane, and Cyberpunk Edgerunners, as well as character designs like Rukia, Akane, and Kagura for Riven and Gojo, Lelouch and Jin Woo for David. These sources were studied to comprehend how the designs of the setting, characters, and assets can enhance the animation and story.

The way of these discoveries to the story's plot, which follows Riven as she venture alone to find her missing brother, was the next topic of discussion. Key elements such as the masks, bamboo sword, masked killer, and poster were found to be narrative drivers, and themes of sacrifice and responsibility were emphasized by the contrast between Riven's own decision and David's sacrifice through the end. The report creates an organized basis for the character, environment, and asset development of the project by combining ideas from previous works with the final design decisions.

3 METHODOLOGY

3.1 Introduction

Methodology refers to the precise procedures or strategies used to find, select, process and analyze information about a topic. Methodology also helps to ensure that work is planned and carried out efficiently, making it easier to carry out or assess outcomes. Every step builds on the one before it, guaranteeing clear technical, creative, and conceptual performance, careful preproduction helps avoid expensive amendments and guarantees seamless transitions into the production and post-production stages (*Animation Workflow Guide: Step-By-Step Pipeline for Quality Animation - Educational Voice, 2025*).

Animation projects that use a lot of 3D need a lot of time and hard work. By following these steps, it is easier to keep good quality and finish the project on time. This process keeps everything on track, and if a problem happens, it is easier to find the cause and save time. Each step in this pipeline is important to make the next step run smoothly.

3.2 3D Animation Pipeline

3.2.1 Pre-Production

Pre-production is the stage of development, planning, and design stage of a 3D animation project. In order to give an accurate planning, the concepts, stories, and models are required for the 3D project are described and properly constructed in this step.

- **Idea Pitching**

Each project will begin with a search for ideas. By finding ideas from there, the concept will be expanded until it becomes a whole story. The ideation that is accepted and picked by the supervisor will move on to the next step

- **Script writing**

Screenwriting creates a whole script with dialogue, character actions, and scene descriptions is known as screenwriting. Screenwriting frequently uses a three-act format, where the main character is introduced and an occurrence occurs in the first act, challenges and difficulties are presented in the second act, and the conflict is resolved in the third act.

- **Character Designing**

Character design is the process of making a concept come to life by adding characteristics including appearance, behaviour, personality, and physical attributes. To assist in selecting the ideal character for the suggested animation, the supervisor will also offer suggestions for character designs

- **Storyboarding**

Storyboarding is a visual planning method used for planning out a story, scene by scene, in filmmaking and other creative fields. To graphically illustrate every shot or scene, including camera angles, actions, and dialogue, a sequence of drawings must be made. The thumbnail, a fast, simplified sketch used to quickly explore and show multiple scene concepts, is typically carried out before the storyboard

- **Animatic**

Animation is the guidelines for the final animation, which develops into the project's final edit. In its most basic form, animation is made simple 2D drawing with less movement animation, this is just to set a plan in time frame, camera angle and voice acting making it a preparation for the final animation process to be easier and more accurate.

3.2.2 Production

In production step, all the pre-production design concept will start to proceed in 3D animation software as well as the animating process to create a 3D animation short film. During this process, many software will be uses such as Autodesk 3D Maya, Substance Painter, Z Brush and more depending on the individual skills and experience. ▪ **3D Modelling**

3D modelling is the process of using 3D software, like Autodesk Maya, to create a model or surface based on the concept of the project.

- **3D Texturing**

3D texturing is the process of developing and applying colours and surface to a 3D object to match with the art style either stylized or realism.

- **3D Rigging**

In 3D animation, rigging is the process of creating a joint or skeleton to the character in order to animate or move the character. Without a good rigging, the character movement will not look neutral and some facial expression may not look good.

- **Lighting**

3D animation lighting is a stage where lighting is used in accordance with pre-production preparations to create the ambiance of a 3D scene or set, much as real-life lighting in photography or filming.

- **Rendering**

Rendering is the process where all the complete animation is converted into sequence of Raw footage for it to be edit in post-production process. Some renderings are also separated from background, middleground and foreground.

- **3D Animation**

During the animation stage, 3D objects or characters move inside a scene or environment. The most crucial and time-consuming aspect of creating a 3D animated video is typically the animation.

3.2.3 Post-Production

Finally, in this step where all the magic begins, all the raw footage will be transformed and edit in the different software to add on the overlay, visual effects, sound effects, background music, voice over, colour grading and more. This is the last step of production.

- **Editing and VFX**

Editing is the act of organizing and improving animated parts to produce a smooth and interesting finished film. This includes removing unneeded parts, altering timing, creating transitions, adding sound effects, and voice acting. By creating a VFX can improve the visual of an animation in certain scenes especially in fantasy-based animation.

- **Colour Grading**

This is the process of changing and increasing the colours in an animated film to achieve a certain mood, atmosphere, or style. With only the lighting input in 3D will not be enough to change the mood in the entire scene, so colour grading is needed in some important scenes.

- **Final Output**

The finished video or film is the end result of animation after all of the production and postproduction work is achieved. The animation has been fully rendered, edited, and polished and is ready to be shared with an audience.

3.3 Conclusion

For the conclusion of this chapter, a 3D animated short film success is depends on the animation workflow. It offers a clear timeline that directs the project from the early concept to the finished animation by following the timeline given into pre-production, production, and post-production phases. Other than that, to prioritized time management, this technique avoids some of the mistakes and unnecessary redo, especially in harder and bigger 3D animation projects. The timeline guarantees that both creative and technical goals are accomplished effectively with the preparation and a consistent workflow, which leads to a smoother production process and a great result from the final result.

4 PRE – PRODUCTION

4.1 Introduction

Before any film or animation project can begin, it must go through process of pre-production, an important stage that guide every step that follows. This is where ideas are created, upgraded, and transformed from imagination into a structured plan. This is the moment when visions start becoming real, blending creativity with careful planning.

Pre-production is one of the most fun stages of storytelling, going out of the box of basic planning because this is where it all started. Writers can go deep into ideas, directors imagining camera angles and the lighting fits the mood of each scene meanwhile artist can create concepts characters and build landscape suits with the story, and also producers organize schedules and budgets to keep everything running smoothly. This is the phase where all of people works together to chase the same vision and figure out how to achieve it.

At this point, every little detail is important. Scripts are revised, concepts are selected, designs are improved, and the creation of storyboard and discussion. Every choice made in pre-production, from the colour of the lighting to the mood of a scene, conveys the story's emotional core. To lay the groundwork for everything that follows, creative minds gather here, frequently with a mixture of nervous and excited energy.

In simple words, pre-production is the “preparation before action.” It ensures that everyone knows their role and direction when the cameras finally roll or the animation starts, saves time, and avoids chaos. It's the quiet before the storm, a period of creativity and clarity that transforms concepts into blueprints, which in turn create stunning visual experiences.

4.2 Ideation

A 14 years old girl named Riven sets out on a journey to find her missing brother, David, who has been lost for a year and during the search, this lies at the climax of the story, which we will explore the themes of love, sacrifice, and identity. Her determination to discover the truth represents the connection and understanding. Even when it comes with a great risk and emotional pain, she still follows the trail of a mysterious masked killer, without aware of the truth that he is her brother. She encounters danger and dilemmas that challenge her perception of right and wrong.

As the story progresses, the tension building up when Riven finally met with the masked killer. What started as a terrifying encounter turns into a heartbreaking decision, showing how love and sacrifice can come with painful consequences. David's masked identity reveals that even the right intention can be corrupted by obsession and power, leading to choices that can never be undone.

The main plot of the story shows the struggles of love and responsibility, that shows how hard choices can change the characters and their actions. It reminds the audience that even the most devoted acts of care and protection can come with unexpected consequences. Some people might say "I will cross the flaming seas just to claim your heart" but in the end the act was unnecessary to begin with. In the end, after David's true identity has been revealed, the scene delivers a bittersweet truth that love can demand unimaginable sacrifice, and understanding or compassion often comes too late. It's either watching someone you love sacrifice himself fighting for something you don't need and letting him destroying himself, or put an end to all of this by give up your feelings and let him free by stopping him even it means to slay him.

4.3 Treatment

4.3.1 Exposition

Riven and her brother David lived a peaceful and quiet life, far from the chaos of the outside world. Their home was warm and full of joy. Together, they shared happy memories and never experienced the pain and cruelty of the world beyond.

4.3.2 Initial Incident

One night, David went to the woods near their home to gather some supplies and train his sword a bit in the meantime. Suddenly, after a long time since David left, Riven began to worry. She started searching for his brother in the woods and shocked to only find his bamboo sword stabbed in the ground with a blood stain on it.

4.3.3 Rising Action

A year later, Riven sets her journey to the city searching for her missing brother. In the city main street, she found the masked killer causing chaos in the city. She attacked him. She didn't know it was her brother, David. He didn't fight back, only blocked. She broke part of his mask and saw his eye. It looked like David's. She paused, calls for him, needs an answer but only follows up with a tear flowing through her eyes.

4.3.4 Climax

David stops fighting and tries to reach Riven by triggering a childhood memory. He tosses a stone in the air like they used to do when playing a game called "If you get hit, you lose." Riven briefly remembers the game and softens for a moment, even letting out a small laugh. Knowing that David won't stop with what he's doing, Riven finally decides the right path she will walk on.

4.3.5 Falling Action

Her sword hit him with full force. The mask broke completely. She saw his face. A burst of tears flowing through her eyes, she quickly dashes to him only to be flashed by a lot of sweet memories of them long ago.

4.3.6 Resolution

Riven fell to her knees, shocked and heartbroken. Tears ran down her face as she realized what she had done that she thought is right. David smiled at her softly, apologizes through his action and acknowledged the strength of his little sister that doesn't need his protection anymore.

4.3.7 Denouement

The story ends with Riven holding tight the corpse of the person she loved most.

4.4 Script

A script is the written structure of a movie or animation that acts as an outline for the whole process. It includes the narrative, conversations, acts, and feelings that influence how each scene plays out. The core of storytelling is a screenplay, which is more than just words on paper, but where the creativity is transformed into structure and emotion. It enables the directors and animators to work together to realize a shared vision and give the story meaning and passion.

Unmasked

by

Amirrul Shakirin Bin Mohd Zanurri

FADE IN.

EXT. WOODS - DAY

David stands in a sword stance, eyes closed, focusing only on the sound around him.
He listens... breathes... and strikes.

CLOSE ON a leaf drift downward in slow motion. David's blade slices it into pieces midair.
The camera follows the cut leaf fragments, then focuses on David's calm expression.

CUT TO:

EXT. WOODS - DAY

Riven approaches, worry on her face. She carries a bento of onigiri and a thermos of hot tea.
David notices her, smiles warmly, and lowers his sword.
They walk together to a nearby large tree, sitting under its shade.
They eat, talk, and laugh.

WHIP PAN:

EXT. WOODS - DAY

Riven and David train together, both wielding wooden swords.
David's strikes land cleanly every time while Riven's didn't land a single hit.
Riven stop attacking and focus on her surroundings, read her brother's movement and strike with her sword skill learned from David.
She looks back to check if David is down but David is suddenly appeared in front of her.
David slashed his wooden sword onto Riven's head.
After training, David takes out a band strips from his old master and hands it to Riven.
She beams, ties it on her arm, and proudly shows it off.

CUT TO:

EXT. MOUNTAIN STAIRWAY - DAY

The siblings climb the long stairs to their home, still chatting and laughing after training.
The sun hangs low in the sky, warm light spilling over the path.

WHIP PAN:

EXT. WOODS - DAY

Another training session. This time, Riven lands a same technique but now its stronger but David parry it and counter with the same slash onto her head.

She sulks, drops to sit under a tree, staring at David's who is deeply focus on training. She snores, then dozes off.

David smiles mischievously, dips his fingers into nearby mud, and doodles on her face.

Riven wakes, notices mud on her face, catches him, and bursts in outrage. David laughs uncontrollably.

CUT TO:

EXT. SIBLING'S HOUSE - DAY

Riven chops firewood near the house. Sweat runs down her forehead as she splits each log cleanly.

David is nowhere in sight since he left earlier for training.

She pauses, glances up at the sun to check the time.

David still hasn't returned. She frowns, mutters to herself, then continues working.

CUT TO:

EXT. SIBLING'S HOUSE - NIGHT

Riven emerges from the house with a small stack of bento boxes. She heads toward the woods, the boxes carefully packed with onigiri.

EXT. WOODS - NIGHT

The forest is quiet.

Riven spots a faint firelight ahead. She approaches and freezes. In front of the flames, David's bamboo sword is stabbed into the ground. Beside it lies a torn scrap of his clothing, stained dark with blood.

David is nowhere to be seen.

Riven's knees hit the ground. Her eyes widen in shock, tears welling instantly.

Her breath trembles, unable to speak.

FADE OUT:

A FEW SECONDS OF BLACK, BEFORE

FADE IN:

(1 YEAR LATER)

EXT. ROOFTOP - NIGHT

Riven awakes from a deep sleep, she dreamed of the past.

She lies on the concrete roof, gazing at her hand, still holding David's bamboo sword with strips tied to her arm.

Her face is somber, her eyes tired.

Slowly, she rises and stares into the distance toward their island, somewhere beyond the city lights.

She walks forward, looking down at the city's street.

CUT TO:

EXT. CITY ALLEY - NIGHT

Riven moves cautiously through the alley, heading toward the main street. In her right hand, the bamboo sword. In her left, a wanted poster of a yakuza betrayer who wearing the same mask as them but been killing people. Her jaw is tight. She believes this figure is dangerous and must be avoided or stopped.

CUT TO:

EXT. CITY STREET - NIGHT

A scream shatters the quiet. Riven spins toward the sound and sprints. She cuts down a group of yakuza in swift, precise strikes, saving a frightened civilian. Without a word, she leaves, vanishing into the crowd, eyes scanning for her missing brother.

CUT TO:

EXT. CITY STREET - NIGHT

A shadow emerges from the darkness. The masked man stands surrounded by corpses of yakuza and civilians alike. His presence radiates a cold, dangerous aura. Riven freezes, locking eyes on him. Noticed that he is the one in the wanted poster. She tightens her defence.

CUT TO:

EXT. CITY STREET - NIGHT

In an instant, Riven drops into her battle stance, katana unsheathed and ready. Her breathing slows, her eyes sharpen.

CUT TO:

EXT. CITY STREET - NIGHT The masked murderer notices her from afar and is stunned.

It's
Riven.
His sister.

Before he can react, she vanishes from her position, reappearing midleap above him. Her strike comes fast but he blocks it with his katana and kicks her back.

CUT TO:

EXT. CITY STREET - NIGHT

Mid-air from the kick, Riven grabs his katana's sheath and hurls it back at him with full force. It strikes just a glancing blow but enough to draw his attention before she hits the ground.

CUT TO:

EXT. CITY STREET - NIGHT

The mask man smirks a bit as he surprises with her current strength.
DAVID (MASKED MAN) Heh... you've gotten stronger,
I see.

He chuckles briefly then his expression hardens. He knows Riven's stubbornness. She won't stop. And he can't afford to let her get in the way of his mission.

CUT TO:

EXT. CITY STREET - NIGHT

David walks toward Riven slowly, step by step. Riven steadies her stance, watching him closely. Suddenly he vanishes.

A sharp presence flares behind her.

She spins, barely managing to block his attack, but the impact sends her flying back.

CUT TO:

EXT. CITY STREET - NIGHT

Riven pushes herself to her feet, tightening her grip on her katana.

Her breathing steadies as she sharpens her focus. David disappears again the same movement as before.

She turns just in time to block, but the blow is heavier this time, sending her crashing through several obstacles.

CUT TO:

EXT. CITY STREET - NIGHT

David assumes she's down. His guard lowers. He turns to leave.

But a chilling killing intent hits his senses.

He spins, Riven is already closing in for a powerful strike.

David backsteps, dodging her first slash. Her momentum carries through into a spinning follow-up strike.

CUT TO:

EXT. CITY STREET - NIGHT

David blocks with both hands on his katana, pushing back hard.

The clash breaks Riven's stance.

With a swift motion, David flips his blade and strikes her with the blunt side, aiming to disable her without killing.

CUT TO:

EXT. CITY STREET - NIGHT

The blow lands but just as David moves in to follow through, Riven's eyes widen.

A memory flashes in her mind of her training with David a year ago, learning a counter with a quick slash.

CUT TO:

EXT. CITY STREET - NIGHT

Riven's stance shifts. Her grip tightens.

As David's next blow comes, she counters the movement almost identical to that old training.

But David recognizes the technique instantly.

He responds with the exact same counter.

CUT TO:

EXT. CITY STREET - NIGHT

The two clashes in rapid succession, katana meeting katana, sparks flying.

Each attack is blocked by the other, a perfect mirror match.

The sound of steel echoes through the empty street.

CUT TO:

EXT. CITY STREET - NIGHT

Riven crouches low suddenly, dodging David's next strike.

She sweeps a kick toward his legs, a dirty trick to break his balance.

David predicts the move, leaping clear.

But he doesn't notice her real intention to bait him into the air.

CUT TO:

EXT. CITY STREET - NIGHT

Mid-leap, David can't dodge.

Riven springs upward, appearing above him, her katana slicing downward.

The blow lands hard on his mask sending him crashing back across the street.

CUT TO:

EXT. CITY STREET - NIGHT

Riven lands, panting. She freezes.

On his wrist, a strips her brother gave.

The exact match to her own.

Her eyes widen.

CUT TO:

EXT. CITY STREET - NIGHT

David staggers to his feet, mask cracked, face still partially hidden.

He sheathes his blade, stepping toward her slowly. Riven

stands motionless, staring at the ground.

RIVEN

How dare you... how dare you wear exactly the same outfit as him... killing innocent people with that stupid mask!

(voice rising)

Who are you even supposed to be!? How dare you impersonate him, killing people, causing chaos... You're not him!

Her eyes burn with anger.

RIVEN

And I... I will bring him justice... by TAKING YOU DOWN!

She charges, katana raised.

CUT TO:

EXT. CITY STREET - NIGHT

David freezes mid-step, shocked by her words.

As she closes the distance, he bends down, scooping up several pebbles. With a calm motion, he tosses them high into the air.

CLOSE ON one of the falling pebbles as they spin in slow motion as they fall.

MATCH CUT TO: **EXT. WOODS - 2 YEARS AGO - DAY**

The same pebbles drop into a younger David's hand.

He smirks, standing far from a teenage Riven on a dirt path.

David throws a pebble toward her.

She darts aside, laughing as the game is simple.

Dodge the pebble, close the distance, and land a strike.

If she reaches him, David isn't allowed to dodge or block and if the pebbles hit her, she has to return to the starting point and start again.

MATCH CUT TO:

EXT. CITY STREET - NIGHT

The masked man catches the pebbles.

Riven's eyes narrow. Her breathing changes.

RIVEN

... Heh.

MATCH CUT TO: **EXT. WOODS - 2 YEARS AGO - DAY**

Riven chuckles, sprinting toward David.

The game plays out and more pebbles fly, each whizzing past her head or shoulders.

MATCH CUT TO:

EXT. CITY STREET - NIGHT

David whips a pebble at her and it misses.
 But then, almost instantly, another pebble flies, striking onto the first pebbles midair and it ricochets toward Riven.
 She reacts in a flash, slicing both pebbles clean in half with her katana.

MATCH CUT TO:

EXT. WOODS - 2 YEARS AGO - DAY

The playful training continues pebble after pebble.
 Each dodge brings her closer to David.
 CLOSE ON her smile in the past mirrors the faint curve of her lips in the present.

MATCH CUT TO: **EXT. CITY STREET - NIGHT**

Riven's grin grows.
 The memory fuels her steps. She prepares her final move.
 She vanishes in a blur with her special technique.
 In a heartbeat, dozens of shallow cuts appear on David's body. She reappears behind him, slowly sheathing her blade.

CLOSE ON the mask cracks apart, falling away to reveal the masked man's identity.

Riven's eyes widen. She freezes.

CUT TO: **EXT. WOODS - 2 YEARS AGO - DAY**

David and Riven sit beneath a tree, eating lunch. They laugh, teasing each other with childish insults.
 CLOSE ON David's face as he's been laughing.

MATCH CUT TO:

EXT. CITY STREET - NIGHT

CLOSE ON David's face as the mask fall's off revealing his entire face to Riven.

Riven drops her katana, rushes forward to reach him.

EXT. WOODS - 8 YEARS AGO - DAY

Young Riven runs toward someone in the distance.
 As she runs, she ages from child, to teenager, to her present-day self.
 David smiling warmly is waiting with an open arm.

MATCH CUT TO:

EXT. CITY STREET - NIGHT

CLOSE ON David's face as he bleeding heavily, barely survive the hit.
 Riven catches him, holding him close as he weakens.

DAVID

H-Hey Riv..y-you've gotten stronger I see..

RIVEN

...

DAVID

I'm glad you... finally got stronger...

RIVEN

Enough... stop talking...

DAVID

...

RIVEN

What are you doing all this time? Wearing that stupid mask.. killing innocent people.. what happened? Is it because I'm weak that you left me Dav..?

David smiles faintly, his body relaxing in her arms.

DAVID

I'm sorry that I left you Riv..I thought killing them while wearing their mask was enough to get you out of this and to protect you..I'm sorry I-

He coughs up blood, barely breathing as he speaks to his sister for one last time.

RIVEN

No Dav...Stay with me Dav! Don't leave me!

He smiles at Riven, using his last strength to hold his sister tight one last time, gently rubbing her head, with his last breath, he says his last word.

DAVID

Thanks Riv..for being with me..til the end..take care-

He exhales his last breath, his eyes closed, his hand's fell off Riven's head.

RIVEN

NO NO NO! DAVID STAY WITH ME DAVID NO...!

Riven holds David's corpse tightly, refusing to let go as she cries.

Suddenly, a piece of paper with a wanted poster of a masked man fluttered through the air and landed in front of her. With a quick glance, she finally understood, he wasn't wanted for killing the innocent, but for taking down the Yakuza, one by one, until he became a threat to the entire city.

FADE OUT.

A FEW SECONDS OF BLACK, BEFORE

FADE IN:

(UNMASKED)

THE END.

CREDITS ROLL.

4.5 Design

The whole development process for both character and environment design is described in this part. Character creation involves a number of phases, such as sketching many concept ideas, picking one final design, establishing the character's personality and narrative, selecting from a variety of colour schemes, and creating poses, facial expressions, and character turnarounds. Throughout the whole production process, these components operate as a guide to guarantee that every character has a standardized and consistent design.

4.5.1 Character Design

I. Protagonist – Riven

FINAL CHARACTER CONCEPTS - RIVEN



Figure 19: Riven character concept

FINAL CHARACTER CONCEPTS - RIVEN



Figure 20: Riven character concept

CHARACTER PROFILE



Name : Riven

Height : 160cm

Age : 14 years old

Archetype : The Hero

Courageous: Faces danger head-on, willing to fight for what is right.

Determined: Never gives up, keeps pushing even when the odds are against her.

Inspirational: Her actions motivate and protect others, showing strength through example.

Weakness :

Stubborn: Can refuse help or ignore advice, putting herself at risk.

Impulsive: May act before fully considering consequences in her drive to do the right thing.

Overburdened: Takes responsibility too heavily, struggling under pressure or emotional weight.

Traits : Stubborn, Courageous, Loyal.

Riven is David's younger sister, a determined and stubborn swordswoman known for her courage, loyalty, and fierce independence. Trained by David in the woods, she grew skilled, disciplined, and able to turn lessons from their playful training into deadly precision. Driven by a strong sense of justice, she faces danger head-on, fighting to protect civilians and uphold what is right, even when confronting the masked figure who unknowingly turns out to be her brother.

