UNIVERSITI POLY-TECH MALAYSIA

THE LOCKET'S CURSE

WAN NUR SYAHIDA
BINTI WAN HISHAMUDDIN

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

UNIVERSITI POLY-TECH MALAYSIA
Faculty of Computing & Multimedia

FINAL YEAR PROJECT 02

WAN NUR SYAHIDA BINTI WAN HISHAMUDDIN
AM2311015190

MMC4015

DISEMBER 2025

Declaration of Originality

This project is all my own work and has not been copied in part or in whole from any other source except where duly acknowledged. As such, all use of previously published work (from books, journals, magazines, internet, etc.) has been acknowledged within the main report to an item in the References or Bibliography lists.

I also agree that an electronic copy of this project may be stored and used for the purposes of plagiarism prevention and detection.

Copyright Acknowledgement

Signed: Date:

Office Stamp

Abstract

Human behaviour is shaped in part by curiosity and obsession, which brings the question, "when does curiosity become obsession?". Investigating this is crucial to comprehending how a person's actions and decisions are influenced by attraction and obsession. Examining how curiosity might impact one's sense of self and have unexpected consequences is also crucial. In a 2D or 3D animated short film, all of these concepts are imaginatively conveyed, acting as a medium to engage viewers with the underlying messages of the story.

Keyword: Curiosity, Obession, Consequences, 2D Animation, 3D Animation

Table of Contents

List of Figures

List of Tables

Acknowledgements

First and foremost, I want to sincerely thank Allah SWT for all of His blessings, wisdom, and fortitude, which allowed me to successfully finish this job.

Additionally, I want to express appreciation to my supervisors, Sir Mohd Fitry Bin Yahya, Miss Fatanah Syazana Zuraine Binti Ahmad, Sir Hafizz Al Amirrul Bin Mohd Zanial, and Sir Amir Aarieff Bin Amir Hussin, for their constant support, encouragement, and guidance during the project's completion. Their vast experience, helpful criticism, and commitment have all made a significant contribution to the final product's enhancement and general quality.

I also want to express my deepest appreciation to my family for their unwavering encouragement, tolerance, and support during trying moments. I also want to thank Muhammad Izzuddin Bin Noor Hishmuddian, Ugly Duckling Production and Kacak Studio for their guidance, help, and consistent moral support, all of which enabled me to remain resilient and focused during this project.

1 INTRODUCTION

1.1 Introduction

In this modern life, the wide range of digital entertainment and instant enjoyment has made it harder to maintain self-control and sustained concentration. Frequent exposure to short-form films can overstimulate the reward systems of the brain, reducing the pleasure that comes from routine tasks and encouraging impulsive behaviour, according to recent neuroscientific research. Meanwhile, in modern technological contexts, such as AI-driven innovations that quickly lose their initial appeal, the phenomenon of hedonic adaptation, where people rapidly return to an earlier state of satisfaction even after significant positive experiences, has been observed (Venkat, Balaraman, & Vohra, 2025b). The ability to avoid immediate wants predicts improved long-term outcomes, although environmental situation also plays a role. These findings are reflected in classical psychology studies on delayed satisfaction. These practical observations make them very important to modern storytelling since they highlight how crucial it is to examine themes of self-control, temptation, and the results of uncontrolled emotions within storytelling contexts.

"The Locket's Curse" is the title of the short animation that will be produced by this project. The project animation will be focus on 3D animation, and the story of CINDY, the first model of a brand-new maid robot series that was only built three months ago. Cindy is presented as naive and eager to learn in this story, but her curiosity causes her to touch something she was not allowed to touch, which sets off the conflict that develops throughout the course of the story.

This project will follow a 3D animation pipeline using Autodesk Maya as the main software, including pre-production, production and post-production stage. During pre-production, the script will be developed, storyboards will be made, and the character and arcade setting will be designed to express the themes of discipline, temptation, and curiosity. To bring the robot maid and arcade machines to life during production, Maya will be used for modelling, texturing, rigging, and animation. This will emphasize the transition from joyful delight to anxious tension as the devices malfunction unpredictably. Finally, post-production editing and sound design with Adobe Premiere Pro will improve the short animation mood and guarantee that the audience understands the moral lesson about avoiding greed and respecting boundaries.

1.2 Background Study

Issues with fast satisfaction, curiosity, and addictive behaviours have become more common in modern culture due to the quick growth of digital technology and entertainment platforms. According to research, social media and video game mechanics like achievement rewards, loot boxes, and inconsistent schedules for reinforcement are purposefully made to activate the brain's reward system, especially the release of dopamine, which encourages compulsive engagement (Newsroom, 2025). This tendency reflects what psychologists refer to as hedonic adaptation, in which people rapidly normalize positive stimulate because of repeatedly pursuing pleasure, which lowers long-term happiness and encourages them to seek out stronger or more frequent rewards (Gary Goldfield, 2025).

This psychological context closely resembles the animation project's story elements. The main character, a recently developed robot maid, symbolizes purity and curiosity in her surroundings. Her attraction with the arcade and it offers many rewards and enjoyment, however, reflects the same dynamics seen in modern addictive systems. The problem people have navigated a world full of quick satisfaction is symbolized by her failure to resist the temptation to explore what she was warned against. Thus, the animation functions as a metaphor for the dangers of uncontrolled desire, showing how curiosity and the never-ending quest for stimulation can conflate self-destruction with growth if they are not counterbalanced by discipline. The initiative not only entertains but also teaches by placing a fictional character withing this psychological reality, highlighting the value of restraint, tolerance, and respect for boundaries in time when digital temptations are becoming more prevalent (Gary Goldfield, 2025).

With Autodesk Maya serving as the primary program for producing the 3D elements and animation, this project will keep to a 3D animation pipeline. IbisPaint will used to sketch the storyboard, concept designs, and story development. 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 synchronize sound design, add atmospheric components, and perfect visual effects, guarantee that short animation delivers a polished cinematic experience.

1.3 Problem Statements

The problem statement of this project focuses on difficulties of addiction and curiosity present in day-to-day living. Through the plot in this animation, it represents the larger battle of avoiding temptation and maintaining discipline in a world full of distraction.

1.3.1 Some people enjoy breaking the rules without feeling guilty.

Because breaking the law itself can generate a dopamine-release sense of excitement and reward, some people love doing so without feeling guilty, especially those who show high levels of curiosity or sensation-seeking tendencies. according to research, these individuals use self-licensing or moral disengagement to justify their actions, maintaining a positive self-image even when they knowingly break societal expectations (Dana Hatch, 2025

1.3.2 People getting obsessed with something leads to addiction.

When someone develops an obsession, whether it be with gaming, social media, or any captivating activity, they frequently get dopamine spikes that reinforce the behaviour and make it appealing, eventually ending in compulsive use. According to research, these actions cause structural alterations in the reward circuits of the brain. Even if the initial enjoyment fades, this can eventually result in addiction (Gao, 2023).

1.4 Project Objectives

The project's objectives are to create a strong message about the risks of addiction and the consequences of breaking rules especially among kids and young audiences. The project seeks to highlight the value of following instructions, maintaining discipline, and appreciating real-life experiences rather than becoming trapped by addictive temptations using engaging storytelling approaches, visual metaphors, and in 3D animation.