Figure 21: Riven character description

CHARACTER TURN AROUND - RIVEN

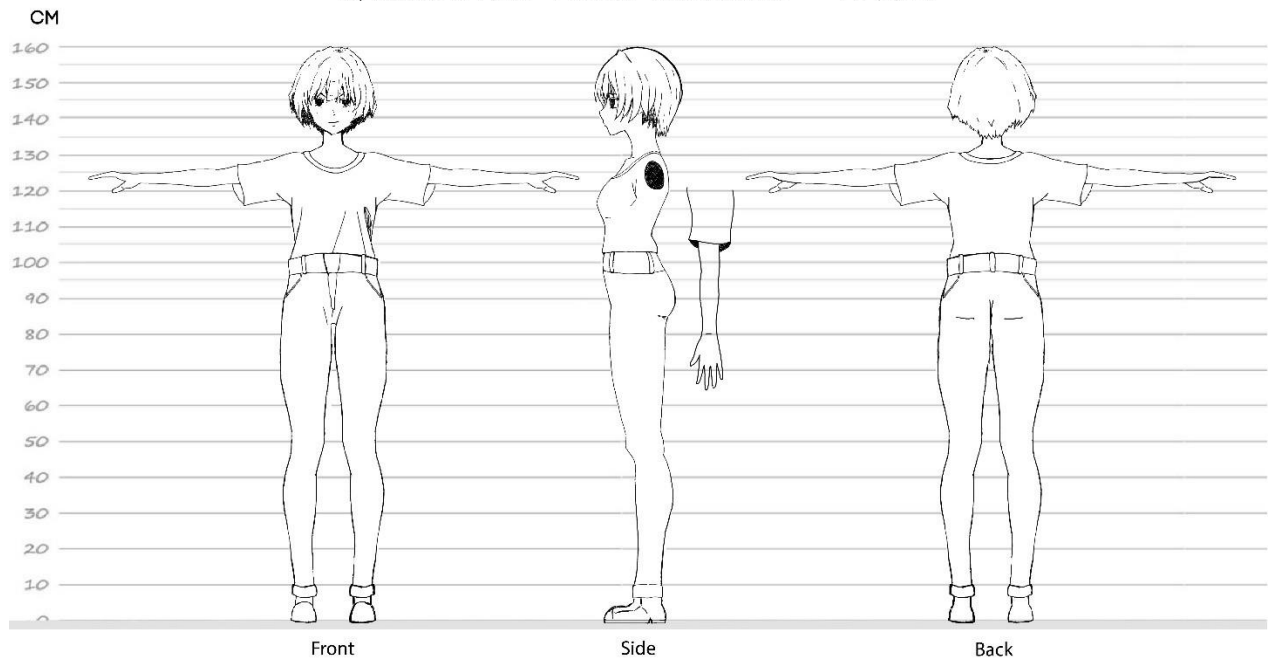


Figure 22: Riven character orthographic view

COLOUR PALETTE - RIVEN

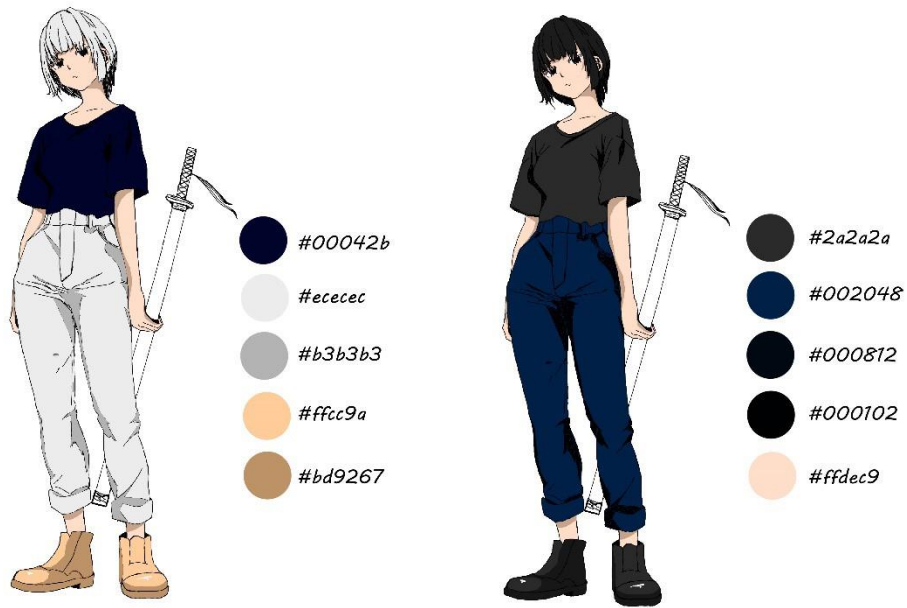


Figure 23: Riven character colour palette

COLOUR PALETTE - RIVEN



Figure 24: Riven character colour palette

FACIAL EXPRESSION - RIVEN

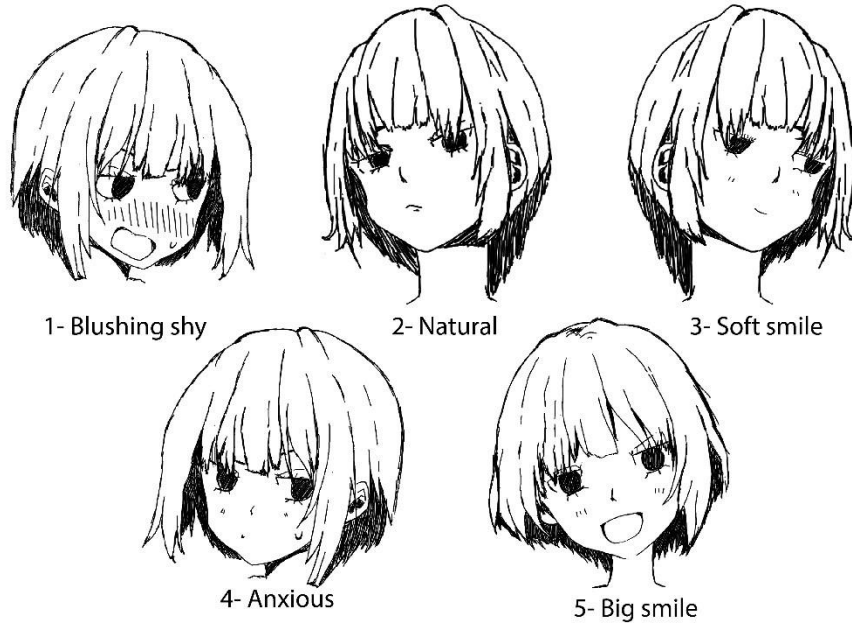


Figure 25: Riven character expression

FACIAL EXPRESSION - RIVEN

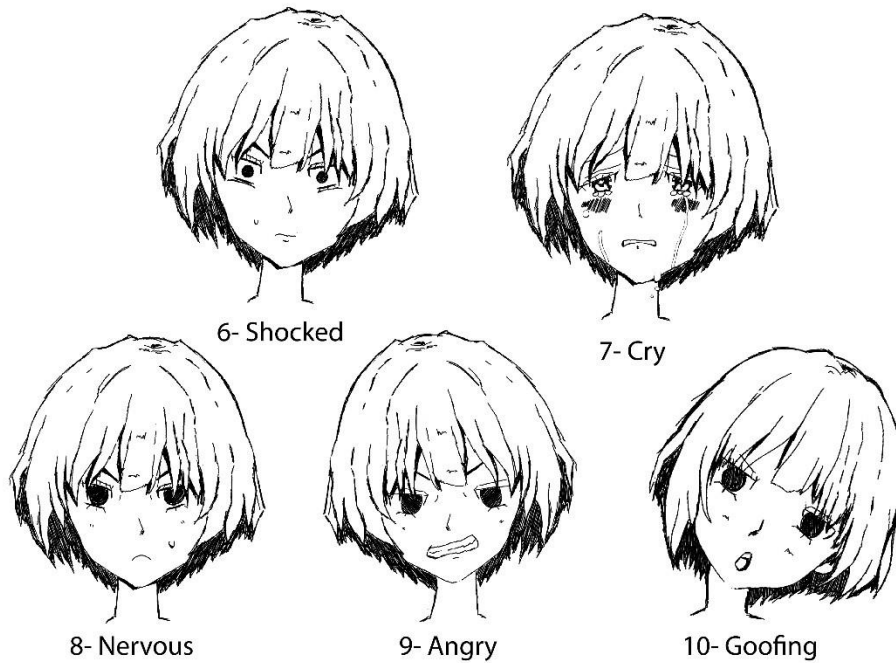


Figure 26: Riven character expression

CHARACTER POSES - RIVEN

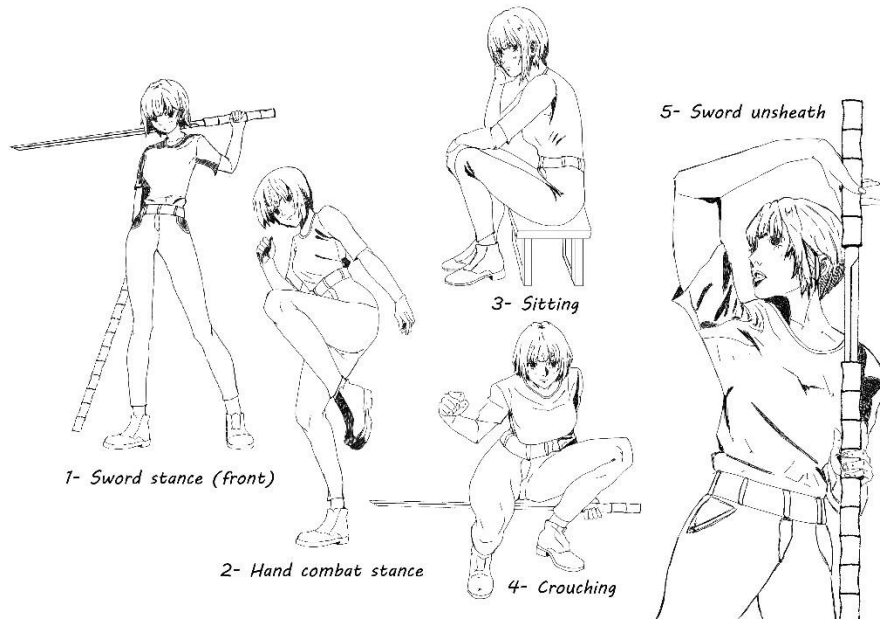


Figure 27: Riven character poses

CHARACTER POSES - RIVEN

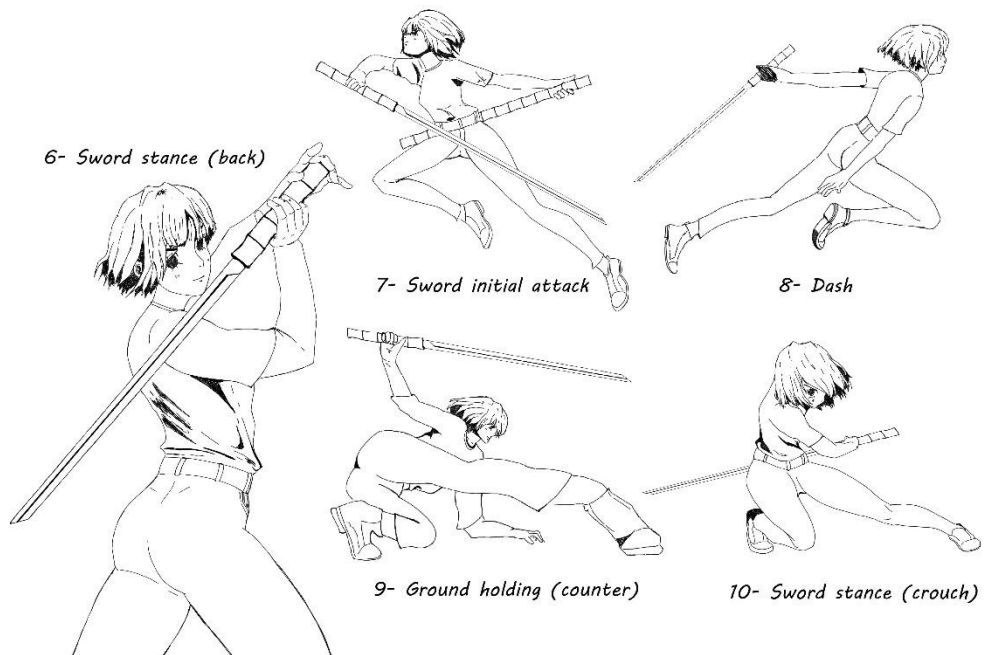


Figure 28: Riven character poses

MOUTH CHART SHEET - RIVEN

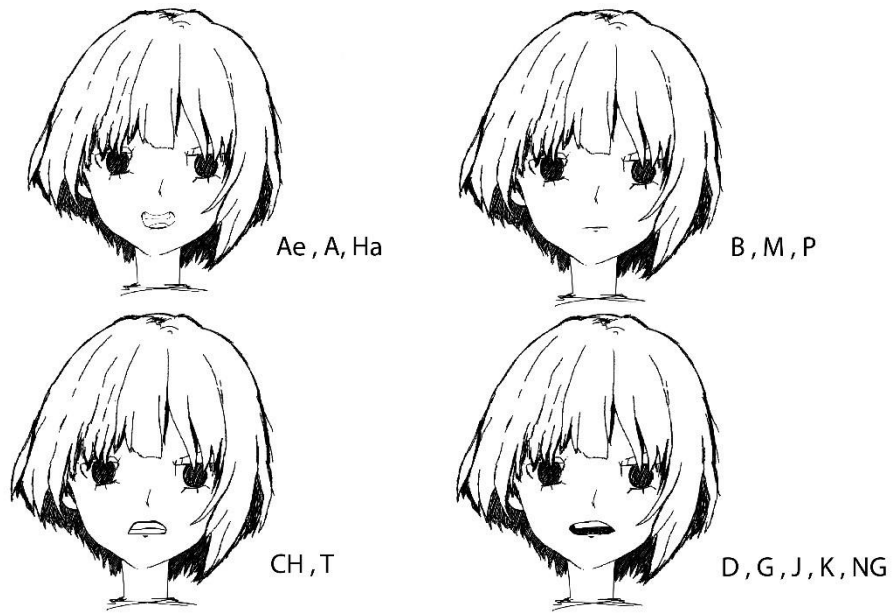


Figure 29: Riven character mouth chart

MOUTH CHART SHEET - RIVEN

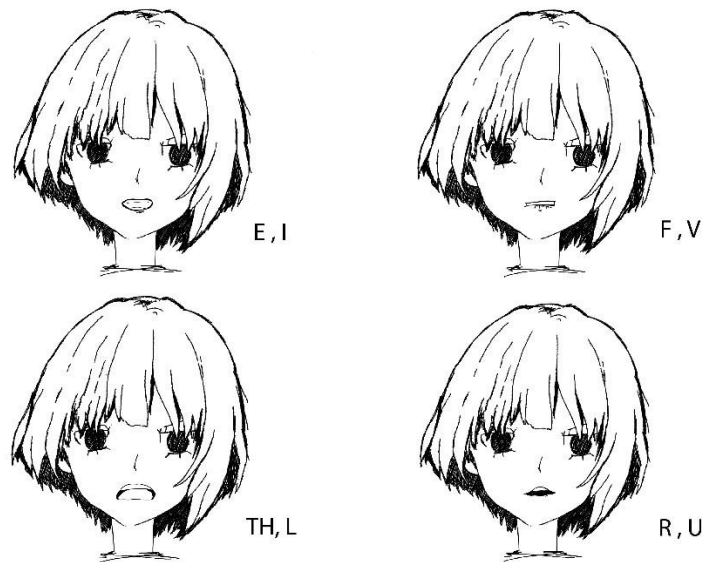


Figure 30: Riven character mouth chart

MOUTH CHART SHEET - RIVEN



Figure 31: Riven character mouth chart

II- Antagonist – David

FINAL CHARACTER CONCEPTS - DAVID



Figure 32: David character concepts

FINAL CHARACTER CONCEPTS - DAVID



Figure 33: David character concepts

CHARACTER PROFILE



Name : David

Height : 170cm

Age : 17 years old

Archetype : The Caregiver

Selfless: Always puts others' safety before his own.

Protective: Will go to great lengths to shield loved ones from harm.

Compassionate: Deeply cares about the well-being of those close to him.

Weakness :

Overprotective: May shield others so much that he denies them independence or the truth.

Secretive: Withholds information, which can cause misunderstanding or mistrust.

Unable to ask for help: Believes he must bear every burden alone.

Traits : Protective, Vigilant, Self-sacrificing

David is Riven's older brother, a tall and lean swordsman in his late twenties, known for his calm precision, quiet confidence, and the warm playfulness he once showed during their days together training in the woods, sharing simple lunches under the trees, and teasing her with harmless pranks while pushing her to grow stronger. When the yakuza raided their island, David made the choice to leave for the city, determined to hunt them down one by one and erase the threat to his sister. To conceal his identity and distance her from his violent path, he crafted and wore a mask of his own making, becoming feared as the city's "masked murderer." Despite his ruthless efficiency, subtle hesitations in battle, his familiar fighting style, and the bracelet he still wore revealed that the brother Riven knew had never truly disappeared.

Figure 34: David character profile

CHARACTER TURN AROUND - DAVID

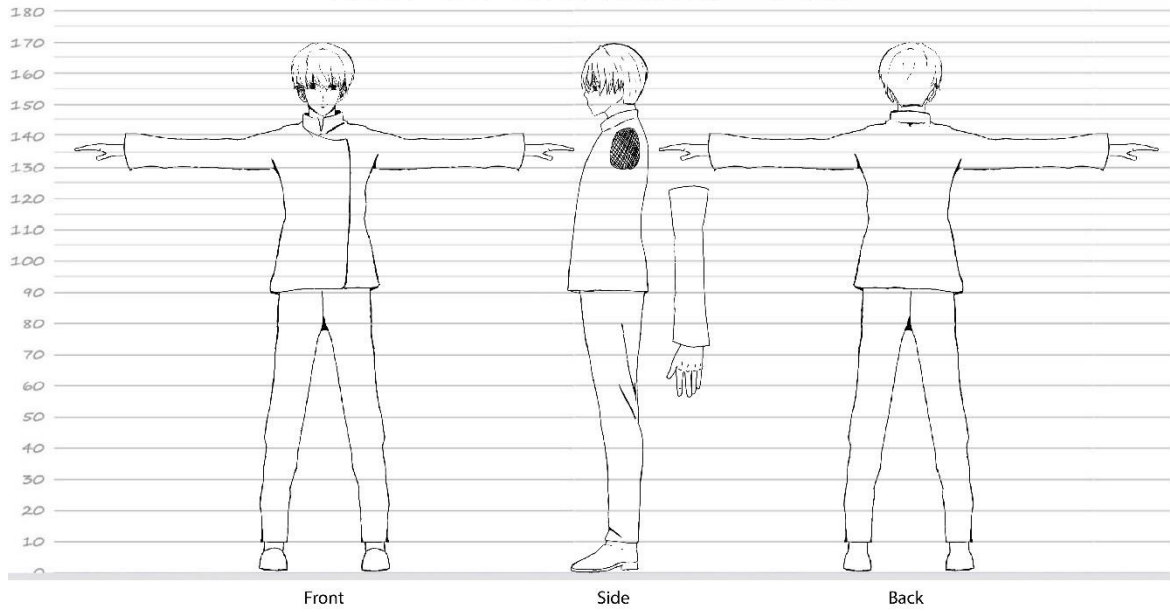


Figure 35: David character orthographic view

COLOUR PALETTE - DAVID

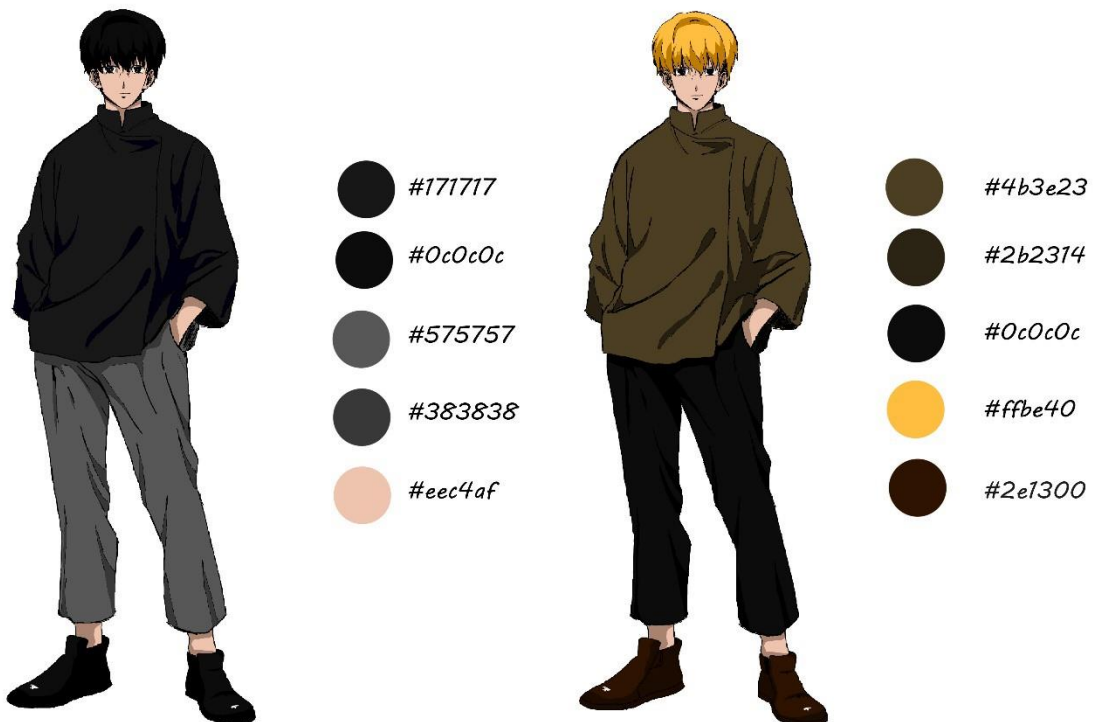


Figure 36: David character color palette

COLOUR PALETTE - DAVID

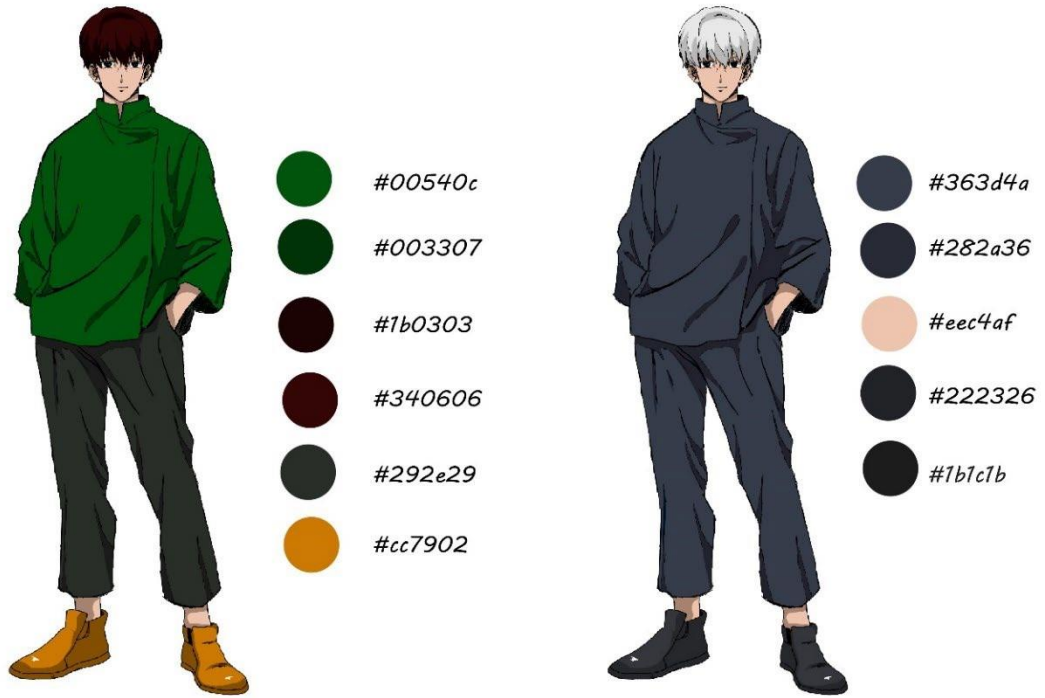


Figure 37: David character color palette

FACIAL EXPRESSION - DAVID

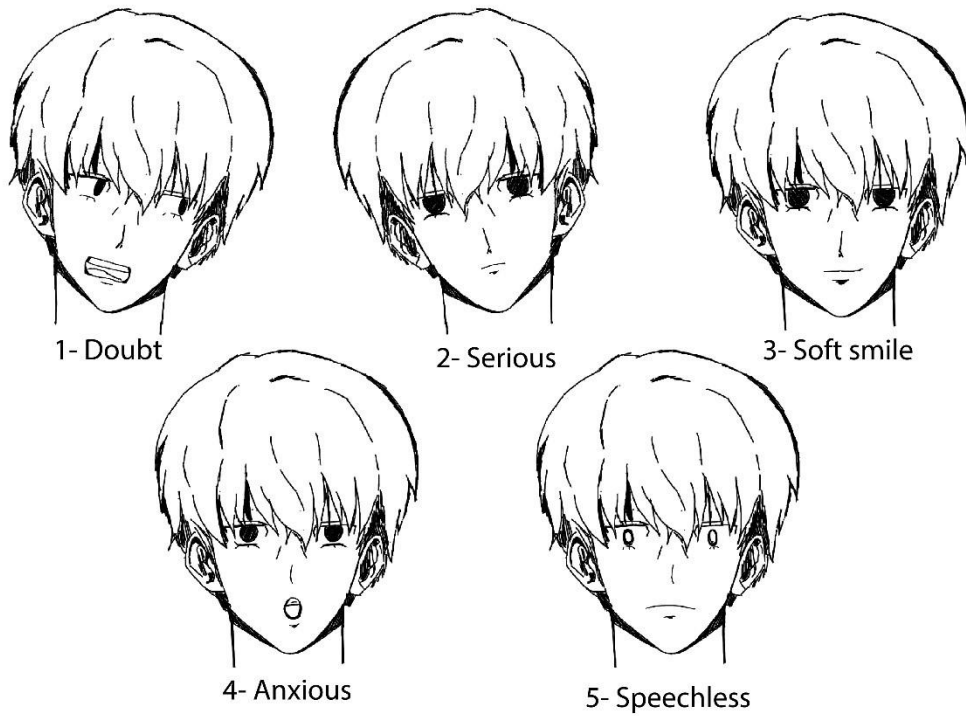


Figure 38: David character facial expression

FACIAL EXPRESSION - DAVID

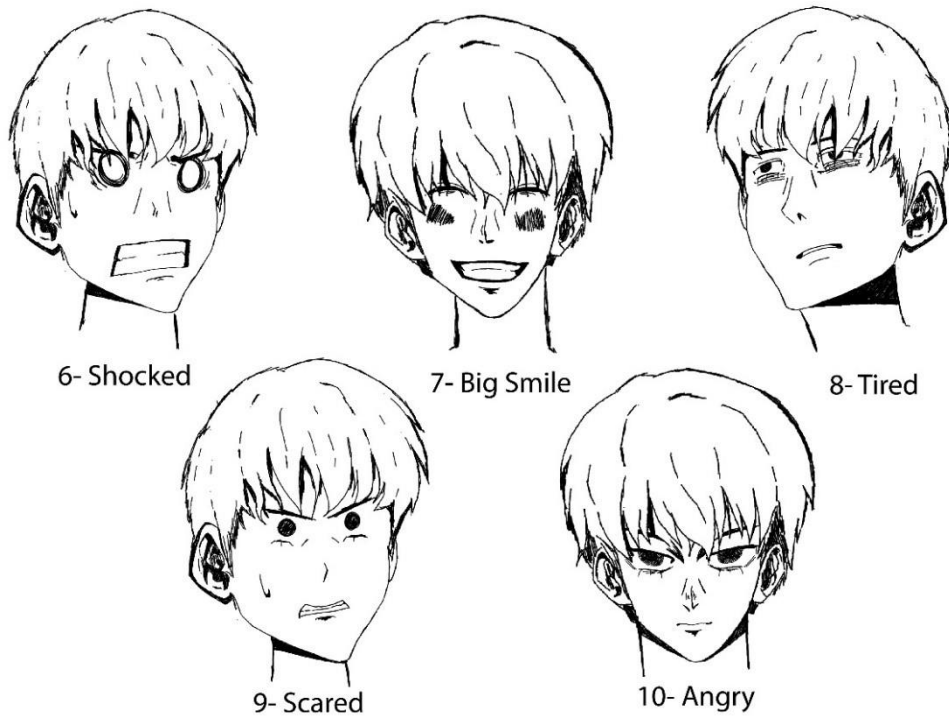


Figure 39: David character facial expression

CHARACTER POSES - DAVID

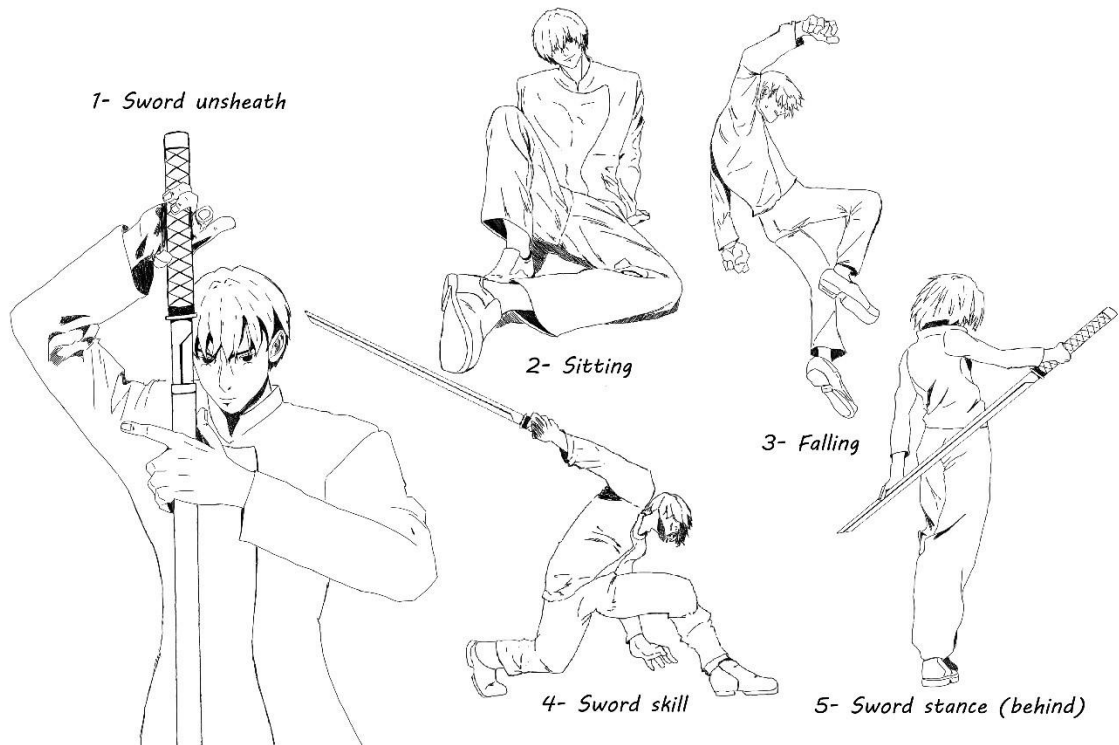


Figure 40: David character poses

CHARACTER POSES - DAVID

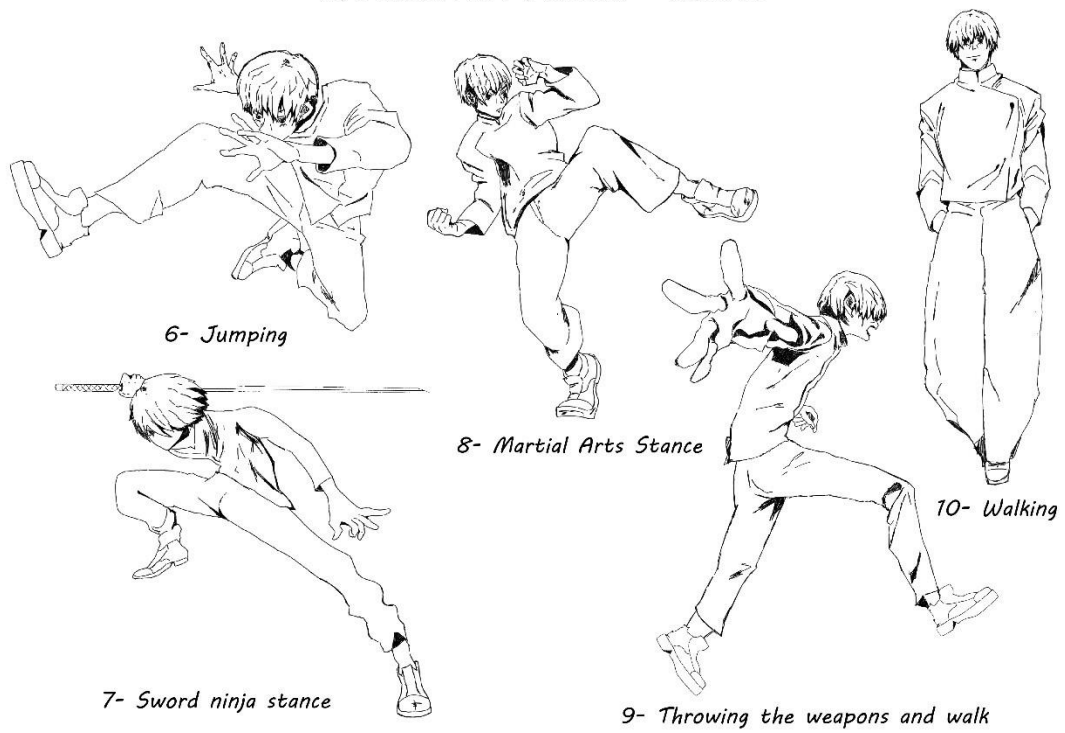


Figure 41: David character poses

MOUTH CHART SHEET - DAVID

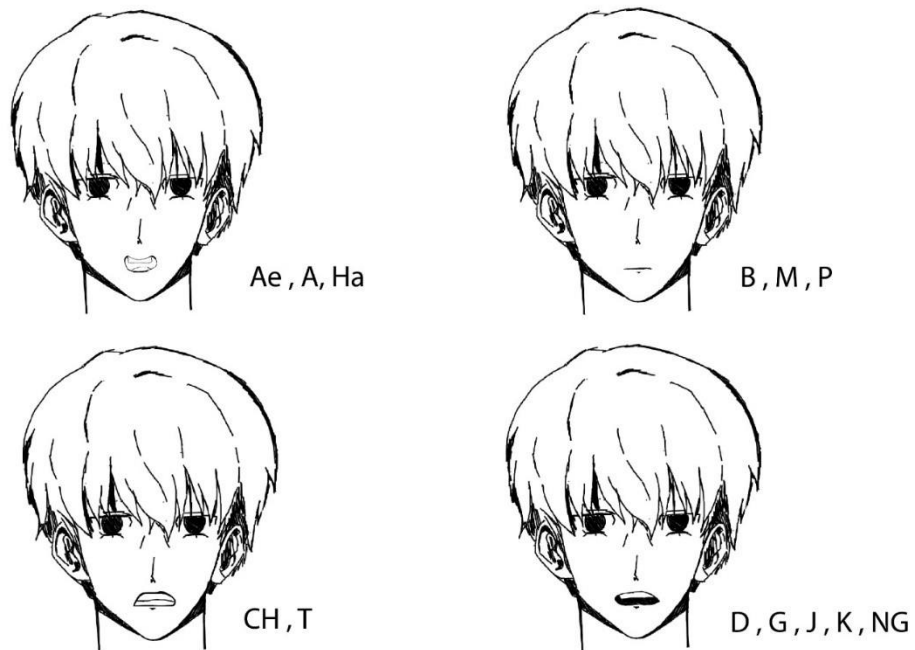


Figure 42: David character mouth chart

MOUTH CHART SHEET - DAVID

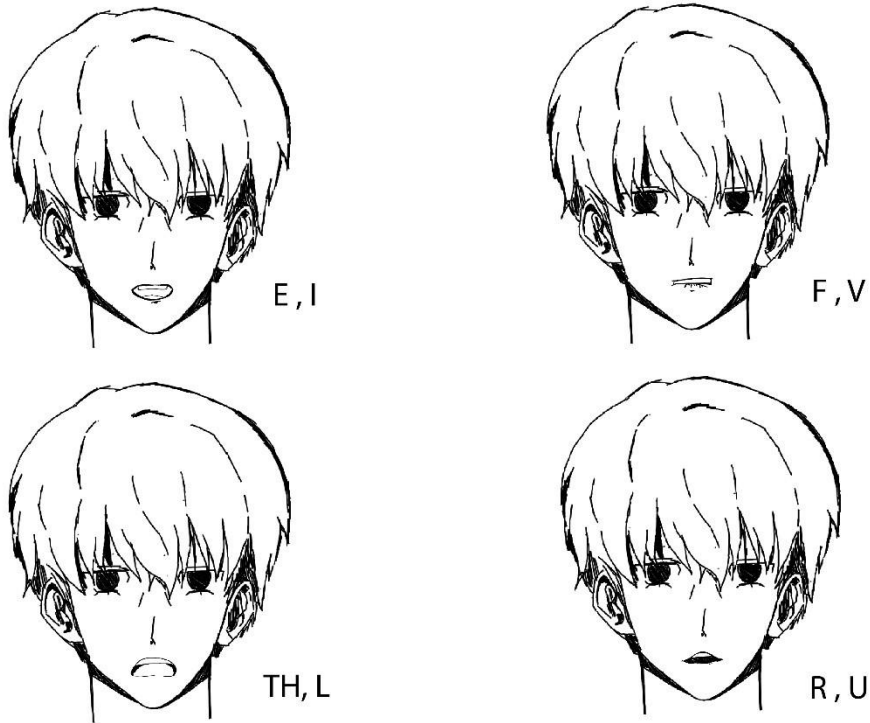


Figure 43: David character mouth chart

MOUTH CHART SHEET - DAVID

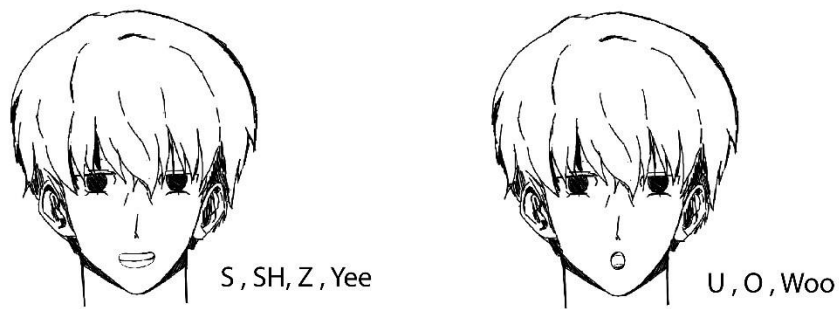


Figure 44: David character mouth chart

4.5.2 Environmental Design

There are two primary environmental ideas in this project which are the city landscape of an alleyway and the main city street setting. To complement the project's overall story and visual design, each setting is created with its own unique mood, lighting, colours, and props.



Figure 45: City Alleyway

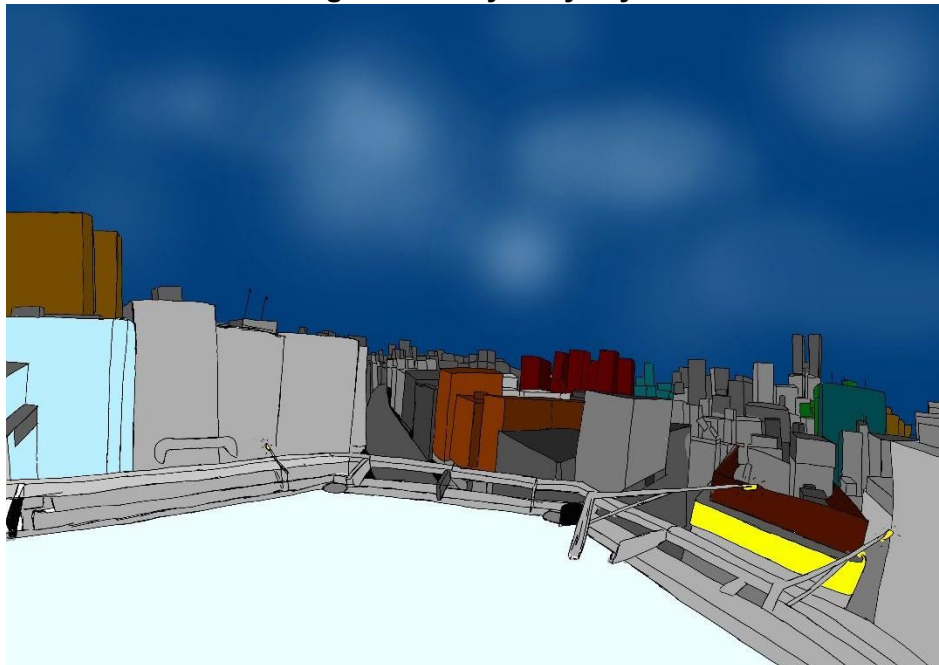


Figure 46: City Rooftop

4.5.3 Asset Design

The process of creating and sketching all the visual assets utilized in a project, including as assets, props, and characters, is known as asset design. It ensures that every component fits the project's story and style. Scenes are created using assets, which contribute to the final production's structure and visual consistency.

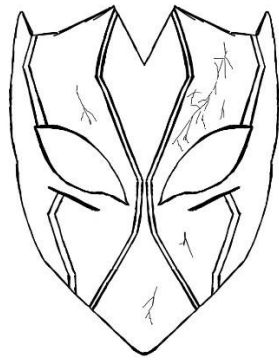


Figure 47: David's Mask

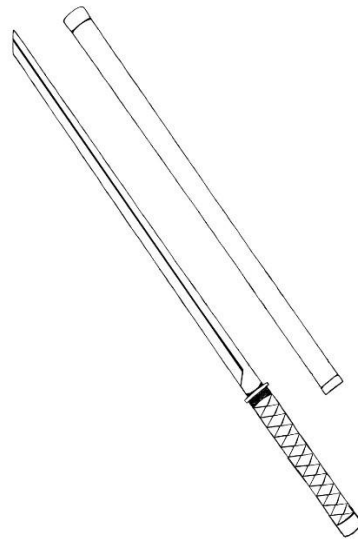


Figure 48: Nichirin Blade

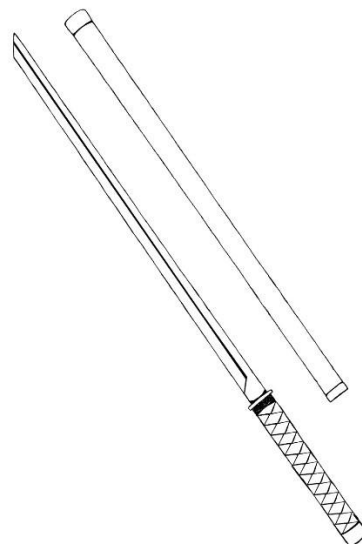


Figure 49: Bamboo Sword

4.6 Thumbnail

A thumbnail is a little picture or sketch that serves as a guideline for a longer piece of content, like an entire movie, an image, or even a scene from an animation. Its goal is to provide an artist with a brief preview of what they will have to plan the timing and the camera angle without requiring them to open or play the full content.