1.4.1 To show the importance of rules and not to break them.

Following to rules is rooted in social norms and internal beliefs, and it goes beyond simply avoiding punishment. According to a 2025 study published in Nature Human Behaviour, people frequently follow the law even when they are by themselves and seeking personal benefit because they respect the law and want to live up to social norm rather than because they are rewarded by others (Amsterdam, 2025).

Such commitment to rules in the real world creates wellbeing and unites people with common standards, as seen during the COVID-19 pandemic, those who diligently followed public health recommendations reported improved mental health when their obedience matched that of those around them (Tunçgenç et al., 2022).

1.4.2 To use animation to show the risks of gaming addiction.

Because the brain becomes used to the excitement of winning and the rewards, compulsive game playing may eventually turn into an addiction. According to studies, excessive play frequently results in weakened control in the prefrontal cortex and anterior cingulate cortes, two areas of the brain that manage self-control and decision-making. This makes it more difficult for people to quit playing even when they are aware that it is unhealthy, which is why compulsive gaming can result in unhealthy addiction (Lopez et al., 2024)

1.5 Project Scope and Limitation

The project's story focuses on CINDY, the first model of a recently created cleaning robot, who works as a robot maid. Her natural curiosity leads her to connect with anything she shouldn't be touching, even though she was created to clean and maintain a big home. As a result of her curiosity, she finds a mysterious arcade that captures her interest in an away like an addiction, symbolizing the difficulty many people encounter when they are unable to avoid distractions or temptations.

Through the experience she had, the story illustrates how uncontrolled curiosity, and compulsive activities can provide obstacles as well as chances for progression, self-control, and learning. The moral of the story is that, especially in a world where temptations are everywhere, curiosity must be balanced with self-control.

1.5.1 Project Scope

The project scope is to produce a three-minute short 3D animated story that raises audience awareness and imparts moral teachings. The project includes a short, animated story in which the narrator goes into further detail so that the audience can easily comprehend the story and be clear on the message.

The project results in a three-minute video as the final output. The video has a pixel resolution of 1920 X 1080. When finished, the video will be shown to the panel members.

The table below is the final output specification:

Specification	Description
Resolution	1920 x 1080 pixel
Video Format	MP4 in x264 codec
Duration	3 minutes
Type of Content	3D Animation Short Story

Table 1: Final Output Specification

1.5.2 Project Limitation

Several constraints arise in this undertaking making completing it difficult. Time and technical hardware limitations are two of the project's final constraints.

1.5.2.1 Time

Every step of a 3D animation workflow, including modelling, rigging, texturing, animation, and rendering, needs to be properly finished to prevent technical problems and guarantee seamless development. To precisely represent her feelings, behaviours, and interactions the character depends on these procedures for this project. In addition to improving visual quality, the 3D pipeline's accuracy emphasizes the story's main theme of discipline and curiosity.

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 (ages 13 to 19) and young adults (ages 20 to 25). People are extremely interested and eager to try new things at these phased of life, frequently without properly considering the risks. Since these age groups frequently struggle to control distractions like social media, gaming, and technology use, themes of curiosity and addiction 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 3 shows all the software requirements that will be used for the project.

Software	Description
ibisPaint	Drawing application for pre-production for this project to create storyboard conceptual design for character and environments.
Autodesk Maya	3D software that will be used for creating 3D related like, 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 real-time 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 pipeline.

Figure 1: LENOVO IDEAPAD GAMING 3 15ARH05

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

Description	Recommended Specification	Purpose
Central Processing Unit (CPU)	AMD Ryzen 7 4800H with Radeon Graphics	Processing unit for rendering and modelling 3D models. Preparation for rendering 2D animation.
Graphic Processing Unit (GPU)	NVIDIA GEFORCE GTX 1650 Ti	Improve the editing and rendering process.
RAM	16.0 GB	Software stability is improved with more power.
Storage	500GB	Space needed to hold all required files and programs.

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

Figure 2: iPad (A16) Gen 11th

Figure above is an iPad 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

The literature review in this chapter compiles a variety of sources, research, and references that support the project's general methodology. It provides a structure for explaining the how, why, and where of specific design selections, ensuring that each innovative solution is backed by current understanding and relevant. In addition to emphasizing the theoretical and conceptual foundation, the review links it to real-world uses it to creation of a brief 2D or 3D animation. Its goal is to give a well-organized framework that directs the animation's topics, direction, and visual aesthetic while also providing more in-depth understanding of the subject's value and relevance to the target audience. Through this process, this chapter ensures that the project is not only visually appealing but also meaningful and relatable.

2.2 Research Topics

Curiosity is a strong desire to learn, investigate novel concepts, and understand the unknown which is frequently triggered by new or confusion. A refined, multidimensional measure that divides curiosity into six different aspects which are, Joyous Exploration, Stress Tolerance, Trill Seeking, Overt Social Curiosity, and Convert Social Curiosity, and these were presented by Kashdan et al. in 2020. By separating overt and covert social curiosity into distinct dimensions, this improved scale beats precious models and provides a more simplified and accurate research instrument with good psychometric qualities (Kashdan et al., 2020).

In some situations, uncontrolled or excessive curiosity can result in addictive tendencies, even though it is generally seen as an appealing trait that promotes learning and creative thinking. Several characteristics of problematic internet use, including loss of control, hiding problematic behaviours, time management issues, and decreasing academic performance, were found to be significantly predicted by composite curiosity in the same study. This implies that, like digital reliance or other compulsive behaviours, curiosity might develop into an addiction if it is not counterbalanced by self-control (Inuusah Mahama et al., 2024).

2.3 Related Works

2.3.1 Storyline

I. Jumanji

Figure 3: Jumanji (1995)

Jumanji is a thrilling board game that traps players in its mystical realm. Alan Parrish, a guy who has been trapped inside for decades, is accidentally released when two kids find the game and start playing it. The only way to stop the chaos is to finish the game, as each dice roll unleashes unpredictable disasters and terrifying jungle creatures into the real world. To finish the game and regain the balance, they must work together to overcome their concerns and take on exciting challenges.

II. Wreck-It Ralph

Figure 4: Wreck-it Ralph (2012)

The animated Disney movie *Wreck-It Ralph* tells the story of Ralph, the antagonist of the Fix-It Felix Jr. arcade game. Video game villain Ralph breaks out of his game to show that he can be a hero and finds acceptance and friendship to be a boost to his self-worth. The main world of the movie is the arcade. I was motivated by this to incorporate the arcade element into my own FYP story with Cindy. But although Ralph emphasizes accepting oneself, my story emphasizes escapism and the dangers of game addiction.

III. Luck

Figure 5: Luck (2022)

In *Luck* (2022), Sam, the unluckiest girl, finds herself in the Land of Luck after stealing a fortunate penny from a magical cat. This gave me the idea for my FYP storyline, in which Cindy also touches the magical locket, which is prohibited. While both stories examine curiosity and its effects, my story emphasizes the darker attraction of gaming as an escape, while *Luck* emphasizes positivity and the ways obstacles may forge resilience.