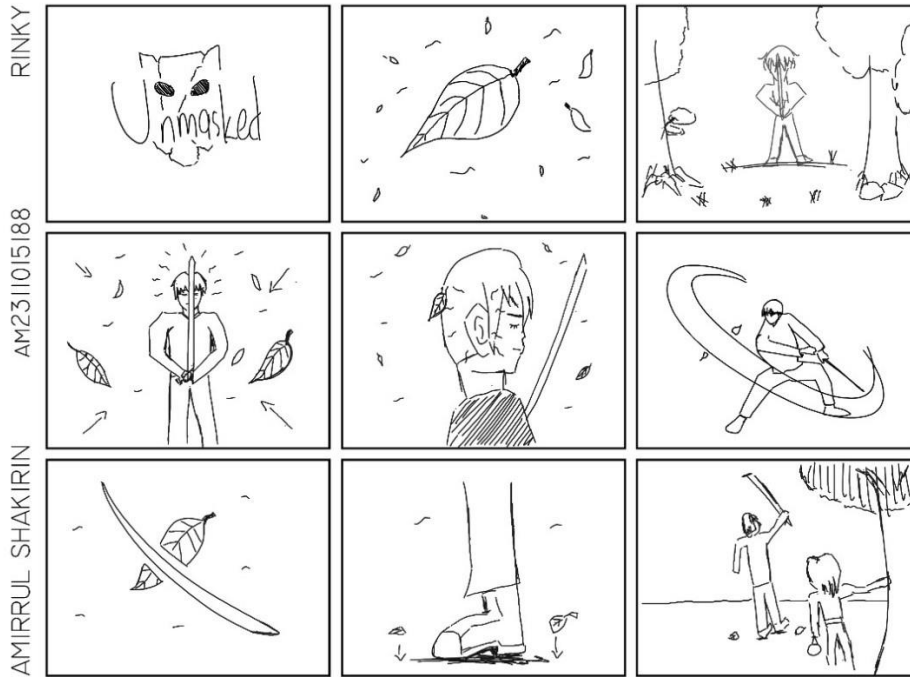


Figure 50: Unmasked thumbnail page 1

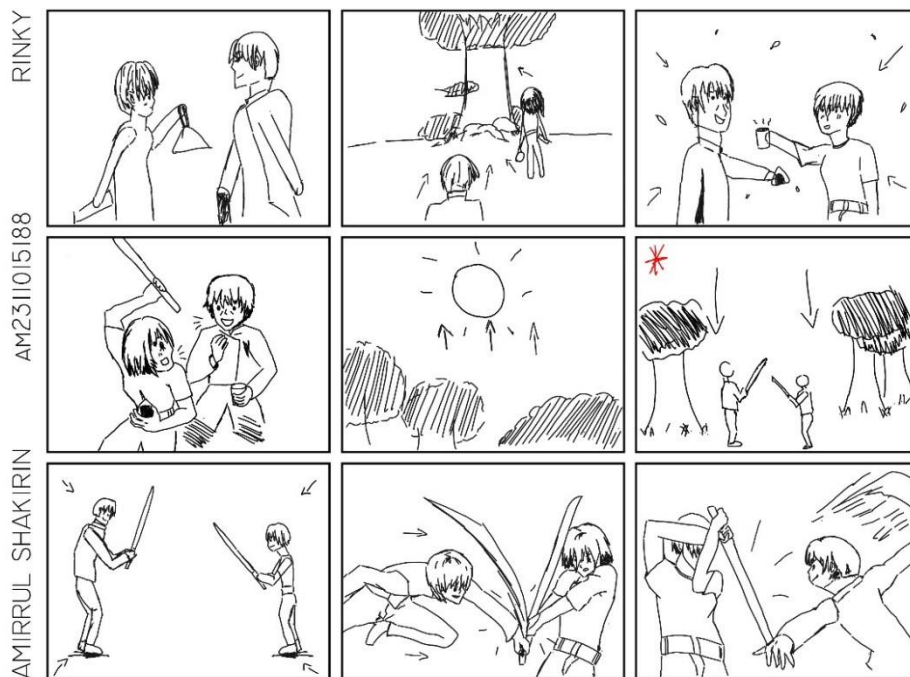


Figure 51: Unmasked thumbnail page 2



Figure 52: Unmasked thumbnail page 3



Figure 53: Unmasked thumbnail page 4



Figure 54: Unmasked thumbnail page 5



Figure 55: Unmasked thumbnail page 6

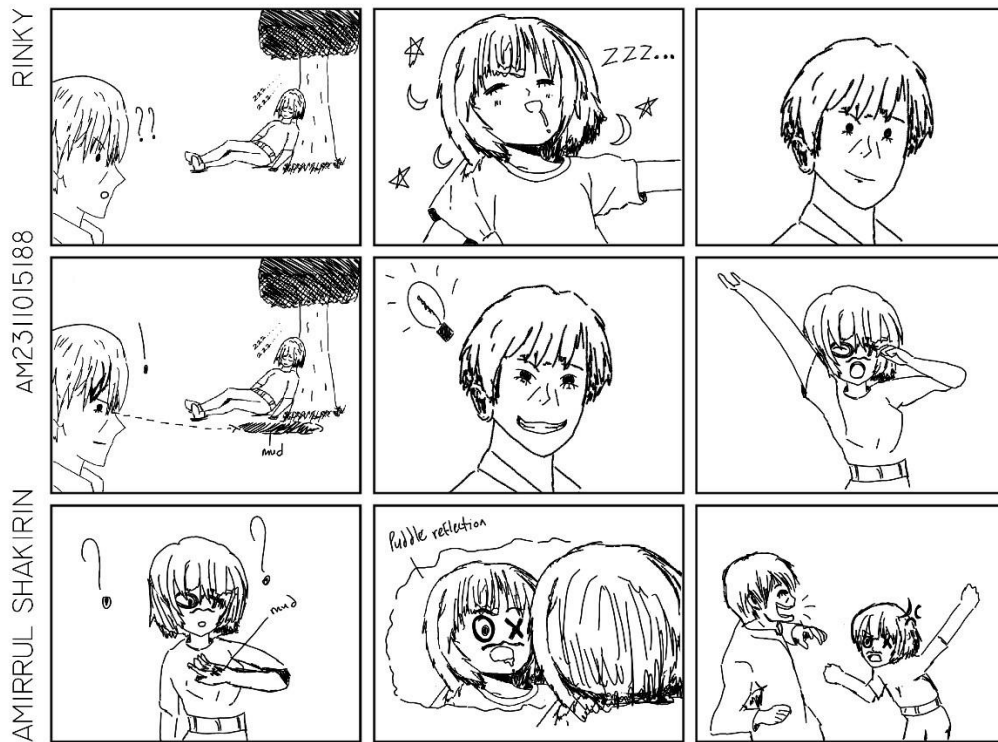


Figure 56: Unmasked thumbnail page 7



Figure 57: Unmasked thumbnail page 8



Figure 58: Unmasked thumbnail page 9



Figure 59: Unmasked thumbnail page 10



Figure 60: Unmasked thumbnail page 11

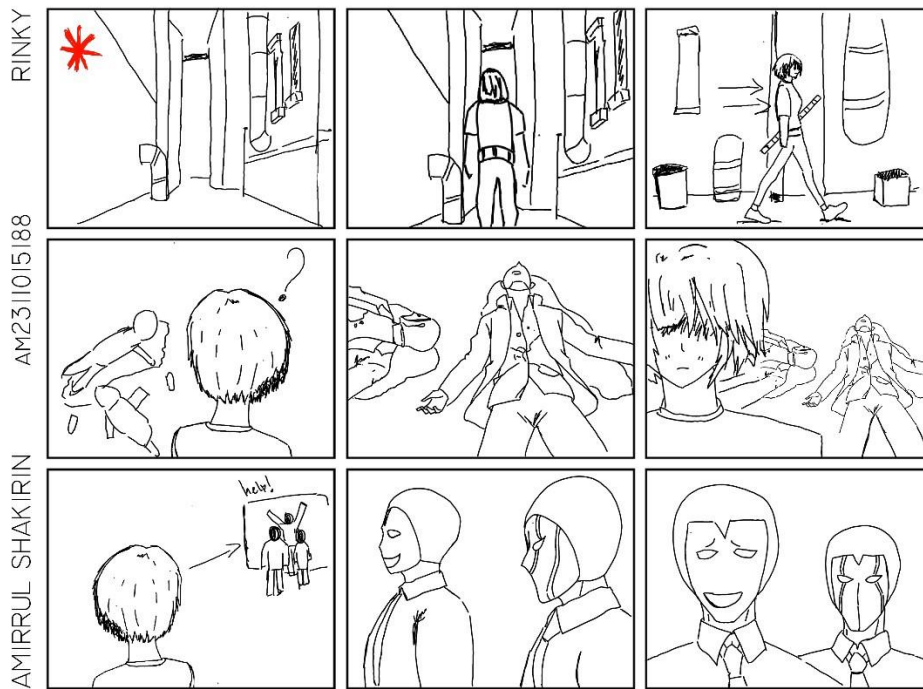


Figure 61: Unmasked thumbnail page 12



Figure 62: Unmasked thumbnail page 13

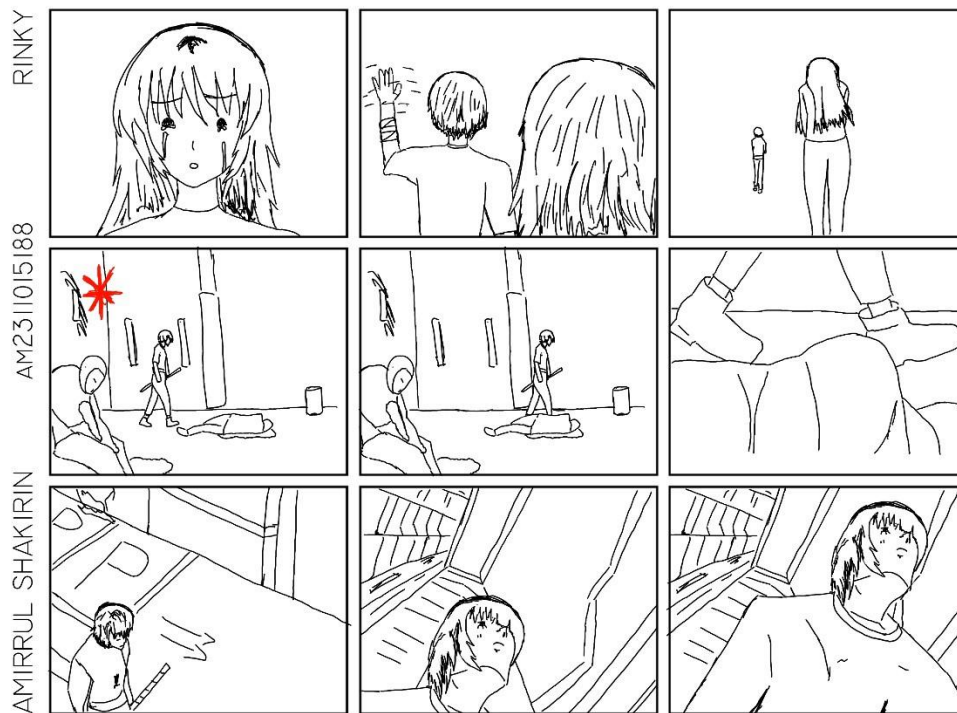


Figure 63: Unmasked thumbnail page 14



Figure 64: Unmasked thumbnail page 15



Figure 65: Unmasked thumbnail page 16

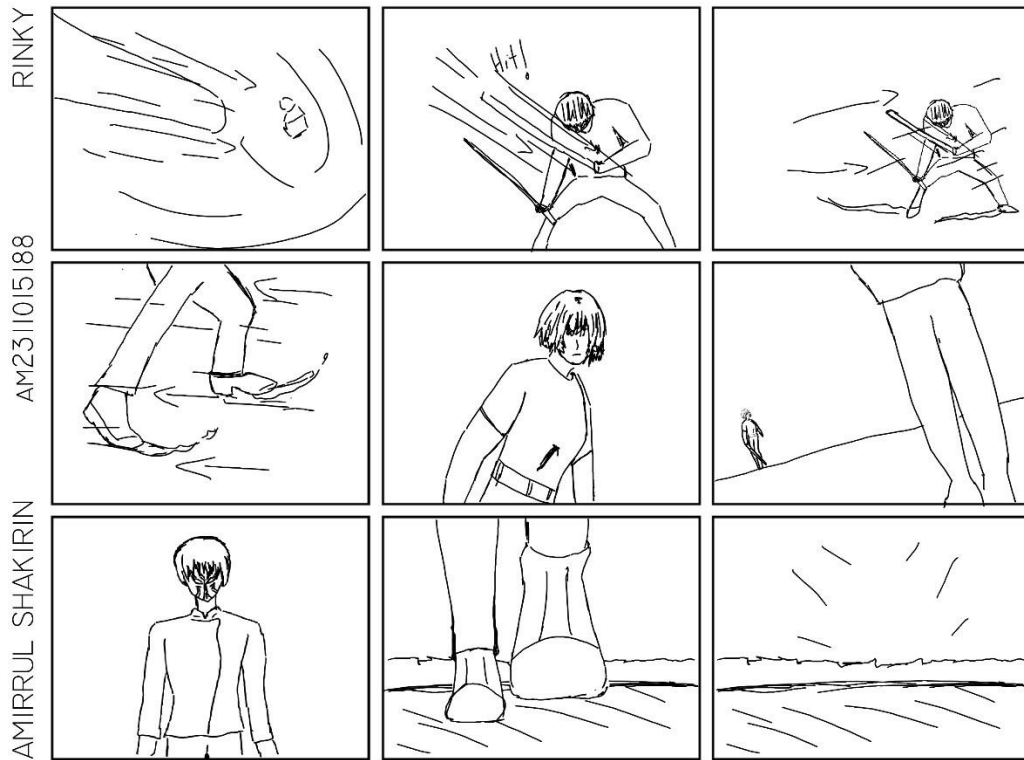


Figure 66: Unmasked thumbnail page 17

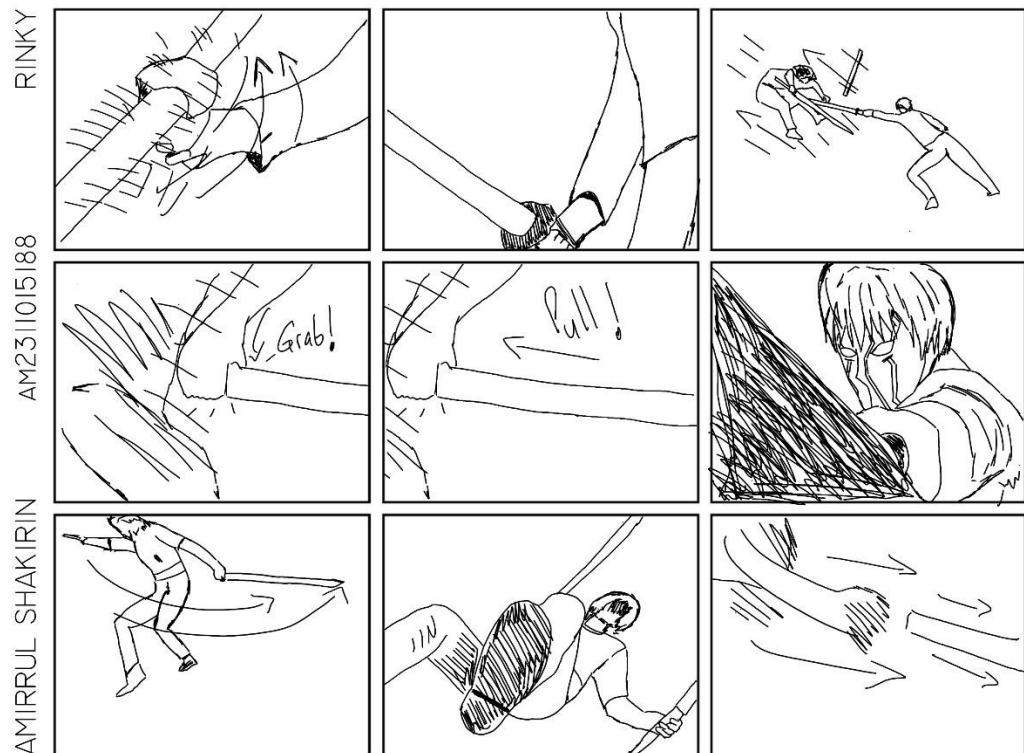


Figure 67: Unmasked thumbnail page 18



Figure 68: Unmasked thumbnail page 19



Figure 69: Unmasked thumbnail page 20



Figure 70: Unmasked thumbnail page 21

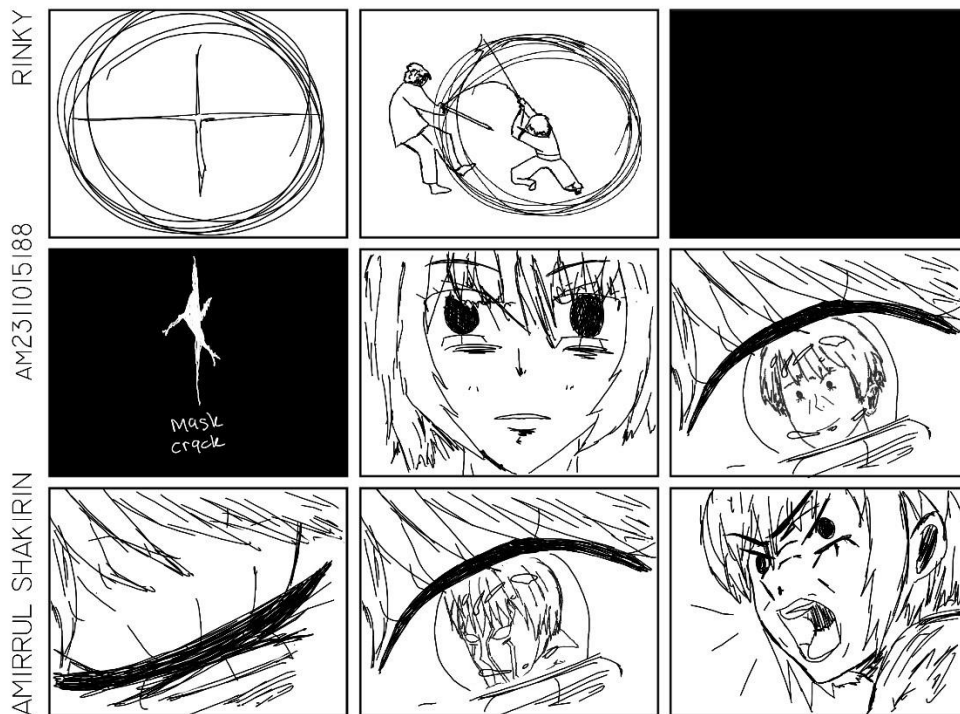


Figure 71: Unmasked thumbnail page 22

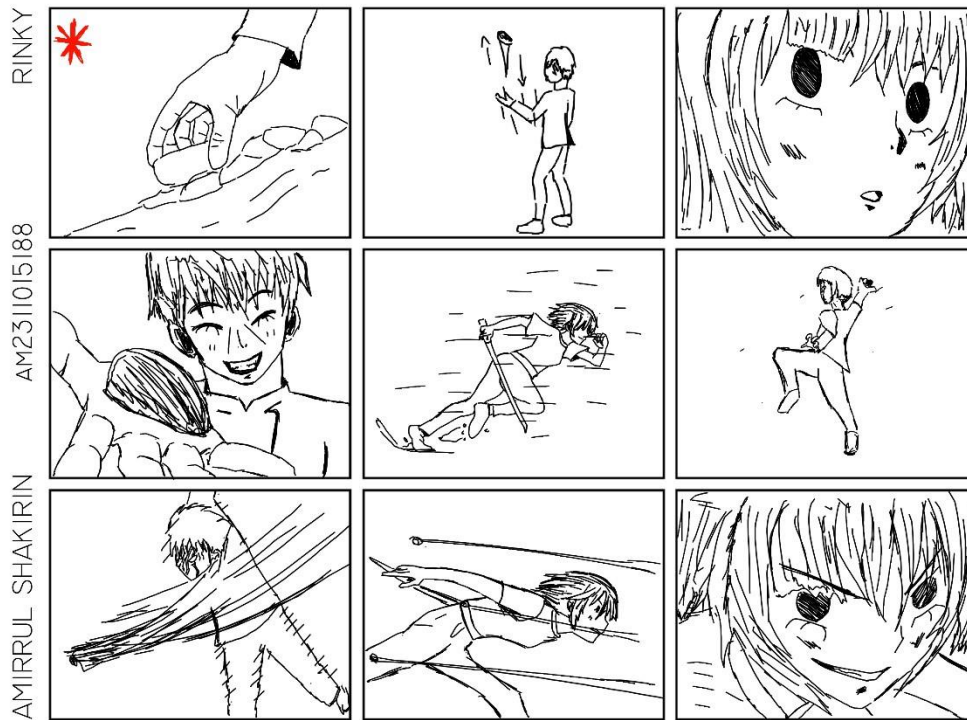


Figure 72: Unmasked thumbnail page 23



Figure 73: Unmasked thumbnail page 24

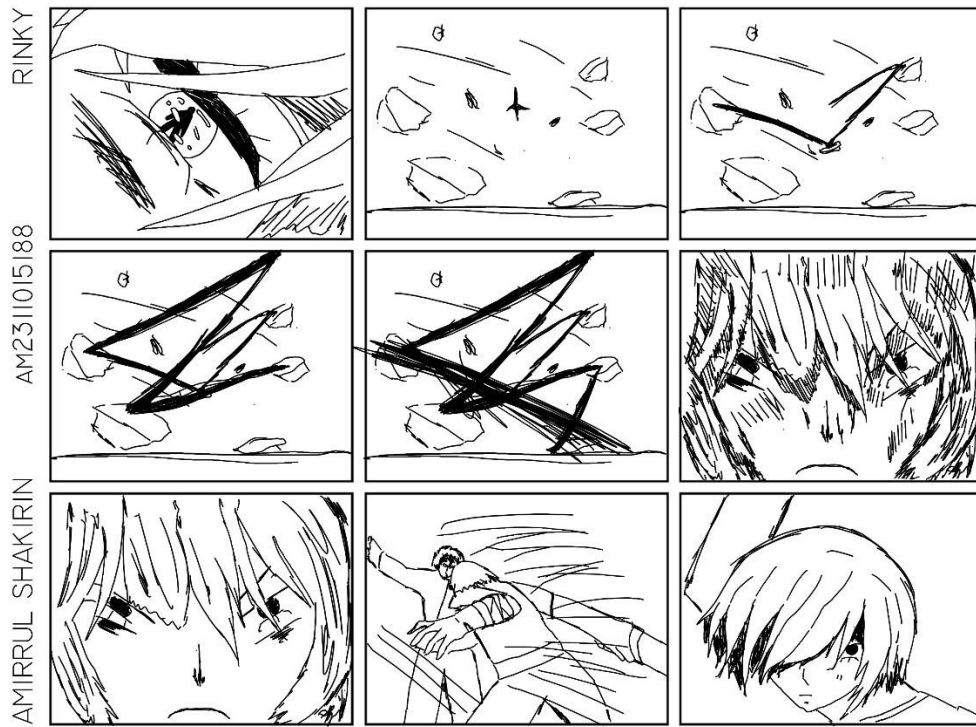


Figure 74: Unmasked thumbnail page 25

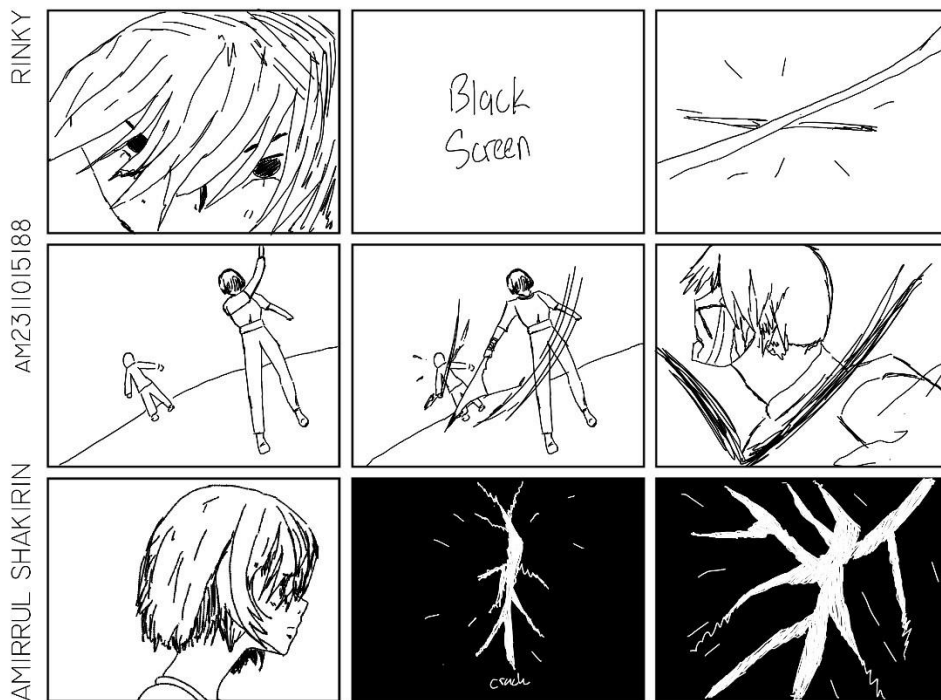


Figure 75: Unmasked thumbnail page 26



Figure 76: Unmasked thumbnail page 27



Figure 77: Unmasked thumbnail page 28

4.7 Storyboard

A storyboard is a visual planning tool used to laying out an outline of a story’s plot in animation, or film productions. It is made up of several panels that show each scene or shot, frequently with remarks on camera angles and movement and sketches of characters, surroundings, and important activities. Its primary goal is to visualize the plot, and guarantee story and pacing consistency before starting the actual production.

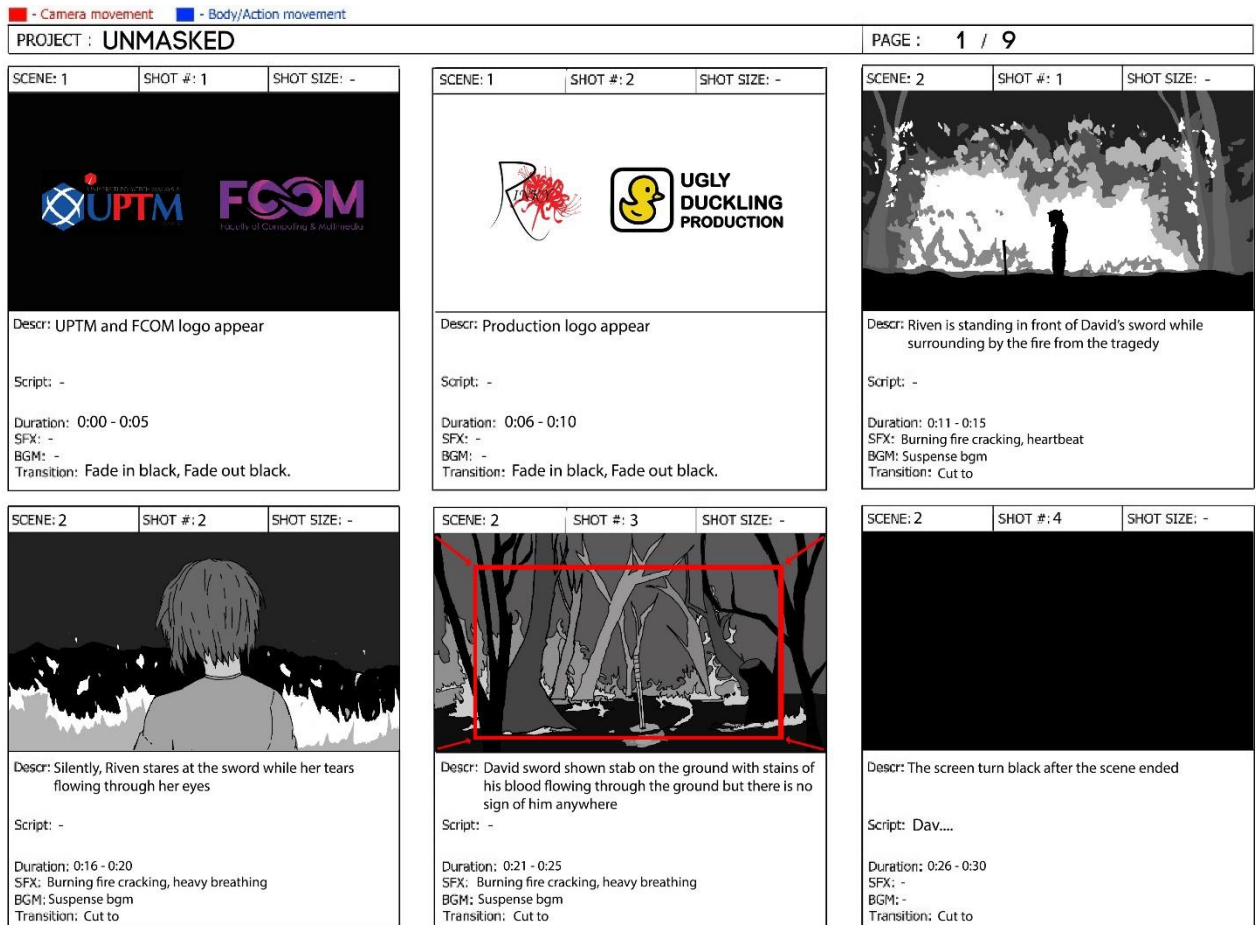


Figure 78: Unmasked storyboard page 1

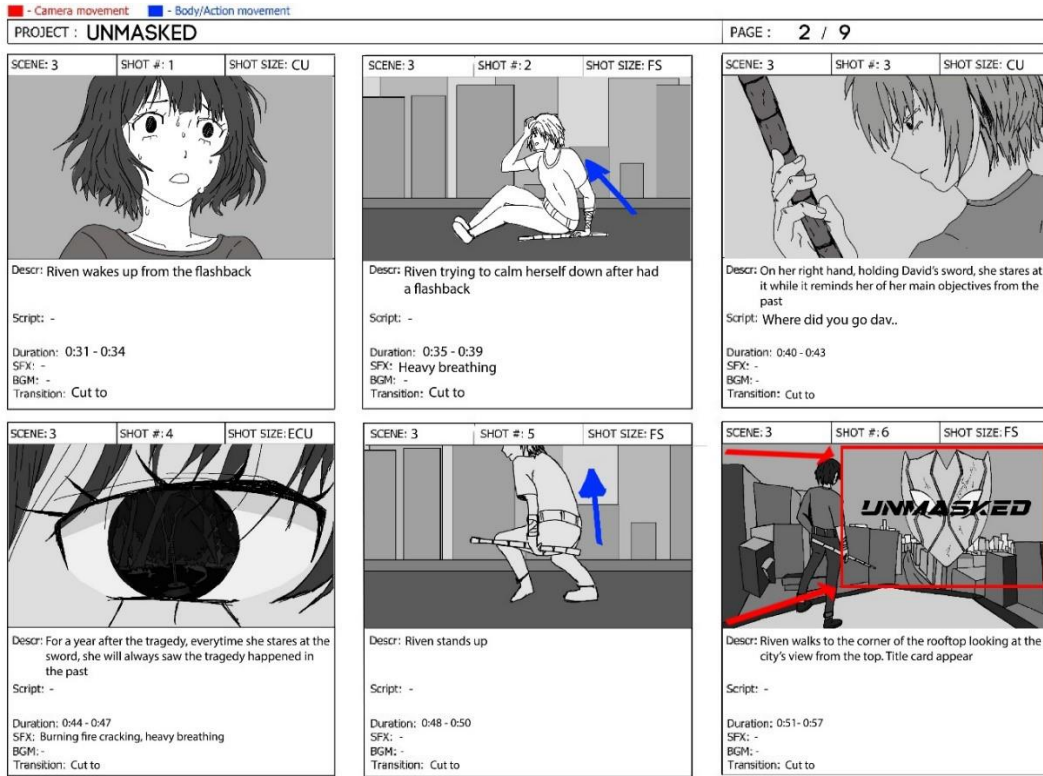


Figure 79: Unmasked storyboard page 2

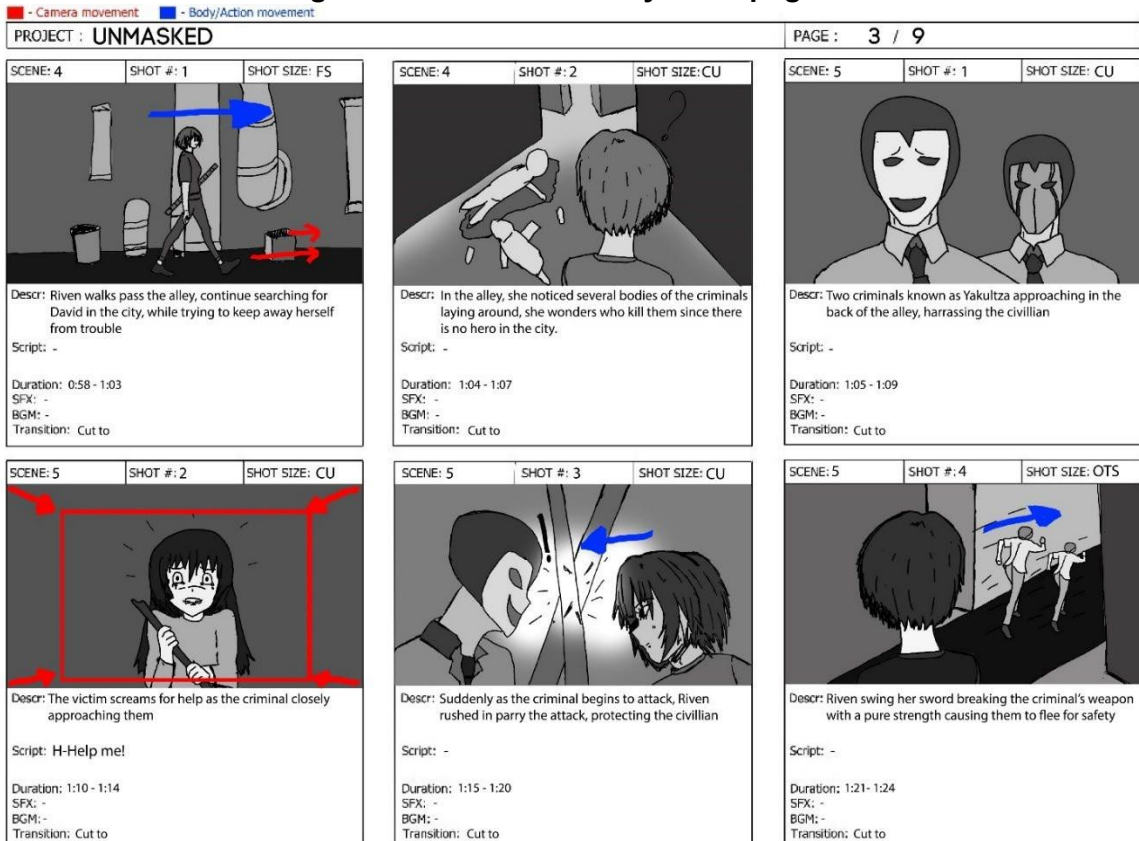


Figure 80: Unmasked storyboard page 3

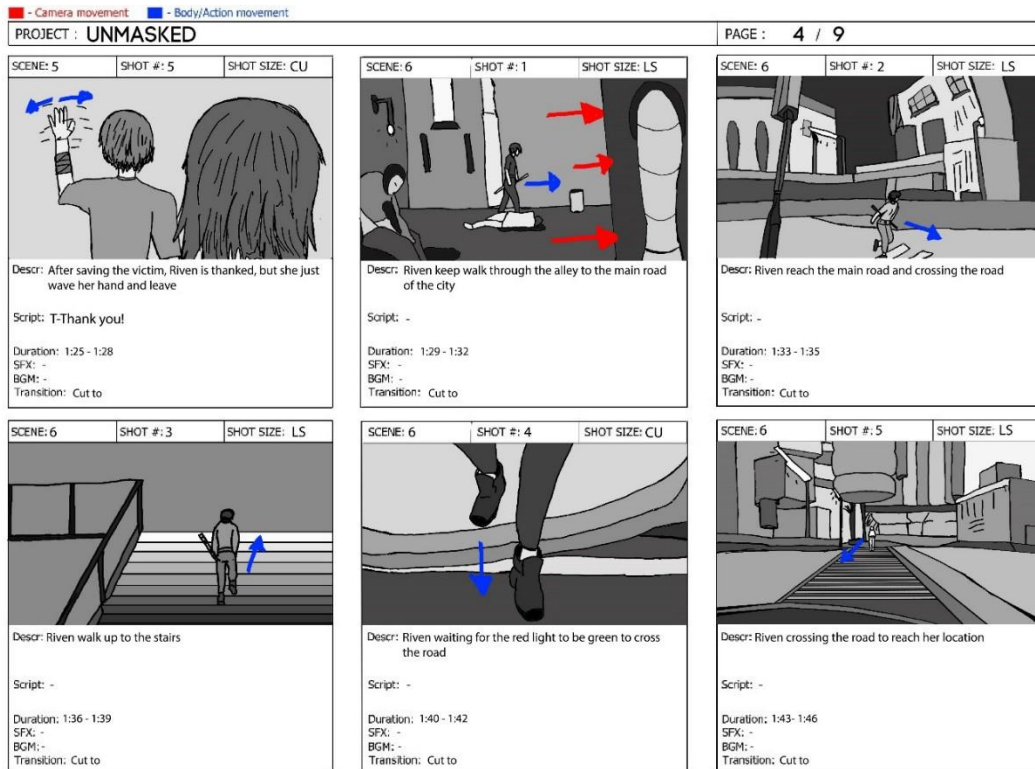


Figure 81: Unmasked storyboard page 4

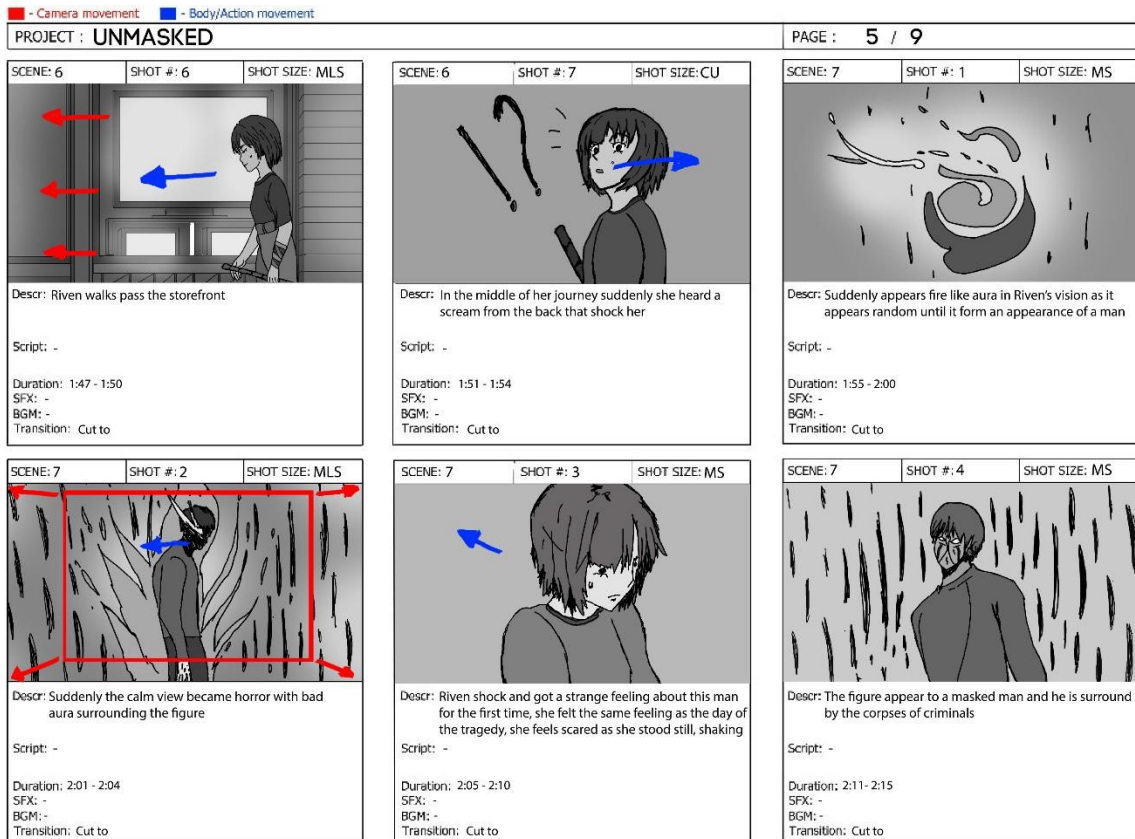


Figure 82: Unmasked storyboard page 5

PROJECT : UNMASKED PAGE : 6 / 9

| | | |
|---|--|--|
| <p>SCENE: 7 SHOT #: 5 SHOT SIZE: FS</p> <p>Descr: Without fully thinking, Riven straight rush to strike the man as she acts like its a muscle memory</p> <p>Script: -</p> <p>Duration: 2:16 - 2:19 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 7 SHOT #: 6 SHOT SIZE: LA</p> <p>Descr: But, before she manage to land the strike, the man parry it with his sword sending Riven to flew away</p> <p>Script: -</p> <p>Duration: 2:20 - 2:24 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 8 SHOT #: 1 SHOT SIZE: MS</p> <p>Descr: The man approaching her slowly</p> <p>Script: -</p> <p>Duration: 2:25 - 2:27 SFX: - BGM: - Transition: Cut to</p> |
| <p>SCENE: 8 SHOT #: 2 SHOT SIZE: CU</p> <p>Descr: The man keeps walking closer</p> <p>Script: -</p> <p>Duration: 2:28 - 2:31 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 8 SHOT #: 3 SHOT SIZE: CU</p> <p>Descr: Suddenly as his feet step to the ground, he vanished</p> <p>Script: -</p> <p>Duration: 2:32 - 2:33 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 8 SHOT #: 4 SHOT SIZE: MLS</p> <p>Descr: The man suddenly appear behind of Riven but she manage to reacts and parry the attack but it send her flew away as it was a strong hit</p> <p>Script: -</p> <p>Duration: 2:34 - 2:37 SFX: - BGM: - Transition: Cut to</p> |

Figure 83: Unmasked storyboard page 6

PROJECT : UNMASKED PAGE : 7 / 9

| | | |
|---|---|--|
| <p>SCENE: 8 SHOT #: 5 SHOT SIZE: FS</p> <p>Descr: After getting hit, Riven manage to stands up once more and manage to land a counter attack to the masked man</p> <p>Script: -</p> <p>Duration: 2:38 - 2:42 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 9 SHOT #: 1 SHOT SIZE: CU</p> <p>Descr: The mask wore by the man suddenly crack because of the attack that landed causing him to expose some of his face</p> <p>Script: -</p> <p>Duration: 2:43 - 2:45 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 10 SHOT #: 1 SHOT SIZE: ECU</p> <p>Descr: Surprisingly the little expose shown from behind the mask reminds Riven of her missing brother David</p> <p>Script: No way.. Dav.. is that you.? Why are you doing this David? Let's stop this and lets go home-</p> <p>Duration: 2:46 - 2:50 SFX: - BGM: - Transition: Cut to</p> |
| <p>SCENE: 11 SHOT #: 1 SHOT SIZE: CU</p> <p>Descr: The man turned out to be David, as he saw Riven is panicking, he casually grab the pebbles on the ground</p> <p>Script: -</p> <p>Duration: 2:51 - 2:53 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 11 SHOT #: 2 SHOT SIZE: CU</p> <p>Descr: As he shown the pebbles to Riven, the view from her perspective changes to her flashback from the past</p> <p>Script: Are you ready Riv?</p> <p>Duration: 2:54 - 2:57 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 11 SHOT #: 3 SHOT SIZE: CU</p> <p>Descr: Riven is speechless and she suddenly understand the situation as she get on her ready stance to attack</p> <p>Script: -</p> <p>Duration: 2:58 - 3:02 SFX: - BGM: - Transition: Cut to</p> |

Figure 84: Unmasked storyboard page 7

PROJECT : UNMASKED PAGE : 8 / 9

| | | |
|---|---|--|
| <p>SCENE: 11 SHOT #: 4 SHOT SIZE: MLS</p> <p>Descr: As David throws the pebbles, the view is snap to the present, the pebbles was thrown like a bullet shot by a gun, one hit is enough to kill somebody</p> <p>Script: -</p> <p>Duration: 3:03 - 3:06 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 11 SHOT #: 5 SHOT SIZE: MLS</p> <p>Descr: In order to reach him, Riven avoid every single pebble like she always did in the past, slowly closer to him</p> <p>Script: -</p> <p>Duration: 3:07 - 3:10 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 11 SHOT #: 6 SHOT SIZE: MS</p> <p>Descr: Riven manage to slice the pebbles in front of her to protect herself from the shot</p> <p>Script: -</p> <p>Duration: 3:11 - 3:12 SFX: - BGM: - Transition: Cut to</p> |
| <p>SCENE: 11 SHOT #: 7 SHOT SIZE: CU</p> <p>Descr: As Riven getting closer, David stomp his feet to the ground, breaking the ground, blocking Riven's way to approach him</p> <p>Script: -</p> <p>Duration: 3:13 - 3:16 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 11 SHOT #: 8 SHOT SIZE: MLS</p> <p>Descr: But Riven manage to jump from platform to platform, rush her way to get closer to David in order to land a single strike</p> <p>Script: -</p> <p>Duration: 3:17 - 3:20 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 11 SHOT #: 9 SHOT SIZE: FS</p> <p>Descr: Finally, she manage to land a strike to David as he falls to the ground</p> <p>Script: -</p> <p>Duration: 3:21 - 3:24 SFX: - BGM: - Transition: Cut to</p> |

Figure 85: Unmasked storyboard page 8

PROJECT : UNMASKED PAGE : 9 / 9

| | | |
|--|---|--|
| <p>SCENE: 12 SHOT #: 1 SHOT SIZE: MS</p> <p>Descr: As David falls, the mask broke in a half exposing his face fully</p> <p>Script: -</p> <p>Duration: 3:25 - 3:27 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 12 SHOT #: 2 SHOT SIZE: CU</p> <p>Descr: Riven is shock to see his face again, she rush to him all the search this time has finally come to an end she finally found her brother</p> <p>Script: -</p> <p>Duration: 3:28 - 3:32 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 12 SHOT #: 3 SHOT SIZE: MS</p> <p>Descr: As she approaching David, she keep seeing a lot of flashback from the sweet memories of her past back in the island</p> <p>Script: Dav!</p> <p>Duration: 3:33 - 3:36 SFX: - BGM: - Transition: Cut to</p> |
| <p>SCENE: 12 SHOT #: 4 SHOT SIZE: CU</p> <p>Descr: She hold him tight but it was too late, David already suffer a serious injury as he lose his consciousness, he smile at Riven, patting her head and passed away</p> <p>Script: I love you Riv... I'm sorry I've to leave you again.. take care of yourself sis.</p> <p>Duration: 3:37 - 3:40 SFX: - BGM: - Transition: Cut to</p> | <p>SCENE: 13 SHOT #: 1 SHOT SIZE: -</p> <p style="text-align: center;">THE END</p> <p>Descr: The end of the animation, quotes appear</p> <p>Script: -</p> <p>Duration: 3:41 - 3:42 SFX: - BGM: - Transition: Fade out to black</p> | <p>SCENE: 13 SHOT #: 2 SHOT SIZE: -</p> <p style="text-align: center;">CREDIT ROLL</p> <p>Descr: Credit end scene</p> <p>Script: -</p> <p>Duration: 3:43 - 3:50 SFX: - BGM: - Transition: Fade out to black</p> |

Figure 86: Unmasked storyboard page 9

4.8 Animatic

An animatic's primary objectives is to specify the timing of every movement in scenes and panels for example character movement and camera angle. It is an important step for production team to understand timing, layout, and camera movement and transitions. An animatic also serves as a guidance and stepping stone, letting the removal or modification of any scene or panel that seems out of place before starting the final production.

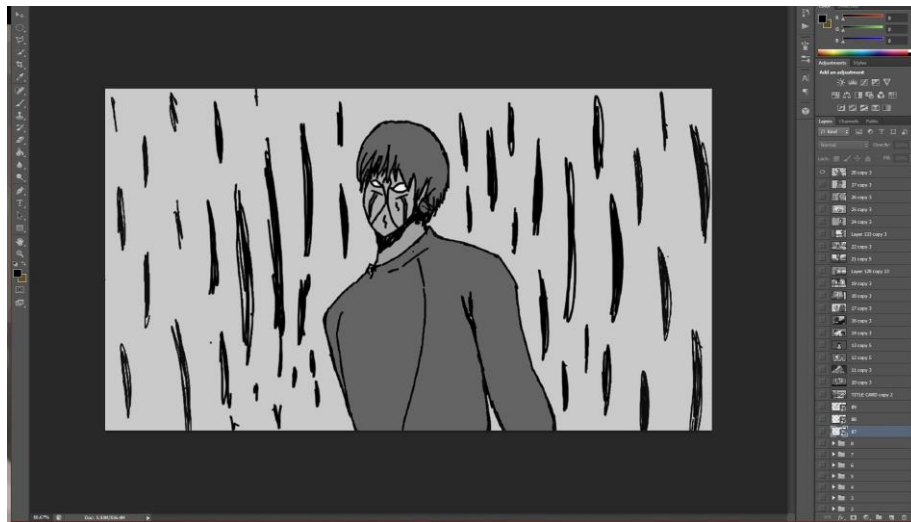


Figure 87: Animatic animation in Adobe Photoshop

Every scene was redrawn in Adobe Photoshop, with cut out the animation graphic and set it in the different layer for the movement later. To show movement inside the scene, keyframes or extra drawings are needed to animate these divided layers and to create a sequence. After being separately drawn, each animation scene was imported into Adobe Premiere Pro for editing. To finish the final sequence, effects, transitions, sound effects, and background music were added during the editing phase.

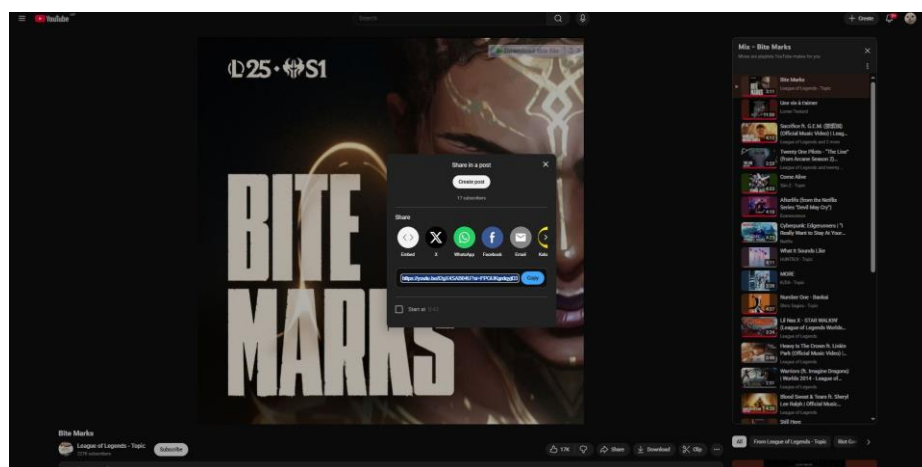


Figure 88: Choose sound effects in YouTube

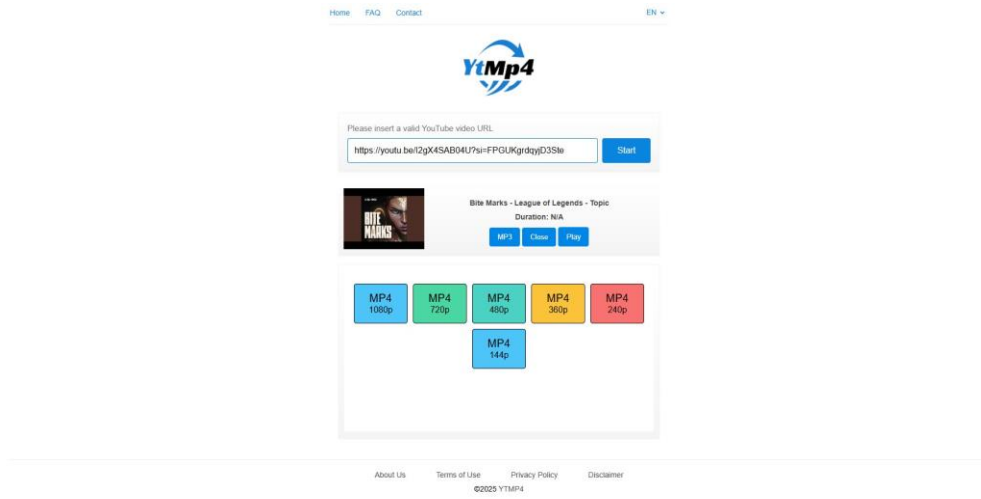


Figure 89: Convert the sound effect in YTMP4

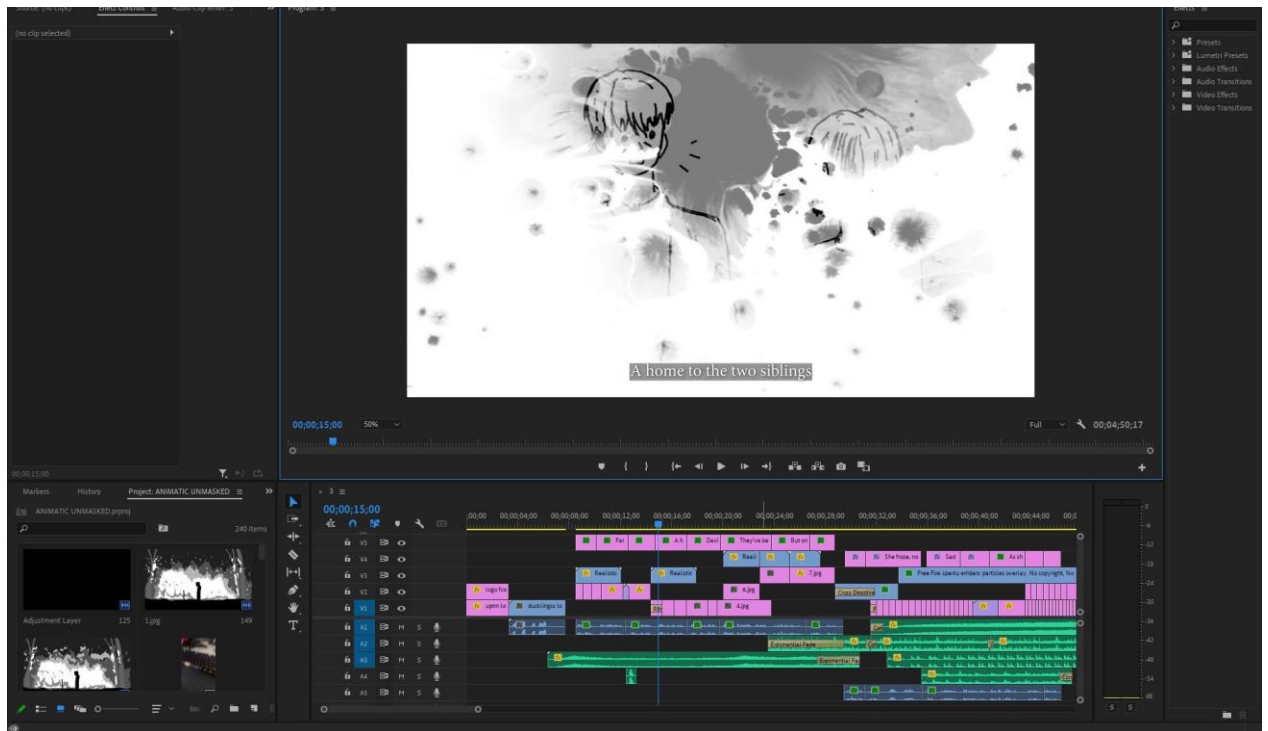


Figure 90: Animatic editing in Adobe Premiere Pro

4.9 Conclusion

In conclusion, pre-production in 3D animation stage is really the starting point of the whole animation project. It's when it's plan creatively and the making of the characters, environments, storyboards, thumbnails, and animatics so we can see what the final result will look like. This step also sets the story flow with scripts, the look and feel with the concepts, the timing is plan through animatic, and the overall flow and suitable transitions, which helps the process work smoothly. Well-made preproduction makes fewer mistakes and makes sure the finished animation matches the plan.

5 PRODUCTION

5.1 Introduction

Production is the stage where the animation starts to come to life after all the planning and design work in the pre-production phase. In this stage, the ideas that were planned earlier are turned into moving visuals. While pre-production focuses on planning the project, the production phase shows whether the plan can actually work or not. This stage usually takes the most time compared to the other phases because many important tasks are done here. Therefore, good pre-production planning is very important to make sure the project can be completed on time and stay within the planned schedule and budget.

5.2 Modelling

In this phase, all visual elements such as characters, props, and environments are created in three dimensions. This makes it a very important stage in the 3D animation production process. The structure of each object in the scene is built using digital sculpting and mesh modeling techniques. These techniques change simple shapes into more detailed objects based on the chosen design. For this animation project, 3D software like Autodesk Maya is used to create and develop the models.

5.2.1 Characters

Character modelling is an important part of the animation process because it affects how the next stages will be carried out. The quality of the animation also depends on how well the characters are modeled. This is because smooth animation requires good rigging, and good rigging depends on having proper topology. To achieve good topology, strong modeling skills are needed.

5.2.1.1 Riven

Protagonist, Riven seems a little bit hard to be modeled, since the shape of a girl body is not a simple task to be model in 3D. Her organic, teen like, and anime/cartoonish like character make it easier to model without using excessive amount of topology. To add on that it had to be modeled with the 'anime/cartoon' style in mind. This character starts off with cube as its base shape before more edges added and arranged according to the character sheet.

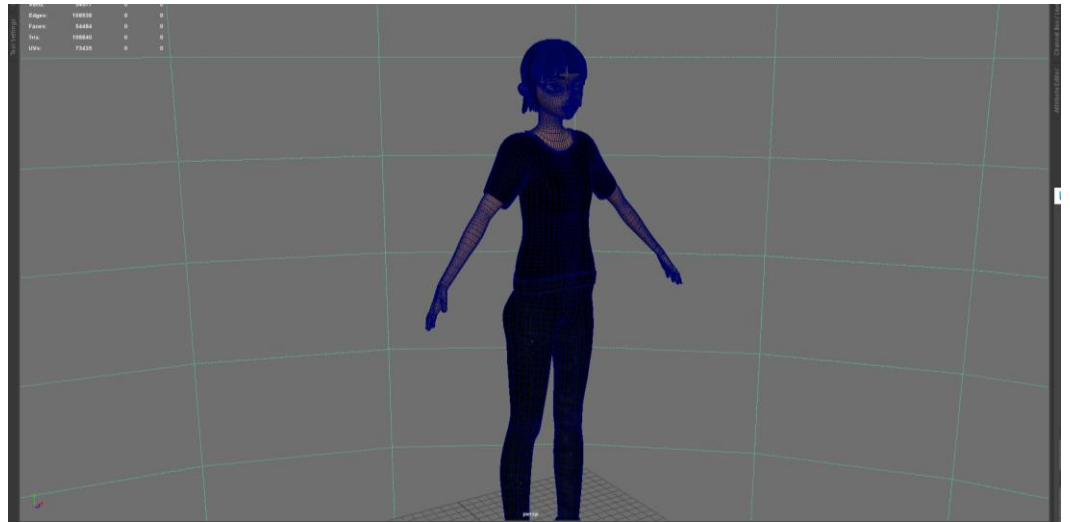


Figure 91: Riven model in Autodesk Maya

To make it look thin and anime like, most of its edges were smoothed using smooth tool and edge loops tool. To achieve the smooth, anime style for the character, more smooth process needs to be done by mostly with manual edge loops add on to the model.