2.3.2 Character Study

- **Main Character**

Cindy, also known as CINDY-01, is the first model of a brand-new maid robot series that was only built 3 months ago. She was created especially to perform housework and cleaning duties while she is constantly learning and adjusting. Cindy, a first-generation prototype, is willing to explore and frequently reflects a childish curiosity about her environment.

For the main out-personality maid character in this story, the overall design reference can be taken from Figure 8, while her personality traits can be referred to in Figure 7. In addition, the robotic shape and form of the character can also be referred to in Figure 6.

Figure 6: Jenny(XJ-9), (My Life As A Teenage Robot)

Figure 7: Wall-E, (Wall-E)

Figure 8: Emmy, (Emmy the Robot)

2.3.3 Environment Study

My animation background is inspired by a fantastic arcade. The mysterious arcade realm concealed inside the mysterious locket, a place full of bright machines and bizarre light, reference can be observed in Figure 10, and the bedroom where Cindy's job is to clean it are the two main settings that are highlighted, can be referred to in Figure 11.

Figure 9: Isometric Scandinavian Bedroom Style (Pinterest)

Figure 10: Isometric Neon Arcade Concept (Pinterest)

2.3.4 Assets

A accessories locket box in Figure 11, a retro arcade machine in Figure 12, a mystical locket in Figure 13, and a conceptual poster Figure 14, are among the animation's assets. Everything has a symbolic value within the context of the story. These items are essential components that spark Cindy's interest and let her enter the arcade's secret world.

Figure 11: Accessories Locket Box (Pinterest)

Figure 12: Retro Arcade Machine (Pinterest)

Figure 13: Mystical Locket (Pinterest)

Figure 14: Conceptual Poster (Pinterest)

2.4 Analysis

2.4.1 Storyline Analysis

Criteria/Movie	Film A *(Jumanji)*	Animation B *(Wreck-It Ralph)*	Animation C (*Luck)*
Main Theme	Facing fears, effect of choices, teamwork	Identity, acceptance, friendship, self-worth	Hope, meaning of life, fate vs. free will
Protagonist's Goal	Alan must complete the game to end its chaos and return normal	Ralph wants to stop being the "bad guy" and prove he's a hero	Sam wants to fix her bad luck and assist her friend find a family
Tone	Adventure, suspenseful, mysterious	Comedic, heartfelt, adventurous	Whimsical, light-hearted, emotional
Conflict Type	External (multiverse threats)	Mix of external (elemental spirits) and internal	Mix of external and internal (existential reflection and identity)
Narrative Style	Linear, adventure-driven, with fantasy realism	Playful, arcade-inspired, multiple interconnected worlds	Magical realism, light-hearted fantasy adventure
Ending Type	Hopeful resolution	Happy, redemptive	Heartwarming

Table 4: Comparison of Storyline

2.4.2 Character Analysis

- **Main Character - Cindy**

Movie/ Aspect	Character A *(Jenny)*	Character B *(Wall-E)*	Character C *(Emmy)*
Character Design	Humanoid teenage robot, sleek and stylized	Small boxy waste-collecting robot, worn and rusty	Humanoid nanny robot, soft curves, friendly aesthetic
Character Emotion	Expressive, exaggerated facial features	Limited face, but strong emotion via eyes, body language	Gentle, empathetic, polite speech
Environment Design	Suburban Earth, sci-fi	Post-apocalyptic, futuristic	Domestic environment, human households
Animation Style	2D stylized cartoon	3D Pixar realism, high environmental detail	2D webcomic style, retro-cartoon vibe
Rendering Quality	TV-level 2D, bold outlines, bright colours	High-end 3D rendering, advanced lighting, texturing, cinematic look	Digital illustration, high-quality webcomic art, softer shading
Tone & Theme	Teen struggles, youthful, energetic	Hope, loneliness, love, humanity's survival	Family, heartwarming, emotional

Table 5: Comparison of Main Character

2.4.3 Environment Analysis

Criteria/Movie/	Environment A *Wreck-It Ralph*	Environment B Figure _	Environment C Figure _
World Type	Arcade world	Modern home interior	Stylized retro-futuristic world
Environment Style	Highly stylized with bold colours	Scandinavian minimalist (natural and cozy)	Retro, cyberpunk setting
Colour Palette	Vibrant, neon tones, high contrast	Warm neutral tones	Bright neon tones
Details & Textures	Stylized but details	Wooden panels and smooth furniture surfaces	Arcade cabinets, glowing signs
Lighting	Dramatic, exaggerated, pop-art inspired	Warm ambient lighting, natural daylight from window	High-contrast neon glow, dark base with vibrant highlights
Interaction with World	Characters explore between arcade games	Practical and calming	Dynamic and energetic atmosphere

Table 6: Comparison of Environment

2.4.4 Assets Analysis

Criteria	Asset A Accessories Locket Box	Asset B Retro Arcade Machine	Asset C Mystical Locket	Asset D Conceptual Poster
Character Models	N/A	N/A	N/A	N/A
Texturing Style	Wooden texture with game design	Retro neon style, flickering screen	Metallic (silver), shiny with ruby diamond	Vintage paper texture
Props and Objects	Serves as locket prop	Interactive arcade game	Small prop in box	Wall decoration (Visual clue)
Environmental Assets	Bedroom setting	Arcade settings, cables, wires	Bedroom setting, fantasy transition	Bedroom setting
Rigging Complexity	Simple (open/close mechanism)	Medium (buttons, joystick)	Simple (open/close mechanism)	N/A
Effects Assets	Glow or aura effect when opened	Screen flicker, neon light glow	Glow or sparkle when opened	Magical glow effect when locket is touched

Table 7: Comparison of Assets

2.5 Discussion

According to the analysis, this project's plot is based on three major movies. Wreck-It Ralph inspired the lively arcade atmosphere and the idea of upsetting balance, Jumanji supplied the idea of being drawn into a game world, and Luck served as the inspiration for the trigger event in which stealing a special item has unexpected consequences. These references provide a solid basis for the narrative, emphasizing curiosity and escape.

In terms of character design, WALL-E served as the inspiration for the curious yet sympathetic attitude, while Jenny from My Life as a Teenage Robot influenced the technical robotic element. A maid-like figure that fits the narrative role of serving while being dragged into adventure is reflected in the outward appearance, which is a reference to Emmy the Robot. This combination produces a distinct and likable character that fits the topic of the narrative.

The environment creates a contrast between the plain, monochromatic bedroom and the lively, colorful world of the vintage arcade, signifying the appeal of escape. As storytelling tools, assets like the mystical box, magical locket, conceptual poster, and vintage arcade games heighten the sensation of temptation and offer visual hints about the character's passion. These visual choices come together to form a seamless universe that supports the story's themes of addiction, escape, and curiosity.

2.6 Conclusion

The inspiration and progression of the FYP animation project have been examined in this research, starting with an analysis of reference movies including Jumanji, Wreck-It Ralph, and Luck, as well as character designs like Jenny, Wall-E, and Emmy. These sources were studied to comprehend how the designs of the setting, characters, and assets enhance a story's plot.