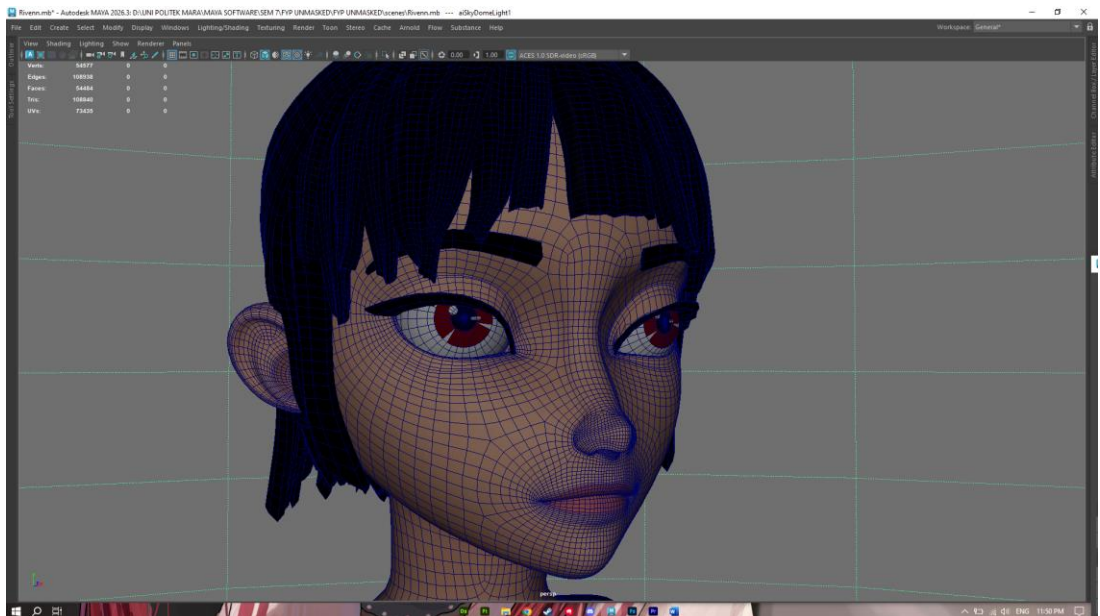


Figure 92: Close up Riven in Autodesk Maya

5.2.1.2 David

Antagonist, David is much easier character to model with the help of experience done before, male body is much more straight forward to done compare to females. With the same concepts of anime and cartoonish style, this will make the character not required a lot of topologies making work much simpler.

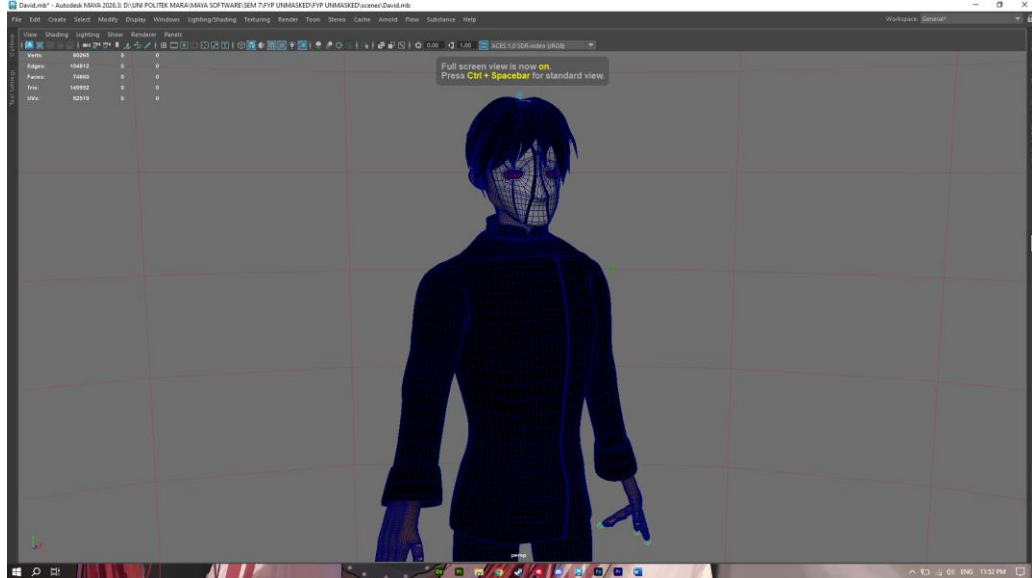


Figure 93: David model in Autodesk Maya

David has detachable mask since in the ending scene he will have to take it off. The mask was modeled separately for these purposes. To make sure the mask fit the face perfectly, David was duplicated before selecting only the front area to create the mask. The mask was created with face selection tool of quarter part of his original face model. With much more adjustment and sculpting, the mask is created based on the original concept idea.

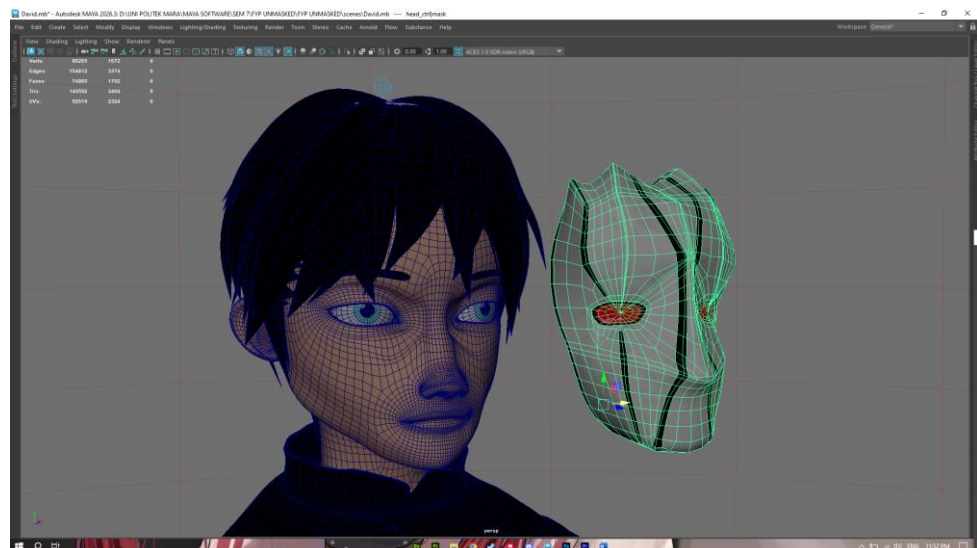


Figure 94: David with detachable mask in Autodesk Maya

5.2.2 Environment

Environment modeling, although usually not as detailed as character modeling, is still important because it helps create the mood of the animation. A detailed and believable environment can support the storytelling by helping the audience understand the world where the characters live. Good background modeling also makes the animation more visually appealing and interesting to watch.

5.2.2.1 Island



Figure 95: Island model in Autodesk Maya

This environment is created for the intro setup of the animation, the starting event of everything before the two siblings were separated. In this environment is full of nature because the two of them were set in a hidden island where it was supposed to be safe from the danger of the world, away from any technologies and corruption.

5.2.2.2 Crime City



Figure 96: City model in Autodesk Maya

This is where the story takes place, the big city with full of crimes, the truth about the world that David tries to hide from Riven. The city take place in late 2077 where robots and AI is count as a civilization. Even that, there are still organic things alive hiding under the city.

5.2.2.3 City Alleyway



Figure 97: City Alleyway model in Autodesk Maya

This environment was created to show the audience of the dark side of the city where Riven is exploring to investigate. Since it was an underground alleyway, the alley has more molds and random grass appeared on the ground and lots of graffiti were drawn on the walls.

5.2.2.4 City Sewer & Tunnel



Figure 98: City Sewer Tunnel model in Autodesk Maya

To make the layout look natural, the tunnel was created to present to the audience that the city connected from different area to another area by tunnel and sewer. This method is introduced in many games such as Cyberpunk 2077 and Final Fantasy 7.

5.2.2.5 Destroyed City



Figure 99: Destroyed City model in Autodesk Maya

In this environment model, showed the destroyed city caused by David with supernatural power to hunt his prey. This scene is actually trying to showed to the audience the element of Fantasy that contain in this animation short film. With floating building and blood moon sky.

5.3 Texturing

Texturing is an important stage in animation because it brings the 3D models to life with details and visual style based on the aesthetic planned during the pre-production phase. In this stage, surface details such as wood grain, fabric, rusted metal, or skin are added by applying 2D images as textures onto the surface of 3D objects. There are several ways to apply textures and materials in 3D models. For this project, two methods are used: applying existing materials and base colors in Autodesk Maya, and using a plugin connected to another software called Adobe Substance.

5.3.1 Character

For characters, using Adobe Substances plugin are the most affective to give it desired look and style. The texturing begins with UV unwrap each object and separate area that will have different material or texture in a same material. The object will then be imported as FBX file.

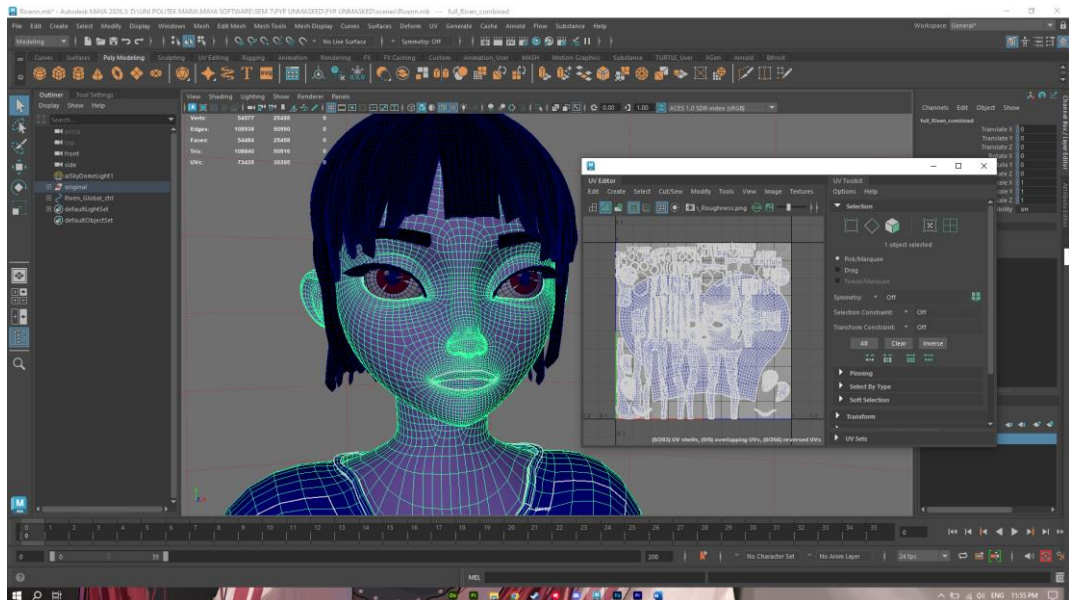


Figure 100: UV Sheet character

The FBX file will then be imported into Adobe substance to add the material and texture. Any custom detail will be added manually by using the paint option in the software. For the blush and lip color were added manually by using the paint brush option. Once done and baked, texture will be exported out to be use in Autodesk Maya. By using the adobe substances plugins, all the exported texture will be imported into Maya as new texture option before applied on the intended object.



Figure 101: Texture in Adobe Substances

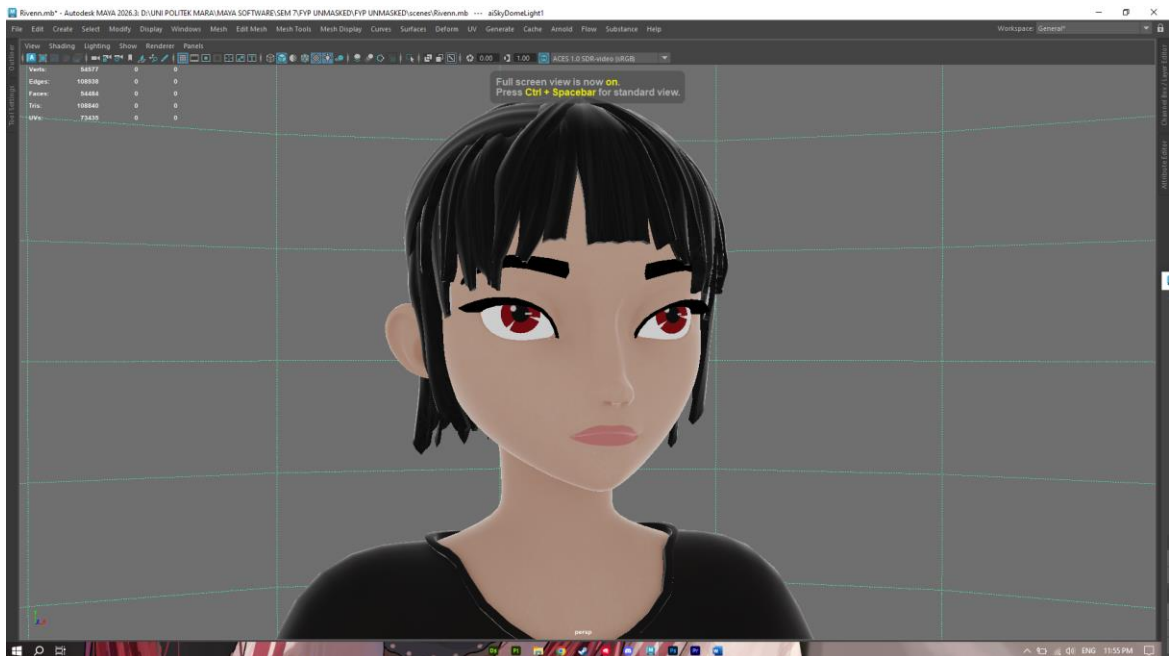


Figure 102: Imported texture into Autodesk Maya

5.3.2 Environment

For environment, the use of Adobe Substance plugin was also implemented similar with how it was for characters. Other than that, another way of texturing uses a lot in environment is by applying existing texture in Maya or using base material. This done mainly for smaller object or on small detail attached on bigger object.

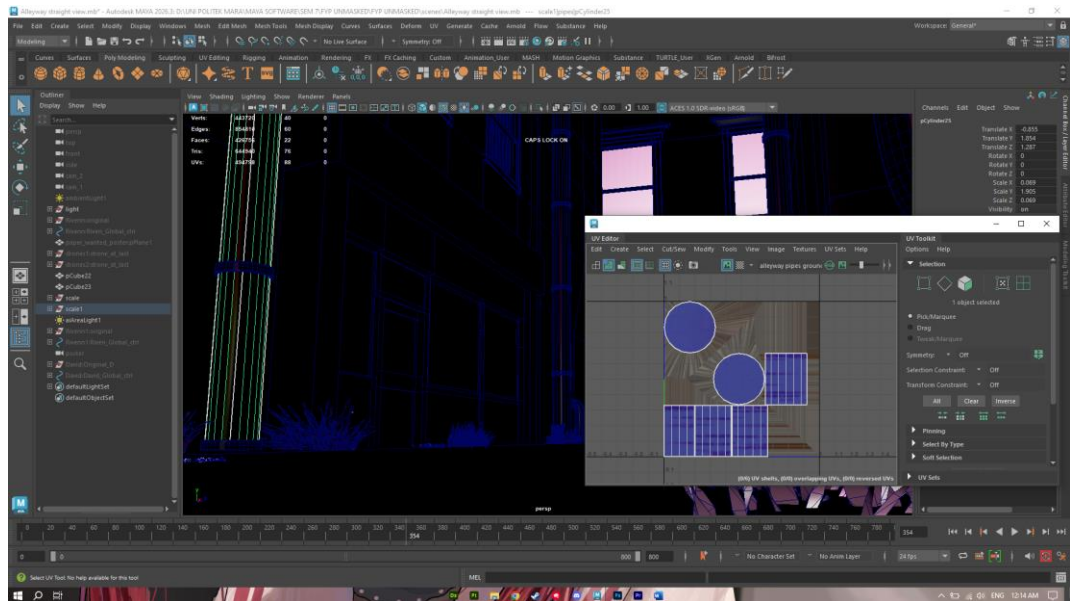


Figure 103: UV Sheet Environment

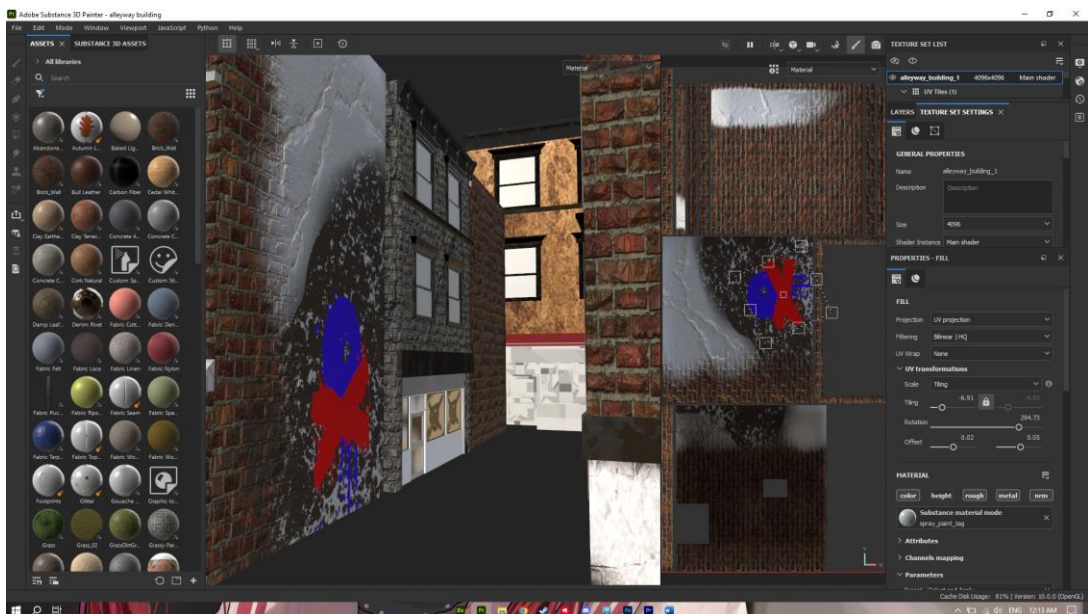


Figure 104: Adding texture in Adobe Substance Painter



Figure 105: Imported texture in Autodesk Maya

5.4 Rigging

Rigging is one of the key steps in the 3D animation production pipeline. It involves creating an internal structure inside the 3D model that allows the animator to move it easily. This structure is called a skeleton or rig. Rigging gives the character the ability to move, making it an important stage that affects the overall quality of the animation. Without rigging, the character cannot be moved or animated.

5.4.1 Skeleton

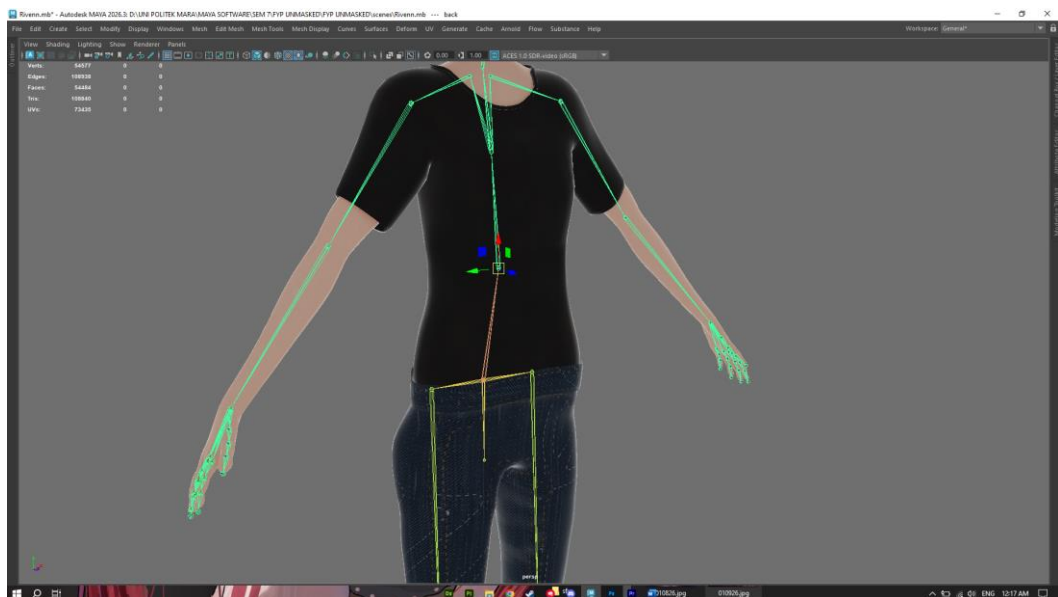


Figure 106: Adding joint to Riven's model

It is much easier to add the skeleton using side or front view to ensure the accuracy of the placement since it is important that the skeleton created inside the model. Which also why x-ray mode was also used in this step. It enhances visibility of the created joint and make it easier to pin point the next joint for the model.

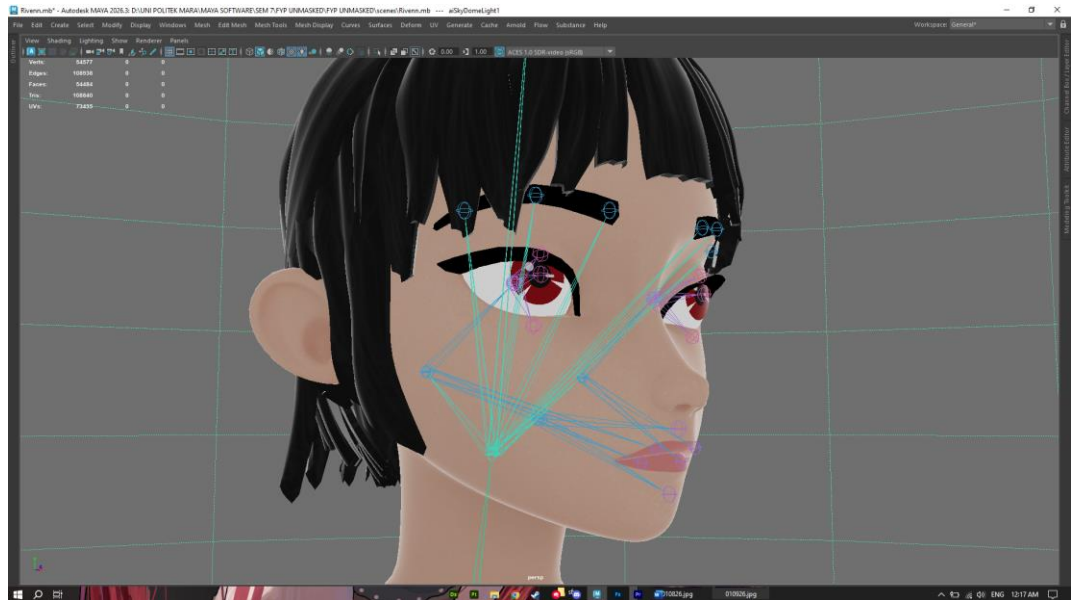


Figure 107: Adding joint to Riven's model

After complete the base rig, I added facial expression rig for the face, with bunch of joints connect from neck and head joint, sticking out to the eyes, jaw, lips and eyelids. These joints are created to animate the facial expression using controller, this was the hardest part of the rigging process in my opinion.

5.4.2 Controller

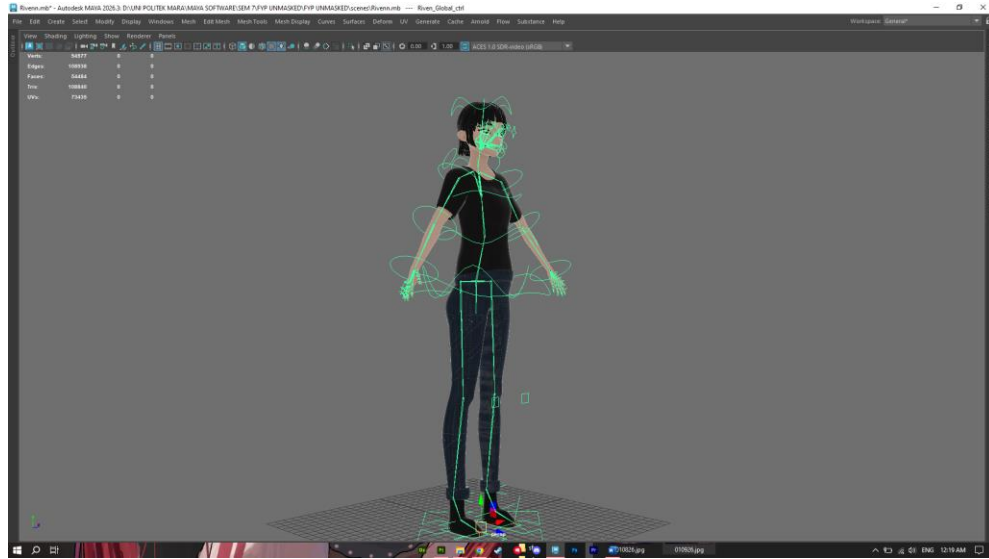


Figure 108: Adding controller to Riven's model

Controller in 3D is used for bone rigging to make the animation process much more efficient and easier. Complex character will result to complex joint placement which could result to the joint become harder to select or differentiate with one another. With controller, where its shape and color can be customized, it solves that issue for the animator. It prevents accidental changes to the skeleton or the mesh itself. It gives more accurate and precise control which then provides more smooth and natural animation.