The application of these discoveries to the project's plot, which follows Cindy as she finds the mysterious box, was the next topic of discussion. Key elements such as the box, arcade machine, locket, and poster were found to be narrative drivers, and themes of addiction and escape were emphasized by the contrast between Cindy's bedroom and the arcade world. The report creates an organized basis for the character, environment, and asset development of the project by combining ideas from previous works with unique design decisions.

3 METHODOLOGY

3.1 Introduction

An animation pipeline is a systematic, orderly series of steps that directs a production from idea to conclusion. Pre-production (idea development, scripting, storyboarding, and visual planning), production (actual asset creation, including modelling, texturing, rigging, animation, and rendering), and postproduction (editing, visual effects, sound design, and final compositing) are the three main stages of this process. Every step builds on the one before it, guaranteeing clear technical, creative, and conceptual performance, careful pre-production 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).

When making a 3D animated short story, there are just a few reasons to use an animation process. Time management is one advantage of employing an animation pipeline. The process of creating a brief 3D animation is naturally challenging and time-consuming. The amount of time needed to finish the project may be further disrupted as delays mount at each pipeline level.

3.2 3D Animation Pipeline

3.2.1 Pre-Production

Pre-production is the development, planning, and design stage of a 3D animation project. To prevent misunderstandings regarding the preparation procedures, the concepts, stories, and models required for the 3D project are described and properly constructed in this step.

- **Ideation**

  Every great story begins with a brilliant concept. Before the production begins, this step will involve meeting with the supervisor to present the idea.

- **Story Creation**

  After receiving supervisor approval, ideas are investigated and improved until the entire plot is formed. This is the most basic form of the animation's plot, complete with character, conflicts, and so on.

- **Script writing**

  A formal, typewritten version of a story that includes language, character movements, setting, time, an activity is called a manuscript. After the project's story creation is complete, the screenplay will be written, including dialogue for the story's narrator.

- **Storyboarding**

  A storyboard is a movie's visual representation. It appears to be a cartoon with rough concepts for scene events, primary character poses, and camera angles. Once the thumbnail is complete, the storyboard will made.

- **Animatic**

  Animation is the storyboard's moving representation, which representation, which develops into the project's final edit. In its most basic form, animation is made by employing 2D script drawings to represent the time of a design sequence.

3.2.2 Production

All visual components, including backdrops, objects, and characters, were created in a 3D animation series during the production stage. Data collection previously in the pre-production stage determines these resources. The complete 3D animation project is formed by the outcome of this step. For the production phase to run well, all pre-production duties must be completed accurately.

- **3D Modelling**
  3D modelling is the process of using specialized 3D software, like Maya, to create a geometric surface representation of any object.

- **3D Texturing**
  3D texturing is the process of developing and applying surface patterns (colours and surface characteristics) to a 3D object. 3D models are often solid coloured by default before they are presented to texture artist.

- **3D Rigging**
  For animators to move various geometric object pieces as fast and effectively as possible, rigging adds bone structure to a 3D object (such as in character rigging).

- **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**
  Every scene in 3D animation is divided and produced into multiple layers, which include foreground, background, objects, colours, shadows, lighting, and more. In post-processing, the layers are once more merged (composite).

- **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

At this point, the project is finished to make it appear polished and professional (though, of course, what constitutes polished, and professional can differ from project to project). Post-processing artists have a few tools of their disposal to make a project look then way they want it to.

- **Compositing**
  The outcome is achieved by recomposing the current layers. Debugging might involve anything from matching hundreds of layers together and modifying their characteristics to as basic as combining two levels.

- **Colour Correction**
  The final modification we make to a 3D animation during production is colour correction, sometimes referred to as colour timing or colour grading. This stage improves the consistency of each image and the project.

- **Sound Design**
  The sounds are now added to the video after the last clip has been created. Together with the actions in the video, speech and foley effects are also included.

- **Final Output**
  These are various possibilities for the slide' printed format. Digital video is the most widely used type, though, as it can be seen online and is compatible with many digital devices. In this instance, the project will be in MP4 x264 codec format.

3.3 Conclusion

To sum up, a 3D animated short story's success is greatly dependent on the animation pipeline. It offers a clear framework that directs the project from the first concept to the finished product by breaking the work up into pre-production, production, and post-production phases. In addition to promoting improved time management, this methodical technique lessens mistakes and needless redo, particularly in complex and time-consuming 3D animation projects. The pipeline guarantees that both creative and technical goals are accomplished effectively through thorough preparation and a consistent workflow, which leads to a more seamless production process and a polished final animation.

4 PRE – PRODUCTION

4.1 Introduction

Any film, animation, or creative project must first go through pre-production, a crucial phase that quietly impacts everything that comes after. This is the time when concepts are conceived, developed, and carefully turned from fantasy into a well-organized strategy. It's where dreams begin to take shape and where creativity and organization meet.

Pre-production is the most thrilling and raw stage of narrative, that goes beyond simple planning. Plotlines are explored by writers, camera angles and tones are planned by directors, characters and worlds are brought to life through sketches by artists, and schedules and budgets have been set out by producers to ensure that everything works together. Everyone is encouraged to envision the same dream and then figure out how to make it a reality as part of this collaboration process.

At this point, every little detail counts. Scripts are revised, places are selected, designs are improved, and storyboards are created. 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 maid who finds a secret, forbidden box hidden in her surroundings is at the heart of the story, which explores into the strong themes of curiosity and obsession. Her increasing temptation to open the box represents the human craving for the unknown and the strong desire to learn secrets while being cautioned against doing so. When she finally caves in, she is taken by surprise into a fantasy, magical arcade world that is full of mechanical amazement, bright lights, and a feeling of childish excitement.

But eventually, what starts out as a magical experience becomes disturbing. The maid becomes obsessed with this new universe, making it difficult to distinguish between reality and delusion. She illustrates how distraction, while initially comforting, may turn into a dangerous trap by losing touch with reality the more she spends herself in the illusion.

The story illustrates the conflict between the need to confront reality and the desire for freedom and adventure through her travels. It reminds audiences that running away from reality may feel wonderful, but it typically comes with consequences. The story concludes by emphasizing that reality, despite its flaws, has more significance and worth since it is the place of genuine development, feeling, and connection.

4.3 Treatment

4.3.1 Exposition

Cindy was a newly hired service maid to work in a large bungalow. One morning, she was tasked with cleaning her master's room and warned not to touch the box on the desk. While cleaning, Cindy notices a poster showing an arcade and a small toy model of an arcade machine. She's always wanted to go there, but she's never had the chance.

4.3.2 Rising action

After done cleaning, she rests at the sofa while looking the box on the desk. Drawn by curiosity, she went to open it, and revealing a glowing locket inside. Cindy picked it up. The moment she picked it up, she sucked into the arcade poster.