5.4.3 Paint Weights

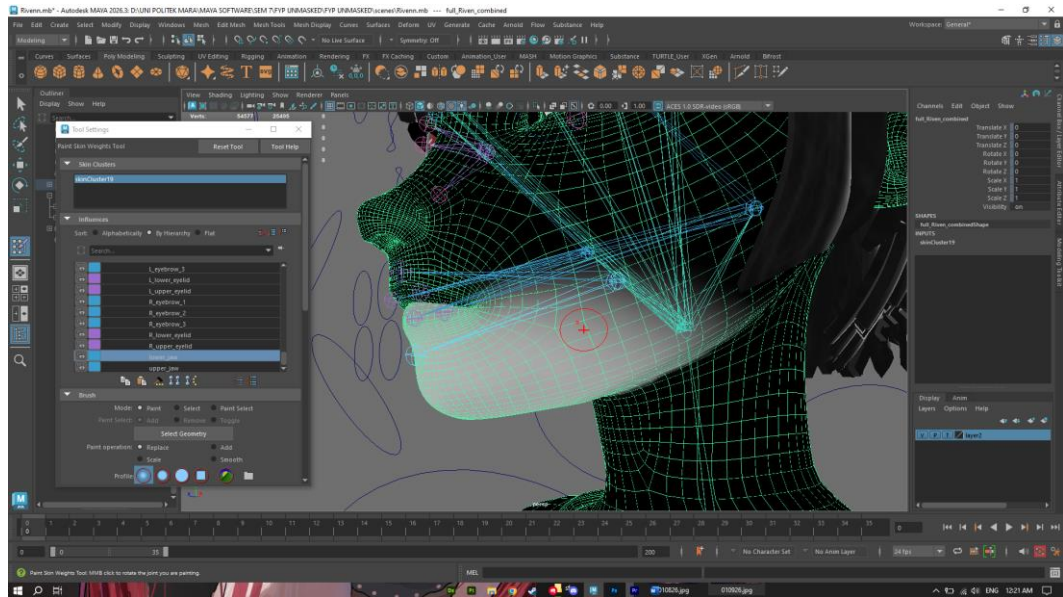


Figure 109: Paint weight process

Paint weight is a step to fine tune how the mesh will bend and deform as the joint move. This step will determine how much of the mesh effected for each joint. This is an important part of rigging that depend on how clean the topology of the object is. The more topology the object or character have, the harder for the rigging to clean up the affected area but that also mean how the character bend will also be smoother. The area with color indicates the affected area by that specific joint and with the tools, the amount of the area or how heavy the influence is can be manipulated and customize. All differ for each model depending on how the character were planned to move.

5.5 Animation

Animation is the main stage in the animation production pipeline. It is the process of creating the illusion of movement by arranging a sequence of images. In animation, visual elements such as drawings, photos, images, models, or digital objects are manipulated to bring characters, environments, and scenes to life. In 3D animation, digital models and scenes are animated inside a virtual space. Techniques such as keyframing, rigging, and motion paths are used to create the animation.

5.5.1 3D Animation

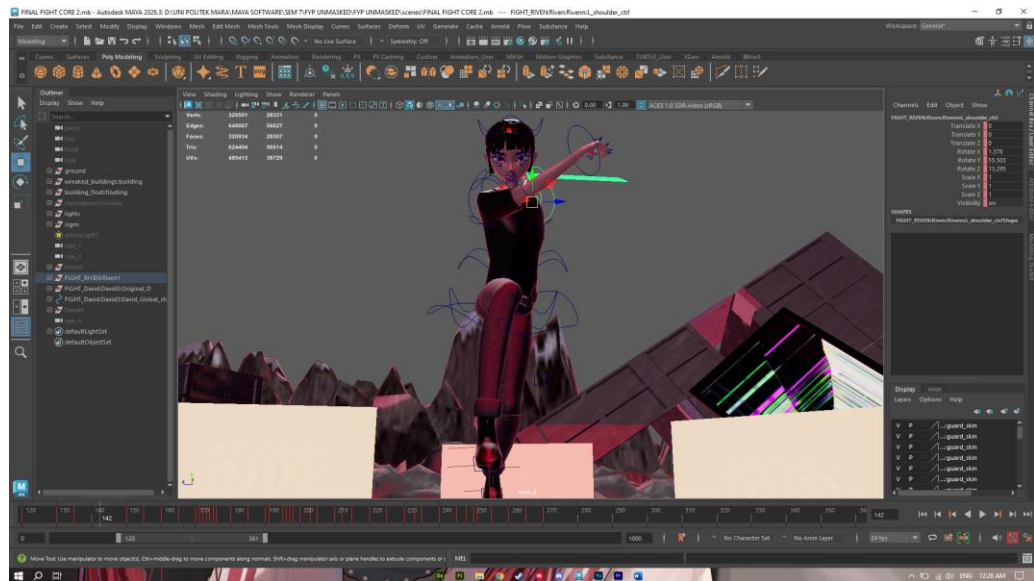


Figure 110: 3D animating in Autodesk Maya

The process of 3D animation for this project were fully done in Autodesk Maya. The animation was mostly done by keyframing each movement on the timeline and also by keyframing the movement of the camera for different dynamic shot. Some of the assets were also animated by the same method for certain scene for it to move such as fall or thrown.

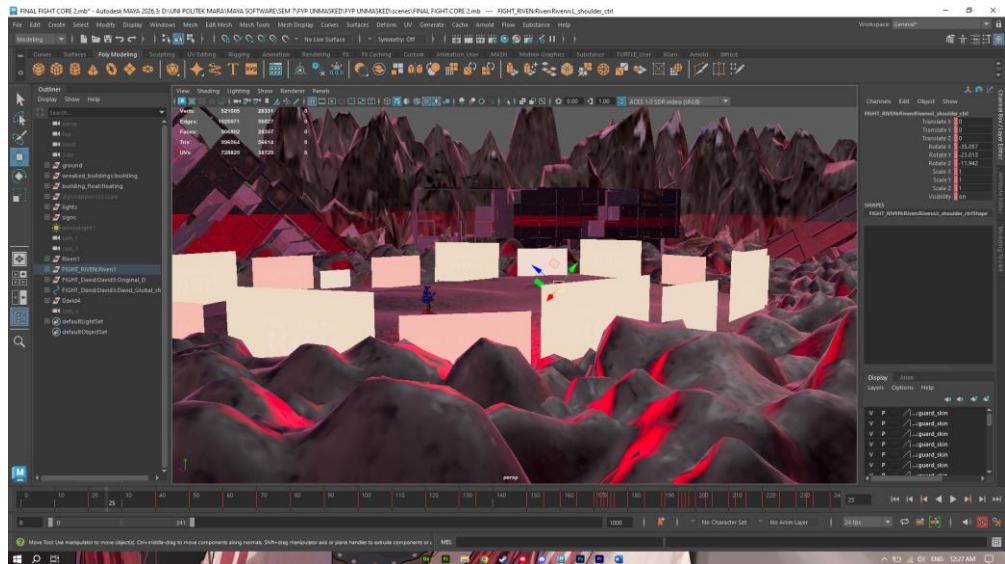


Figure 111: Assets animating process

5.5.2 2D Animation

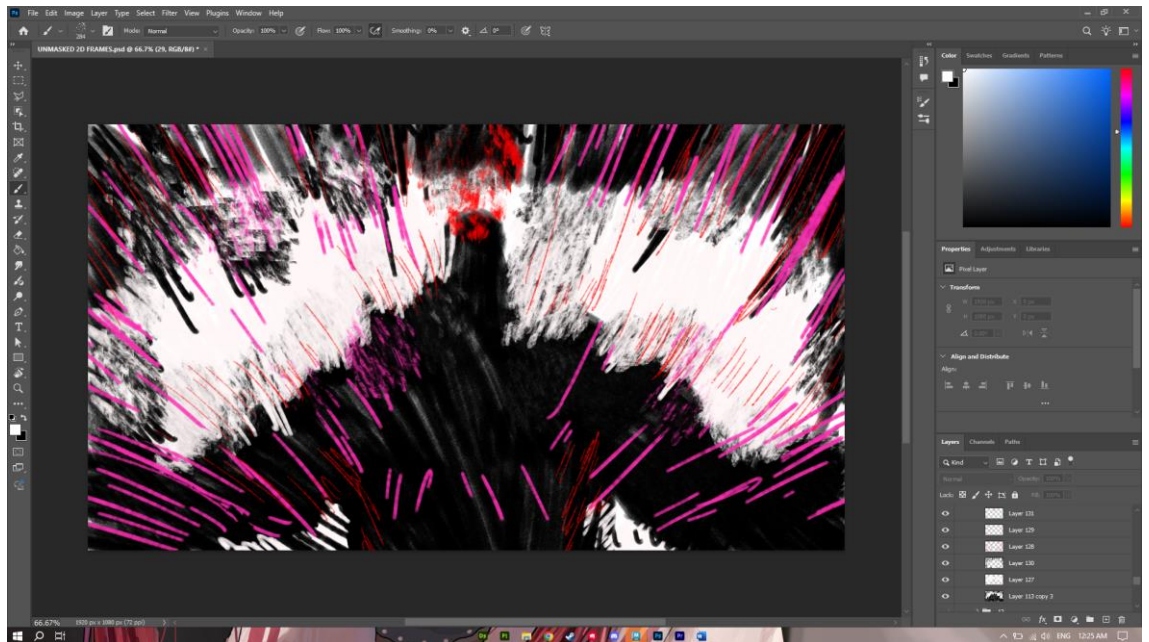


Figure 112: 2D Frames by frames draw in Adobe Photoshop

This animation includes both elements of 2D and 3D, for 2D animation, all frames were drawn using Adobe Photoshop with all the references compile together, frame by frame until it become an animation for it to be play by sequences.

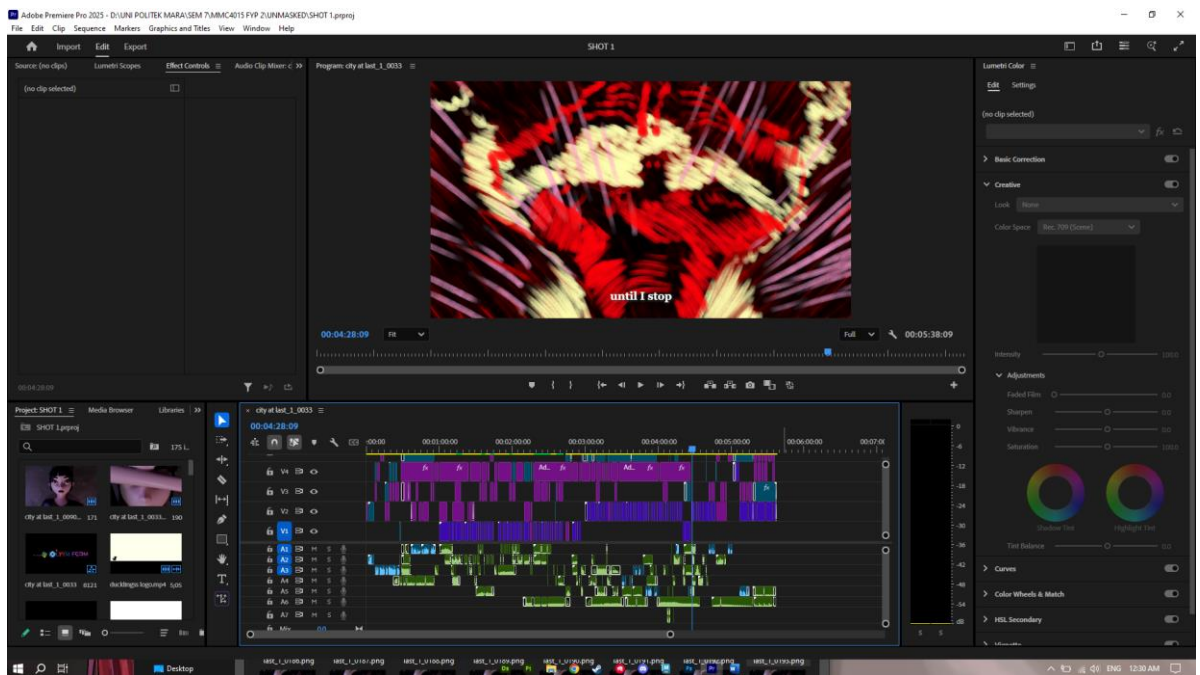


Figure 113: From frames to sequences in Adobe Premiere Pro

5.6 Conclusion

In conclusion, the production phase is a very important stage in the animation pipeline because it is when all the planning from pre-production comes to life. Every step must be done carefully and with proper planning since each part is connected to the others. A single mistake in any step can mean starting over, which can waste a lot of time, especially with tight deadlines. That is why it is essential to carry out each task accurately and review it multiple times to make sure the final animation meets the vision intended.

6 POST – PRODUCTION

6.1 Introduction

Post-production is the final stage in the animation production pipeline. In this phase, all the elements created during production are brought together and refined through editing, including effects, video, sound, and rendering. It plays an important role in shaping and improving how the final animation will look. This is the stage where editors can fix minor issues, adjust the timing of the animation, and add finishing touches such as visual effects, making the final animation more professional and polished.

6.2 Lighting

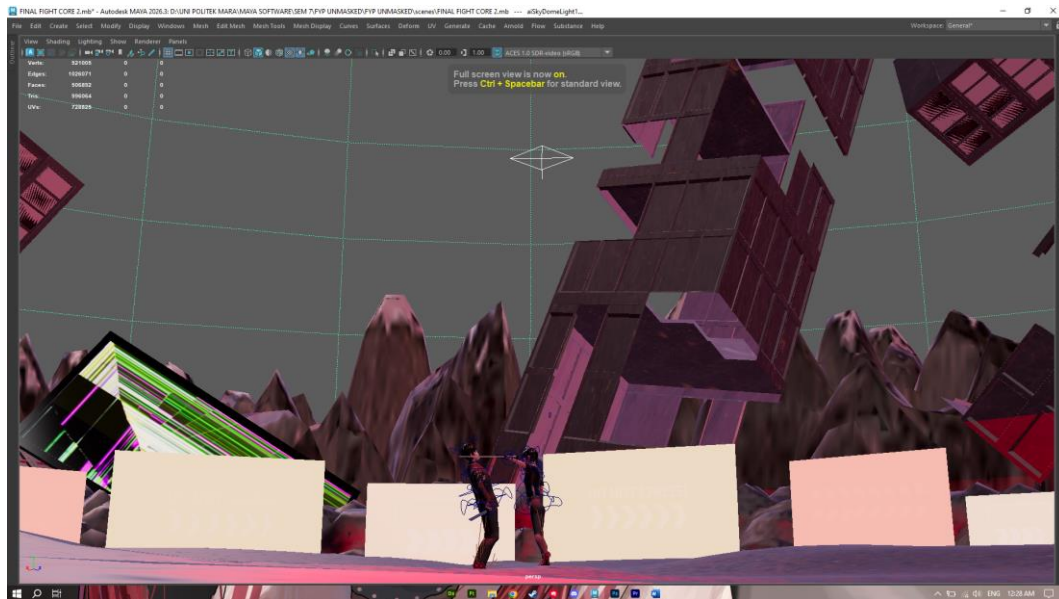


Figure 114: Lighting setup in Autodesk Maya

Figure 114 show an example of a lighting setup in one of the scenes for this project. Base on the mood of the current scene, the amount, type and color of the light will be much different. As majority of the scene in this project story take place outdoor, the amount for lighting is on the larger side. Not to mention lighting for each lamp, fire or glowing object in the scene since the time of the situation is at night. Each lighting was set to fit the ambiance and mood of the scene. For example, scene when the David finally appear, the lighting will be darker and redder to show the mood of a villain and destroyer.



Figure 115: Rendered scene lighting

6.3 Rendering

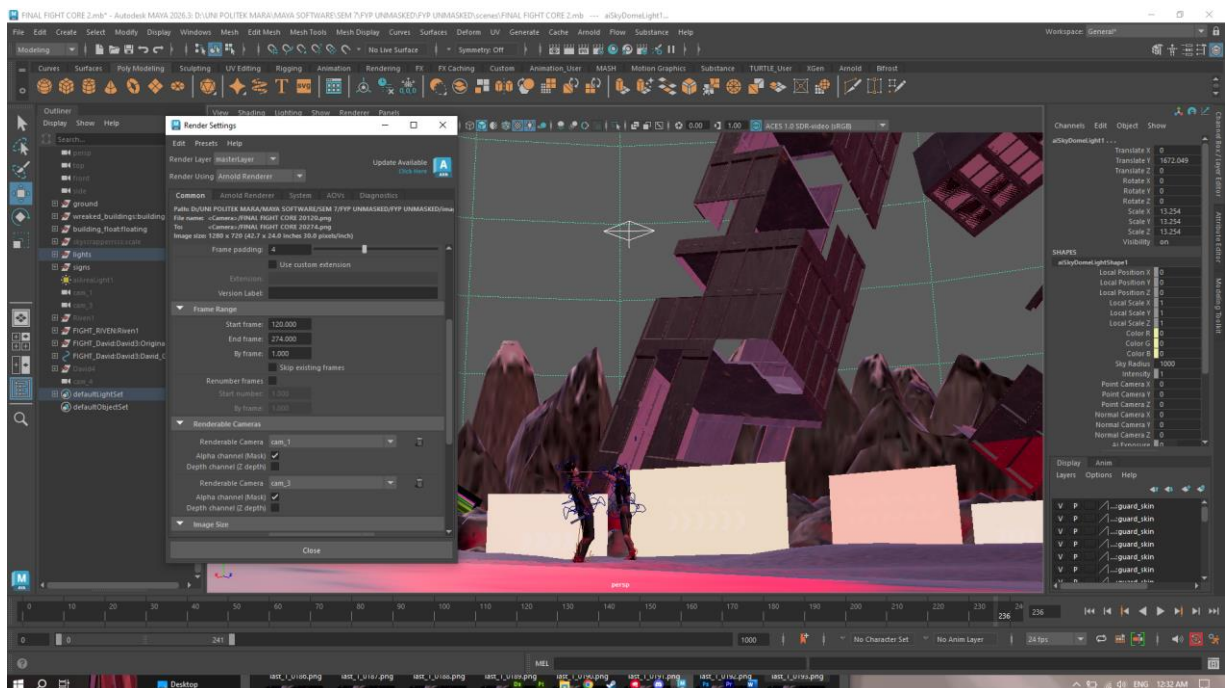


Figure 116: Render setup

Rendering is a phase that extract the complete 3D image from the software. With different setup, different outcome could be created. For this project, the animation scene was rendered with PNG before turning it into a video sequence using Adobe Premiere Pro. This is to reduce the rendering process time and also to balance with the capability of the hardware used to render. The quality of the image was set to basic HD setting which is 1080p and all scene were rendered using GPU. To maximize the rendering power for every scene, each scene quality was tested and the quality is set to the highest and the lowest possible in order to keep the quality clean and without destroying it.

6.4 Compositing

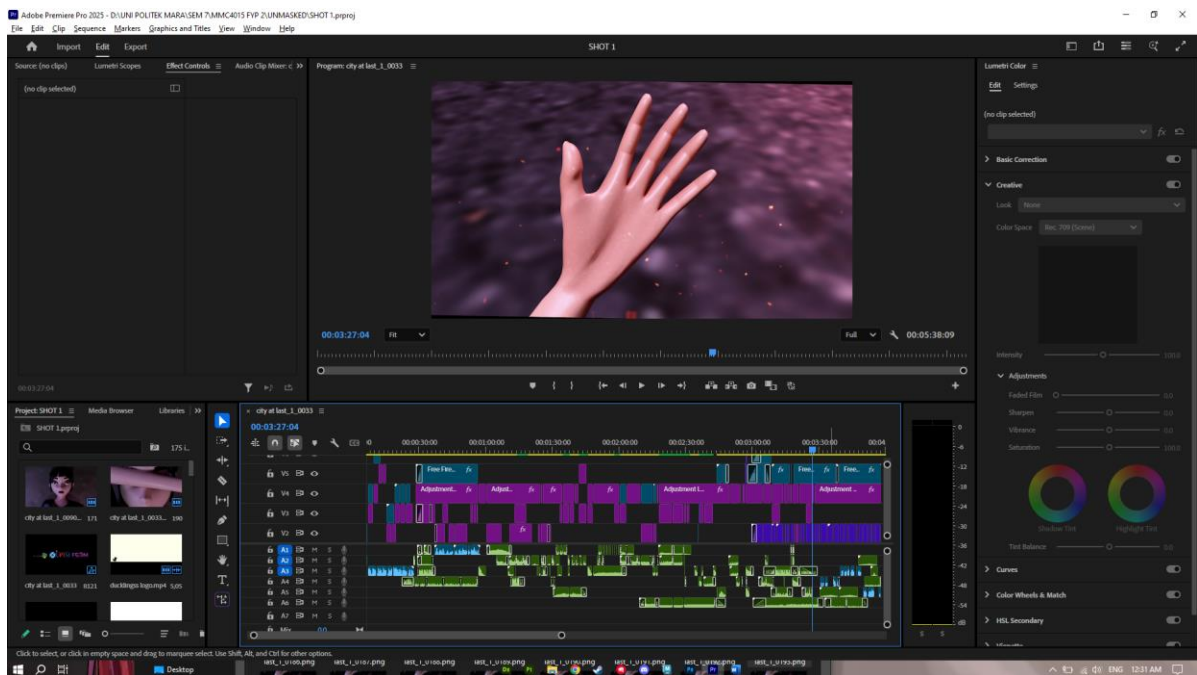


Figure 117: Video Editing in Premiere Pro

Compositing is the process of combining more than one complete product to create a Final Product. For this project, composition is a phase where all rendered image were turned into a video scene and compiled into one timeline accordingly. This is where the timing for each scene can be recheck and fine tune to fit the story flow. Some scenes were slowed, fasten or even cut depending on how the flow work. Background music and sound effect were added after the timing and flow of the animation were finalized. This is because any changes on those part after adding the sound and effect will cause disruption in the timeline and require for each element to be adjusted again. It takes time and could lead to mistake that often overlooked.

In order to make the animation looks more anime and cartoonish like, VFX were added in this animation, with using Premiere Pro effects tools, a lot of VFX are created such as fog, particles, color grading and transitions.

6.5 Final Output



Figure 118: Screenshot of Final Output UNMASKED

The final step is to export the edited video into suitable media. After making sure the editing and sound mixing are up to standard, the composition will be exported as MP4 video. This include everything in the video and is ready to be view as shown in figure 118. This video can be view via this [link](#)

6.6 Conclusion

To conclude, post-production is also an important stage in the animation production pipeline where all media element is arranged and refined into the complete final product. Going through step such as composition, color correction, visual effect and audio design make the final product's quality and emotional impact increase. This phase also allows minor adjustment be made and improved without having to revisit the previous phase. Saving the time but still ensuring good quality. It is the final step before the animation are ready to be presented.

7 EVALUATION

7.1 Introduction

This chapter focus primarily on analyzing the survey question distributed to the audience to asses this project effectiveness, impact and overall value. It involves collecting and analyzing all the data gathered to make an informed judgement with the goal of improving future outcome and identify the strengths and weakness of the project.

7.2 Evaluation Method

7.2.1 Questionnaire

A questionnaire form was made using google form to collect audience feedback on the animation project. These 13 sets of question were crafted to determine the overall value of the project, the effectiveness of its main objective which is spreading the awareness regarding cost of sacrifice and does it able to help these group of people in realizing that.

| NO | QUESTION | ANSWER |
|----|--|--|
| 1- | What is your gender? | <ul style="list-style-type: none"> - Male - Female |
| 2- | How old are you? | <ul style="list-style-type: none"> - Below 18 years old - 18 - 25 years old - 26 - 30 years old - Above 30 years old |
| 3- | Do you think the story is clear and easy for the audience to understand? | <ul style="list-style-type: none"> - Yes - No - Maybe |
| 4- | How much did you enjoy the storyline? | <ul style="list-style-type: none"> - Out of 5-star rating |
| 5- | What do you think of Riven as the Protagonist? | <ul style="list-style-type: none"> - Relatable - Neutral - Non-relatable |

| | | |
|-----|--|--|
| 6- | Do you think David made the right decision by sacrificing himself to protect his sister? | <ul style="list-style-type: none"> - Yes - No - Maybe |
| 7- | How well did you feel the emotional connection between Riven and David? | <ul style="list-style-type: none"> - Very Strong - Weak - None |
| 8- | How would you rate the 3D modelling and the animation quality? | <ul style="list-style-type: none"> - Out of 5-star rating |
| 9- | Did the music and sound design match the mood of the story? | <ul style="list-style-type: none"> - Yes - No - Maybe |
| 10- | Which scene impacted you the most? | <ul style="list-style-type: none"> - This question uses text base answer. Relying on the audience personal thought and opinion. |
| 11- | Do you think Riven could have made a different decision at the end of the story to create a better ending? | <ul style="list-style-type: none"> - Absolutely - No - Maybe |
| 12- | Do you think the ending made you reflect on the theme of sacrifice? | <ul style="list-style-type: none"> - Yes - No - Maybe |
| 13- | Overall, how would you rate "UNMASKED"? | <ul style="list-style-type: none"> - Out of 5-star rating |

7.3 Conclusion

To conclude, this phase of the project provided valuable information and feedback of how effective and how the reception of the animation project from the audience. By distributing the form using google form, feedback was able to be gathered from the targeted audience and even from other group of audience. The questionnaire focused the demographic of the viewer, the overall impression of the animation, the effectiveness regarding the main objective and improvement possibility insights from the audience in many aspects of the animation.