4.3.3 Climax

Cindy's eyes widen in disbelief. She tries play it for the first time, and she easily wins. Flushed with joy, Cindy excited to play it many times. She presses buttons wildly and pulls multiple levers at once. Suddenly, a sharp shock runs through her hand. Being part-robot, she feels it in her circuits. She freezes, staring at the game and only to realize the game is now moving on their own. She tried to switch off the main power, but the machines keep going. In fact, they speed up, voices booming "YOU WIN! YOU WIN!" again, echoing out of control. She panicked, and backs away, heart pounding. She stumbles, falls hard, and shuts her eyes tight in fear as the chaos swallows her.

4.3.4 Falling action

Suddenly it becomes silence. Cindy slowly opens her eyes and she's back at the sofa in that room, the box still resting untouched on the desk.

4.3.5 Resolution

She feels relieved, she picks up her cleaning and out from the room as it was done, a faint smile on her face. Life may not be perfect, but at least it's real and worth living.

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.

The Locket's Curse

by

Wan Nur Syahida Binti Wan Hishamuddin

FADE IN.

INT. BEDROOM – DAY

Cindy, a maid robot, steps inside carrying a cleaning item. Her movements are careful and precise.

On the desk, a small box sits next to a bright poster of a neon-lit arcade. Its vibrant colours glow faintly in the light.

Cindy vacuums the floor, arrange the clean clothes, and make the bed. When she arranges the books, her eyes catch the arcade poster.

She pauses, tilting her head, curiosity flickering her face. But then she just continues cleaning.

After cleaning complete, she sits on the sofa, taking a quiet breath. Her gaze drifts back to the box on the desk.

Drawn by curiosity, she rises and walks toward the box, slow and unsure, but unable to stop herself.

She gently lifts the box. A sudden glow shines, showing the locket. She reaches out. As her touches it, the locket opens instantly.

A blinding flash shines out. Then sucks her inside with burst of light.

INT. ARCADE – UNKNOWN

Cindy lands inside an arcade. Neon lights flicker overhead. She stares, wide-eyed, in disbelief.

One machine glow brighter than the rest as they are out of service. Its screen flashes "PRESS START."

Almost instinctively, she approaches. Her hand trembles as she presses a button and moves the joystick. BEEP! DINGG!

She wins effortlessly.

Her face lights with excitement. She plays again. And again. Her movements grow wild, pressing buttons, moving the joystick.

Suddenly, an electric shock the main plug of the arcade. A sharp electric races through her hand. She raises her hand quickly.

As she wants to play it again, the machine already playing by itself. She is confused. She tries to shut off the machine but the controls jam.

Games play on their own, voices boom from every direction "YOU WIN! YOU WIN! YOU WIN!"

Her eyes widen. She panics and stumbles backward, hear pounding.

She falls to the floor, eyes squeezed shut as chaos around her.

INT. BEDROOM – DAY

SILENCE.

She opens her eyes. Back on the sofa. The room is calm, sunlight steady.

She looks to the desk. The box still there, closed, undisturbed, as if nothing happened.

She feels anxious but relieved.

She picks up her cleaning item, then she walks out, closing the door softly behind her.

FADE OUT.

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. Main Character – Cindy

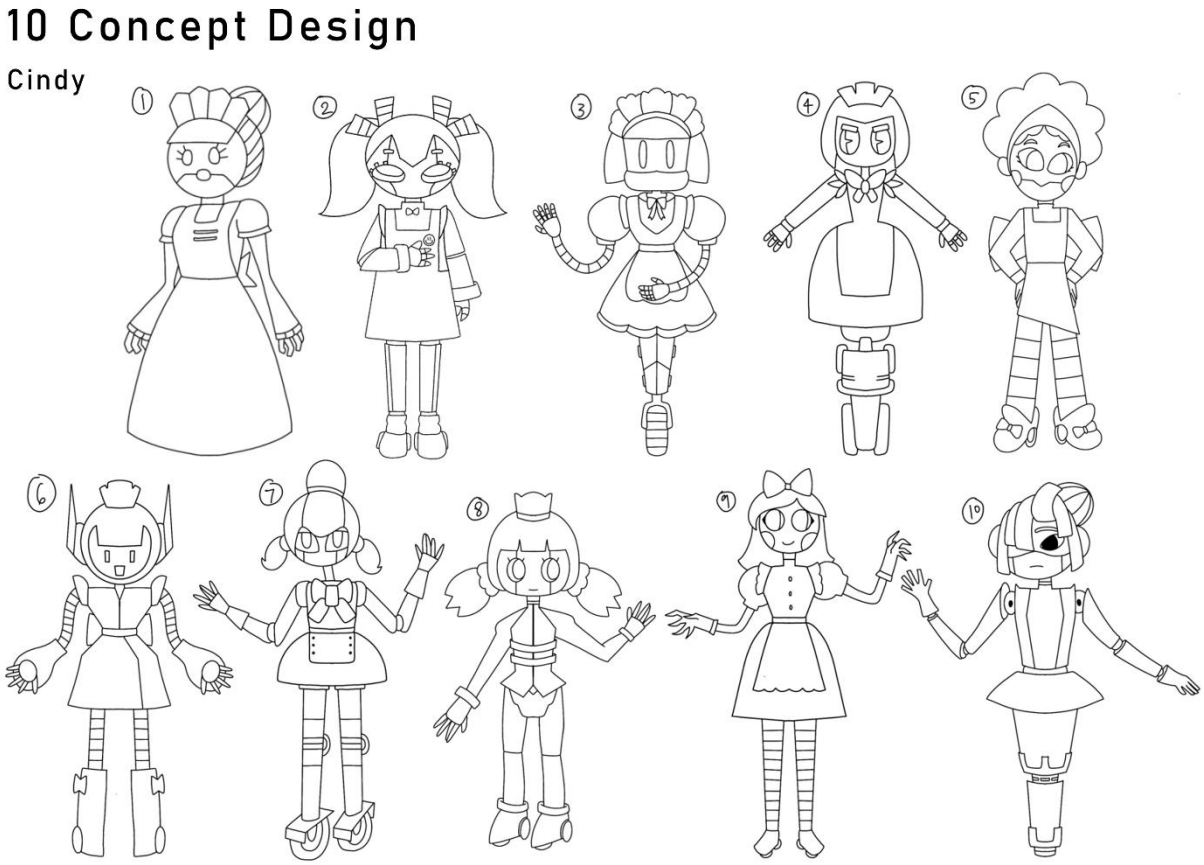


Figure 15: Cindy character concept

Cindy Character Description

Name : CIND-01
Nickname : Cindy
Age : 3 months (Since activation)
Height : 4.8ft
Archetype : The Innocent - Curious
Pure-hearted
Easily fascinated
Weakness : Her curiosity sometimes leads her to ignore instructions, which can create dangerous situations.
Backstory : Cindy, also known as CIND-01, is the first model of a brand-new maid robot series that was only built a few months ago. She was created especially to perform housework and cleaning duties, while she is constantly learning and adjusting. Cindy, a first-generation prototype, is willing to explore and frequently reflects a childish curiosity about her environment.