8 DISCUSSION OF FINDINGS

8.1 Introduction

This chapter present the results of the survey conducted based on the previous chapter. Column is used for clarity and ease of interpretation. A total of 30 respondents participated in the survey at the time of this report. The following sections shows the finding following the sequences of the question presented in the questionnaire.

8.2 Evaluation Results

8.2.1 Questionnaire Feedback

1- What is your gender?

30 responses

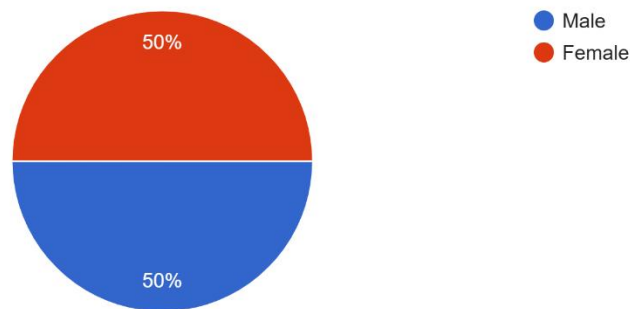


Figure 119: Screenshot of questionnaire first question

2- How old are you?

30 responses

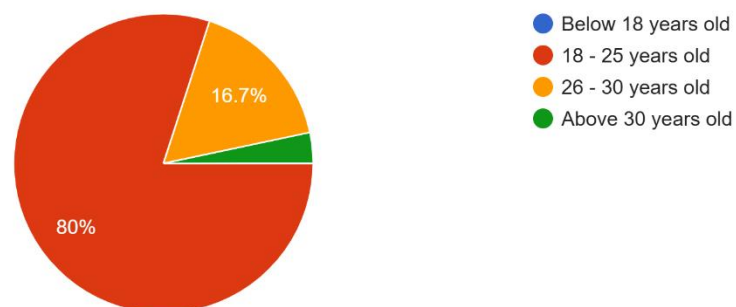


Figure 120: Screenshot of questionnaire second question

Based on the figure above, there are 15 male and 15 female respond to this survey. They are also mostly about 18-25 years old. Some of them are 26-30 years old. There are also a little bit group of above 30 years old.

3- Do you think the story is clear and easy for the audience to understand?

30 responses

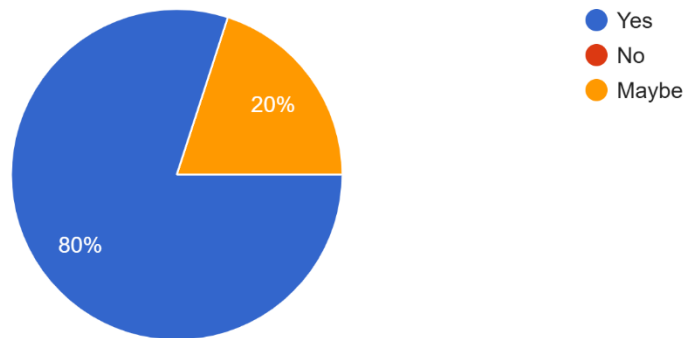


Figure 121: Screenshot of questionnaire third question

4 - How much did you enjoy the storyline?

30 responses

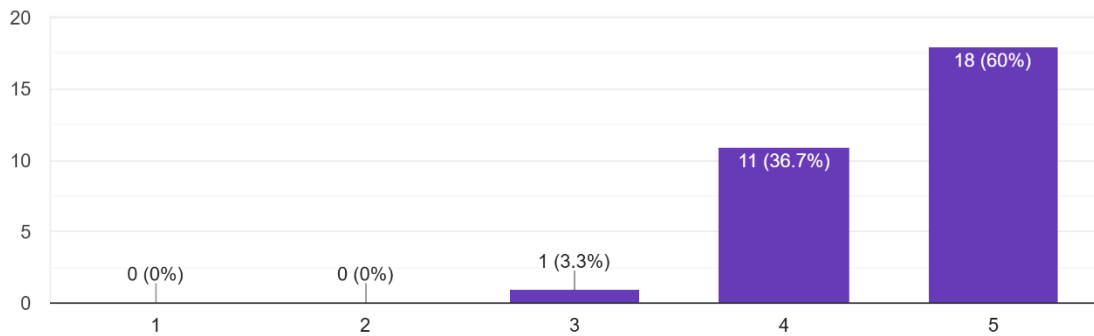


Figure 122: Screenshot of questionnaire fourth question

Based on this survey, 80% of the people respond that the story is actually easy to understand as 18 from them are actually enjoyed the most by the storyline.

5- What do you think of Riven as the Protagonist?

30 responses

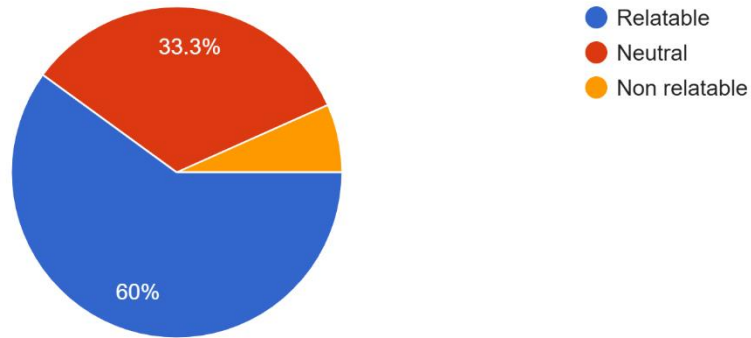


Figure 123: Screenshot of questionnaire fifth question

6- Do you think David made the right decision by sacrificing himself to protect his sister?

30 responses

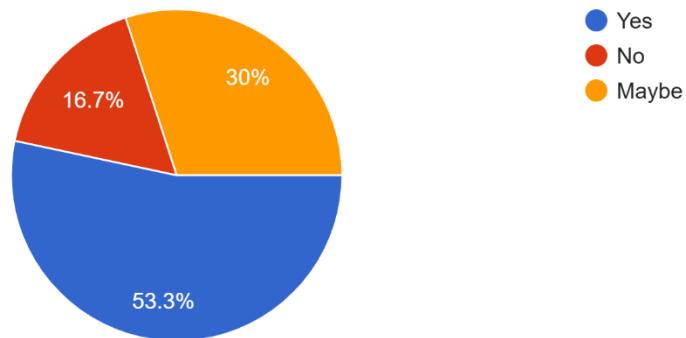


Figure 124: Screenshot of questionnaire sixth question

7- How well did you feel the emotional connection between Riven and David?

30 responses

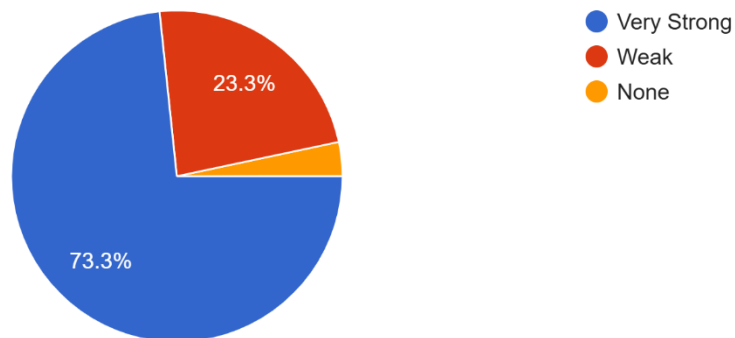


Figure 125: Screenshot of questionnaire seventh question

Based on the figures above, this showed that the audience actually understand the character through the emotions they showed to each other, the results and decision they made and the connection they had until the end of the story.

8- How would you rate the 3D modelling and the animation quality?

30 responses

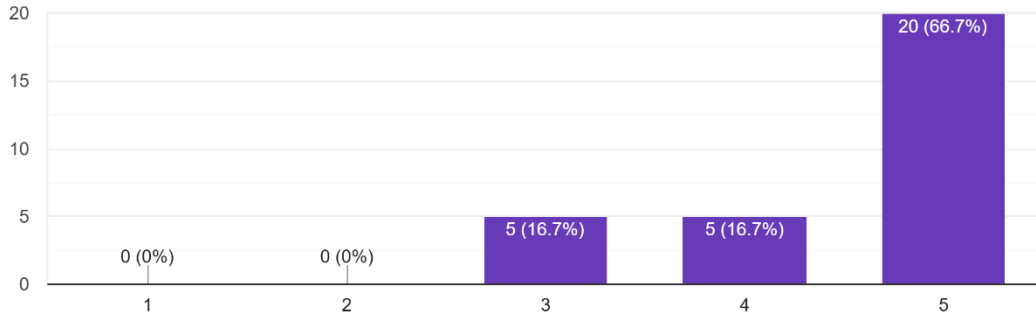


Figure 126: Screenshot of questionnaire eighth question

9- Did the music and sound design match the mood of the story?

30 responses

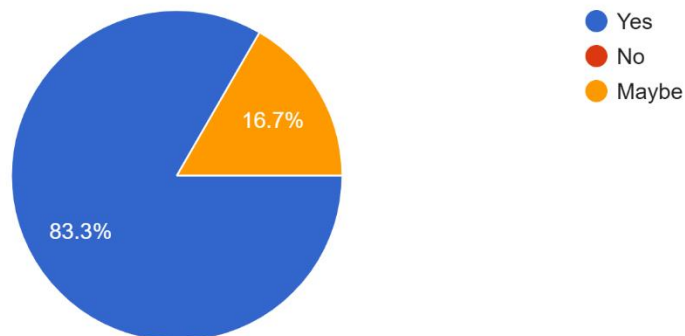


Figure 127: Screenshot of questionnaire ninth question

10- Which scene impacted you the most?

30 responses

☰ Response Summary
✕

- **Conflict and Resolution:** The most impactful scenes involved various fighting scenes (including the siblings' final confrontation), Riven killing her brother David, and David's death/slaying.
- **Emotional Climax (Ending):** The ending scene was highly impactful, specifically when Riven confronts her brother, and the final moments of David's sacrifice.
- **Background and Setup:** Other noted scenes included the introduction/opening, the running scene, the mask man, and flashbacks involving the mother advising David to protect his sister.

Gemini for Workspace can make mistakes, including about people, so double-check it. [Learn more](#)

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- the flashbacks
- When Riven kill his brother
- When Riven needs to kill David
- Dav die
- mask man
- When David was advice by his mom to protect his sister.
- The intro
- FIGHT SCENE (UWU)
- The siblings fight scene

Figure 128: Screenshot of questionnaire tenth question

Based on figure 128, the respondent stated that the scene that impacted them the most is the fight scene which show a lot of sacrifice elements in the scene, of how Riven decide to put an end to her brother's life.

11- Do you think Riven could have made a different decision at the end of the story to create a better ending?

30 responses

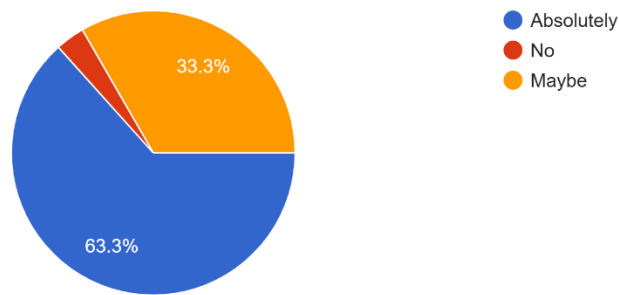


Figure 129: Screenshot of questionnaire eleventh question

12- Do you think the ending made you reflect on the theme of sacrifice?

30 responses

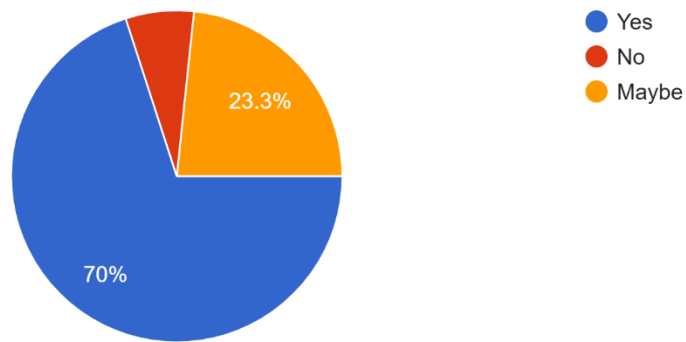


Figure 130: Screenshot of questionnaire twelfth question

13- Overall, how would you rate "UNMASKED"?

30 responses

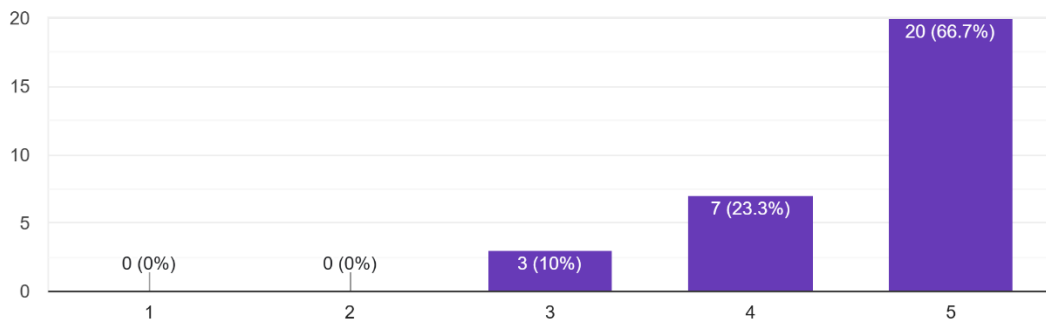


Figure 131: Screenshot of questionnaire thirteenth question

8.3 Discussion

The animation received a positive and high ratings from the respondents with 20 of them giving the score of 5 out of 5 and most viewer found the animation storyline highly engaging. Many key scenes frequently mentioned as the most memorable and praised such as the sacrifice scene, the emotional flashback and the heartfelt ending. To add on, 27 respondents which make it 90% of the total respondents agree that the message was effectively conveyed which indicate that this project succeed in achieving one of the main objectives. Plus 27 agreed that they would recommend the animation to other people to watch. Respondents result also show the emotional impact is strong in the animation as many felt entertained, emotion and inspired by the animation. While majority of the responses were positive and encouraging, respondents also provide insight and suggestion for future improvement such as focusing on enhancing animation texture quality, render setting and story clarity. To conclude, the animation successfully resonated with the audience while still provide a clear guidance to improvement and creative growth.

8.4 Conclusion

In conclusion, the results from the evaluation survey show that the animation receive positive reaction from the audience with majority of the respondents find it engaging, emotionally impactful and effective in conveying the major theme which cost of sacrifice. While there are areas that could be improve such as the fluidity of the animation and clarity in the storyline, the overall feedback was positive and supportive with valuable insights being offered for future projects

9 CONCLUSIONS

9.1 Introduction

This chapter prepared a summary of the important findings, reflections and outcomes of the entire project. It touches upon the objectives and evaluates how it was achieved and shed light to the strengths and challenges faced throughout the entire production. By extracting the insights given by the respondents from the evaluation survey and overall execution of the project, this chapter will conclude the study with final thoughts and future improvement recommendations.

9.2 Achievements

9.2.1 First Point of the Objective

The first objective of this project which is to help people to understand with the element of sacrifice and it was successfully achieved. The context to help in this case is to raise awareness and encourage individuals to learn about this and prevent from the toxic cycle of behavior that often cause by meaningless sacrifice issue and ended up lead to the bad outcome. This evidently proven by the evaluation results where 70% of the respondents (21 out of 30) agreed that the animation was effective in conveying the intended message. This prove that the project has succeeded in creating emotional connection with the viewer thus achieving the core objective to spread awareness and knowledge about the cost of sacrifice.

9.2.2 Second Point of the Objective

The second objective was to create a 3D animated short film that highlights the issue of cost of sacrifice as it deems as a way to reach wider and new range of audience. This goal is closely related to the first one where the goal is not just to animate a story but also to give wider views and visuals regarding the sacrifice topic. Although the use of 3D media is a requirement, the topic chosen were deliberate to pair with this requirement as it will widen the target audience by attracting any kind of audience regardless of the gender and age range. The best way to show this is in story plot, dialogue and character's action. With the result achieved the objectives, this proved that the sacrifice element in the story is actually reached the audience in 3D animation aspect.

9.3 Problem and Constraints

The production process was not an easy everyday task. Several challenges and constraints suddenly appeared during the process especially on the technical aspect of the animation and the time schedule planning. The biggest challenge would be issue with the character model. Each character, especially Riven and David has such unique and interesting face structure of anime that does not work like a normal easy cartoon character would. It requires a lot of trial and error before finding the optimal poly pattern for it. Not to mention some issue only appear during rigging process which set back the progress for a while.

Other major issue is actually the issue with rendering where the duration for the render per image to finish that took 19-20 minutes causing the workflow to pause for few days. Because of it, some adjustments were made and the lag affecting the production speed and quality was fix for a while. It constantly need adjustment for each scene and had to be rendered multiple time. Additionally, the texturing issues that appeared once in while where the texture would just randomly disconnect from it file route which mean that each rendering process need a trial run to ensure all texture appear on the rendered image.

Despite all of this challenges, all issue were ultimately solved by making through trial and error, troubleshooting and few adjustments for each scene. Solving all this issue were not done to complete the project but also to learn and gain new knowledge of technical issue that could appear in this line of production. It gave valuable insight and better understanding of 3D production process.

9.4 Future Work

There are some few adjustments and quality upgrade that can be done to further improve the overall quality of the project and to reach any existing limitations. The main adjustments that can be considered is to smooth the animation more that is could compete with other big animated film such as Toy Story, Spider verse and more. This will allow the audience to develop even deeper interest to watch the film even more. For technical improvement, it is essential to pay attention to refining the texture, lighting, rendering quality and VFX. This is to ensure a more smoother and polish visual.

As for story, more cool visual transition and storytelling should be prioritize especially during emotional scenes such as the flashback. Other than that, in this new era of animation, many impact frames were consider as the epic moment of certain scene, if the impact frames were used with a great phasing, it could help raise the animation quality.

9.5 Conclusion

To conclude, this project has succeeded in meeting both of its main objective which is to spread the knowledge and elements about the cost of sacrifice and to deliver the message through a 3D animated short film that apply both emotional resonant and impactful visual. The result of the evaluation shows a high engagement from the audience, emotionally connected and clarity in delivering the message. Regardless of all the challenge and difficulties faced during the process, such as rigging, rendering and texturing issue, each problem has been countered successfully. Adding skill and problem-solving experience related to 3D production. With a very positive responses and suggestion from the audiences indicate that there is potential for future improvement. Expanding the duration of the animation, improving the technical aspect, adding local element to explore for future work. This project fulfills the creative and technical goals but not only that, it also a stepping stone to create more meaningful story using animation

Appendix A – Questionnaire

[Questions](#) [Responses](#) **30** [Settings](#)

Final Year Project 2 - UNMASKED

Hi everyone, My name is (Rinky) **Amirrul Shakirin Bin Mohd Zanurri**, and I am a Bachelor of Arts student majoring in 3D Animation and Digital Media (Hons) at University Poly-Tech Malaysia (UPTM). I am currently conducting a survey for my Final Year Project 2, which involves a short animation titled "**Unmasked**"

This form contains 13 questions that will assist with data collection and analysis. Please rest assured that your answers will remain private and will be used exclusively for academic research.

Before proceeding to the questions, I have provided a link to view my brief animation film. I hope you enjoy it, and please take your time.

Thank you for your valuable time and support!

SYNOPSIS

Unmasked is a story about siblings **Riven** and **David**, who live peacefully on a hidden island far from the outside world. Their quiet life ends when the Masked Group invade the island. David kills the attackers to protect Riven, but she secretly witnesses his violence, leaving her shaken.

Knowing the masked group will return, David takes one of their masks and leaves for the city to stop them, leaving Riven behind. A year later, Riven searches for her brother and is horrified to find he has become ruthless, killing masked criminals in front of her.

David believes sacrificing himself and becoming feared is the only way to keep Riven safe. Refusing to let her brother become a villain, Riven confronts him. Unable to hurt his sister, David allows himself to be killed, grateful to be freed from the burden he carried alone.

Unmasked is a **tragic story about love, sacrifice, and the cost of protection.**

OBJECTIVE

1. To Investigate and to identify the impacts of sacrifice.
2. To use hidden element to show sacrifice in 3D animation.

'UNMASKED' | Animated Short Film Poster

'UNMASKED' | Animated Short Film Poster



[Questions](#)[Responses](#)

30

[Settings](#)

'UNMASKED' | Animated Short Film Video



1- What is your gender? *

- Male
- Female

2- How old are you? *

- Below 18 years old
- 18 - 25 years old
- 26 - 30 years old
- Above 30 years old

3- Do you think the story is clear and easy for the audience to understand? *

- Yes
- No
- Maybe

[Questions](#)[Responses](#)

30

[Settings](#)

4 - How much did you enjoy the storyline? *

1



2



3



4



5



5- What do you think of Riven as the Protagonist? *

- Relatable
- Neutral
- Non relatable

6- Do you think David made the right decision by sacrificing himself to protect his sister? *

- Yes
- No
- Maybe

7- How well did you feel the emotional connection between Riven and David? *

- Very Strong
- Weak
- None

8- How would you rate the 3D modelling and the animation quality? *

1



2



3



4



5



9- Did the music and sound design match the mood of the story? *

- Yes
- No
- Maybe

10- Which scene impacted you the most? *

Long answer text


11- Do you think Riven could have made a different decision at the end of the story to create a better ending? *

- Absolutely
- No
- Maybe

12- Do you think the ending made you reflect on the theme of sacrifice? *

- Yes
- No
- Maybe

13- Overall, how would you rate "UNMASKED"? *

- 1 
- 2 
- 3 
- 4 
- 5 

Appendix B – Turnitin Result



Page 1 of 49 - Cover Page

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The AI writing percentage should not be the sole basis to determine whether misconduct has occurred. The reviewer/instructor should use the percentage as a means to start a formative conversation with their student and/or use it to examine the submitted assignment in accordance with their school's policies.

What does 'qualifying text' mean?

Our model only processes qualifying text in the form of long-form writing. Long-form writing means individual sentences contained in paragraphs that make up a longer piece of written work, such as an essay, a dissertation, or an article, etc. Qualifying text that has been determined to be likely AI-generated will be highlighted in cyan in the submission, and likely AI-generated and then likely AI-paraphrased will be highlighted purple.

Non-qualifying text, such as bullet points, annotated bibliographies, etc., will not be processed and can create disparity between the submission highlights and the percentage shown.





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Appendix C – Log Book



FACULTY OF COMPUTING & MULTIMEDIA (FCOM)

FINAL YEAR PROJECT 02

LOGBOOK

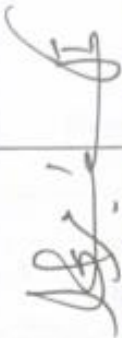





STUDENT'S NAME : AMIRRUL SHAKIRIN BIN MOHD ZANURRI


ID NO. : AM2311015188

SUPERVISOR : SIR HAFIZZ AL-AMIRRUL BIN MOHD ZANIAL

PROJECT TITLE : UNMASKED

CM201 / BACHELOR OF ARTS in 3D ANIMATION AND DIGITAL MEDIA (HONOURS)

| Week | | Agenda | Next Agenda | Signature (Supervisor / Coordinator) |
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| 19 Jan 26 19/01/26 | 5 | - BACKGROUND & ASSETS - 3D TEXTURING | - 3D MODELLING - CHARACTER |  HAFIZZ AL-AMIRUL BIN MOHD ZANIAL Pensyarah Fakulti Pengkomputeran & Multimedia Universiti Poly-Tech Malaysia |
| 30 Jan 26 30/01/26 | 6 | - 3D MODELLING - CHARACTER | - 3D MODELLING - CHARACTER |  HAFIZZ AL-AMIRUL BIN MOHD ZANIAL Pensyarah Fakulti Pengkomputeran & Multimedia Universiti Poly-Tech Malaysia |

| | | | | |
|----------------------|---|-------------------------------|--|---|
| 2 Feb 26 02/02/26 | 7 | - 3D MODELLING - CHARACTER | - 3D TEXTURING - UV UNWRAP - CHARACTER |  HAFAZZ AL-AMIRUL Fakulti Penyelidikan Universiti |
|----------------------|---|-------------------------------|--|---|

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| 20 Feb 26 20/02/26 | 9 | - 3D RIGGING - CHARACTER | - FINAL AMENDMENT - CHARACTER |  HAFAZZ AL-AMIRUL BIN MOHD ZAINAL Pensyarah Fakulti Pengkomputeran & Multimedia Universiti Poly-Tech Malaysia |
| 27 Feb 26 27/02/26 | 10 | - FINAL AMENDMENT - CHARACTER | - 3D ANIMATION - ANIMATION PROGRESS |  HAFAZZ AL-AMIRUL BIN MOHD ZAINAL Pensyarah Fakulti Pengkomputeran & Multimedia Universiti Poly-Tech Malaysia |
| 6 Mar 26 06/03/26 | 11 | - 3D ANIMATION - ANIMATION PROGRESS | - 3D ANIMATION - ANIMATION PROGRESS |  HAFAZZ AL-AMIRUL BIN MOHD ZAINAL Pensyarah Fakulti Pengkomputeran & Multimedia Universiti Poly-Tech Malaysia |

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