Figure 16: Cindy character description

Character Orthographic View

Cindy

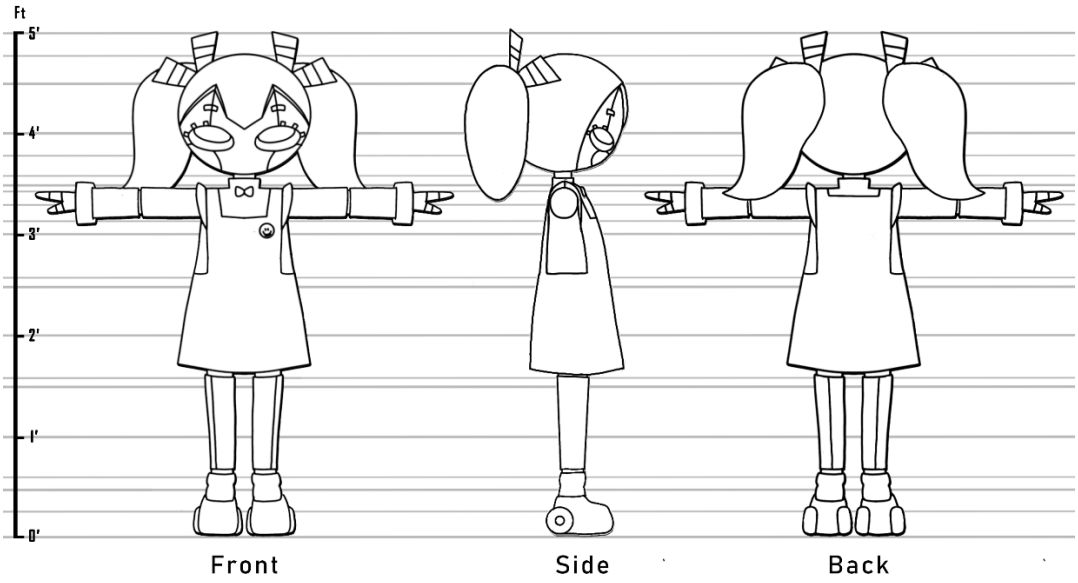


Figure 17: Cindy character orthographic view

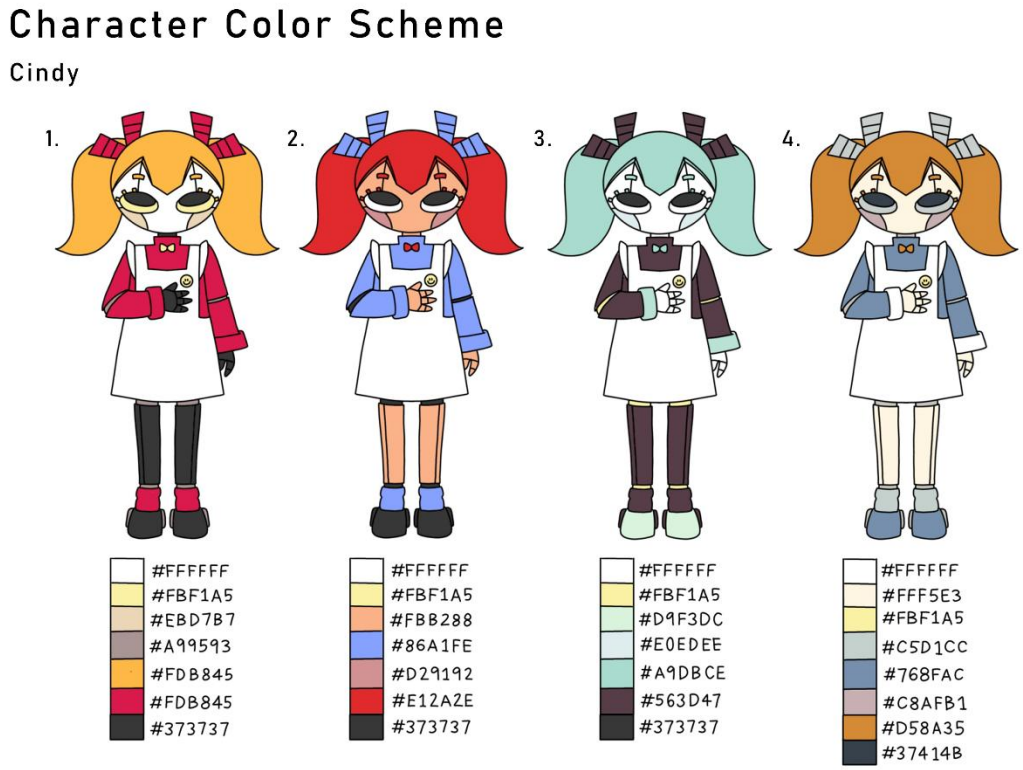


Figure 18: Cindy character colour scheme

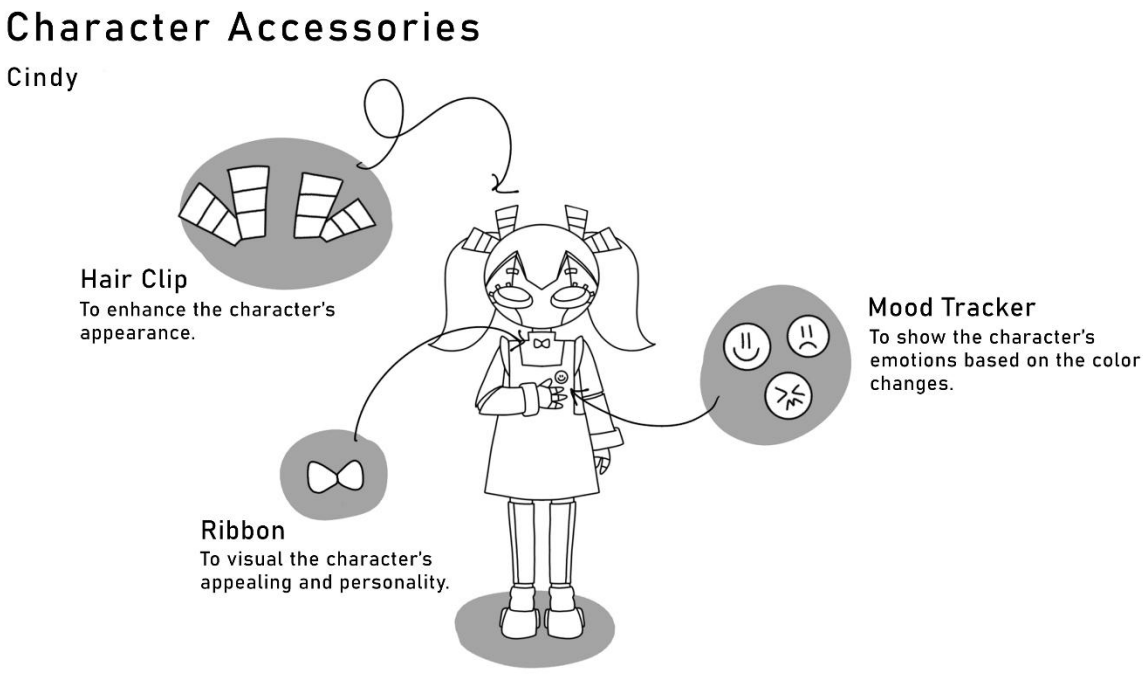


Figure 19: Cindy character accessories

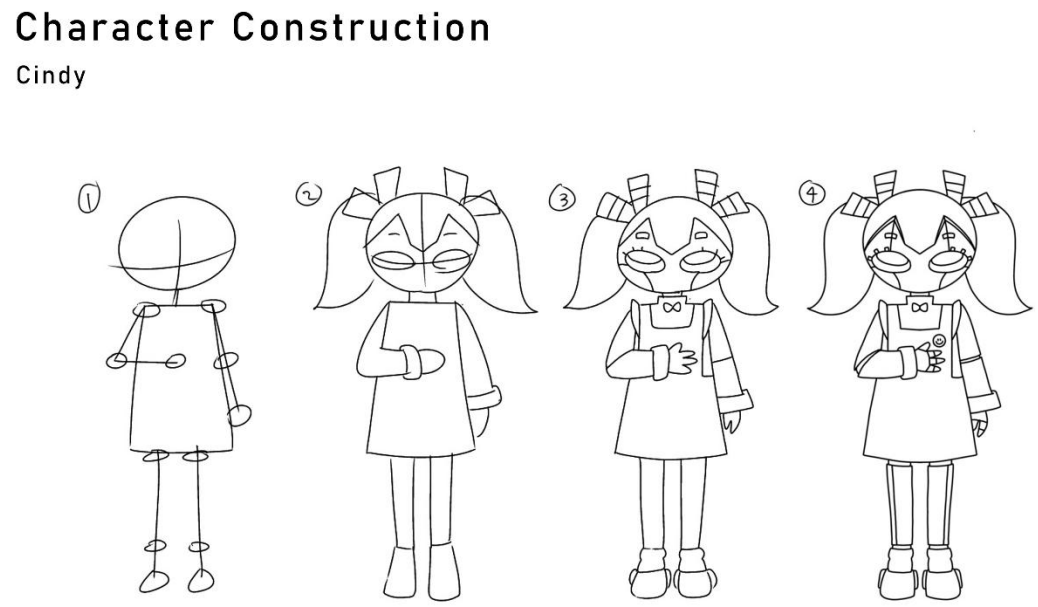


Figure 20: Cindy character construction

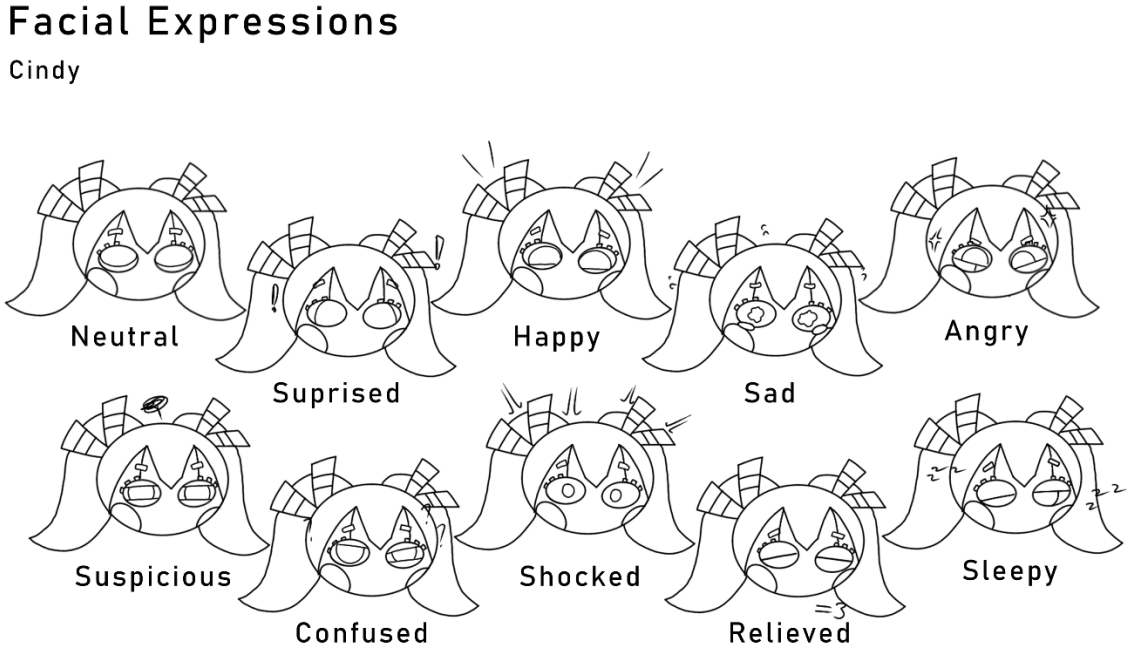


Figure 21: Cindy character expression

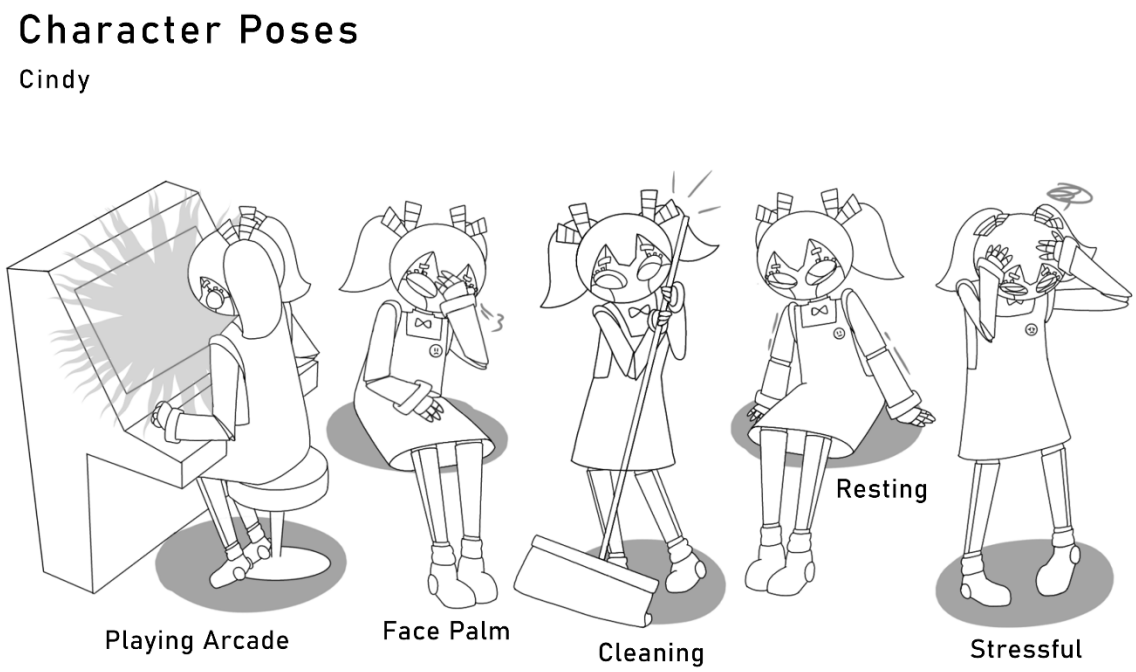


Figure 22: Cindy character poses

4.5.2 Environmental Design

There are two primary environmental ideas in this project which are a bedroom setting and an arcade setting. To completement the project's overall story and visual design, each setting is created with its own unique mood, lighting, colours, and props.

Figure 23: Isometric Bedroom

Figure 24: Bedroom with colour code

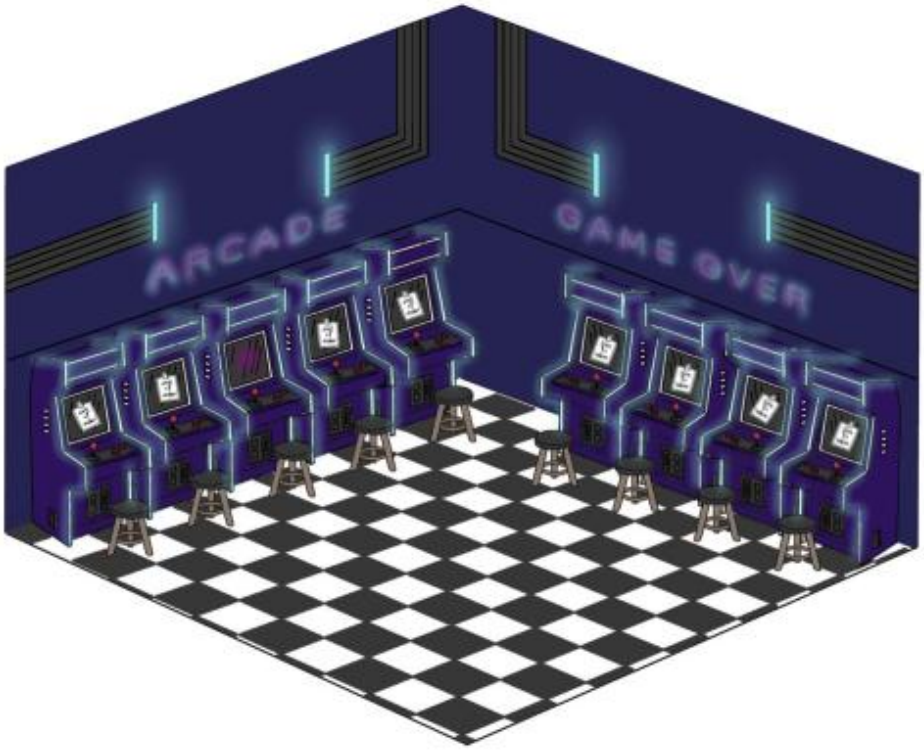


Figure 25: Isometric Arcade

Figure 26: Arcade with colour code

4.5.3 Asset Design

The process of generating all the visual components utilized in a project, including as backdrops, 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 27: Assets 1 and 2

Figure 28: Assets 3 and 4

4.6 Thumbnail

A thumbnail is a little picture or sketch that serves as a sneak peek at a longer piece of content, like an entire movie, an image, or even a scene from an animation. Its goal is to provide a viewer with a brief preview of what they will see without requiring them to open or play the full content.

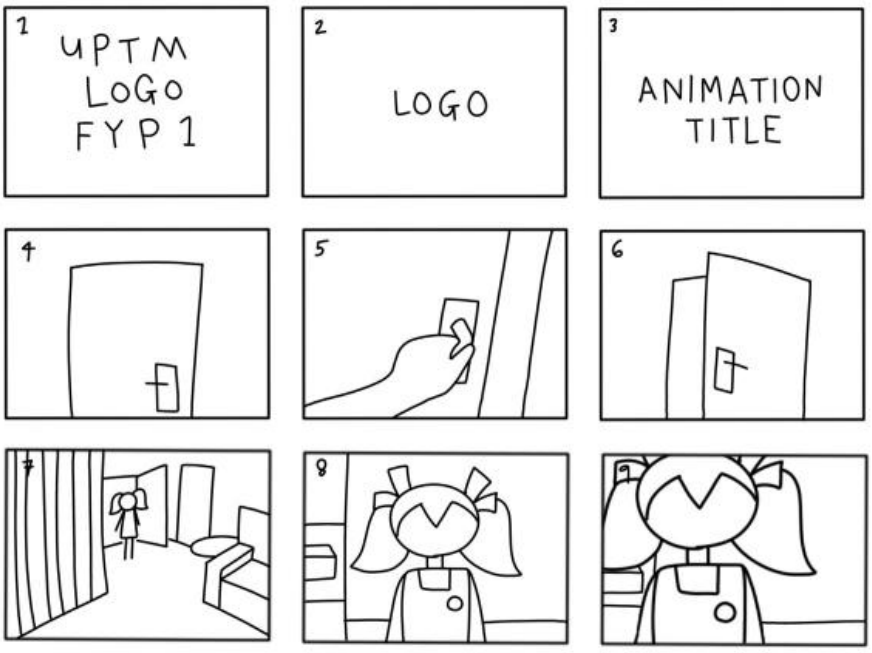


Figure 29: The Locket's Curse's thumbnail page 1

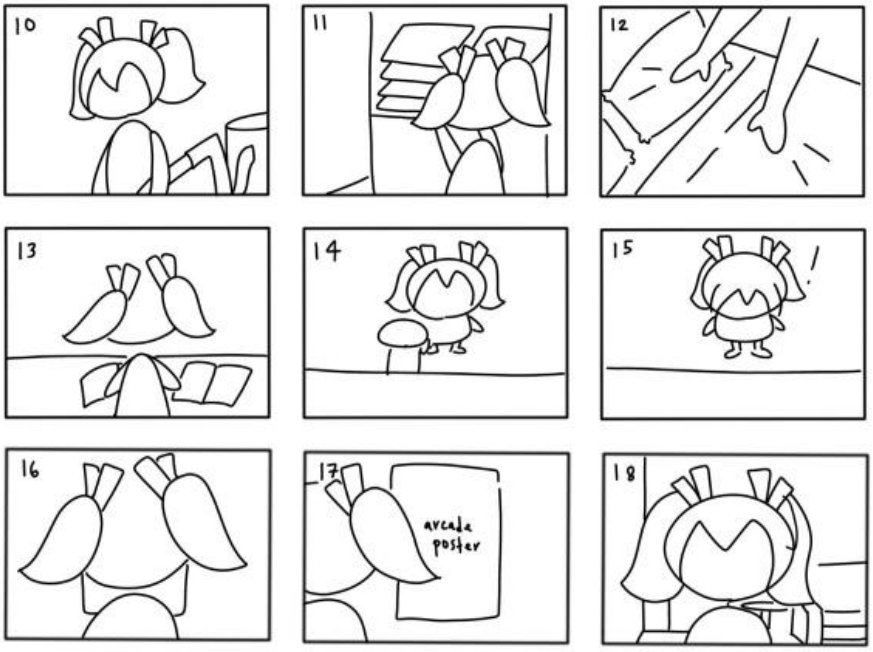


Figure 30: The Locket's Curse's thumbnail page 2

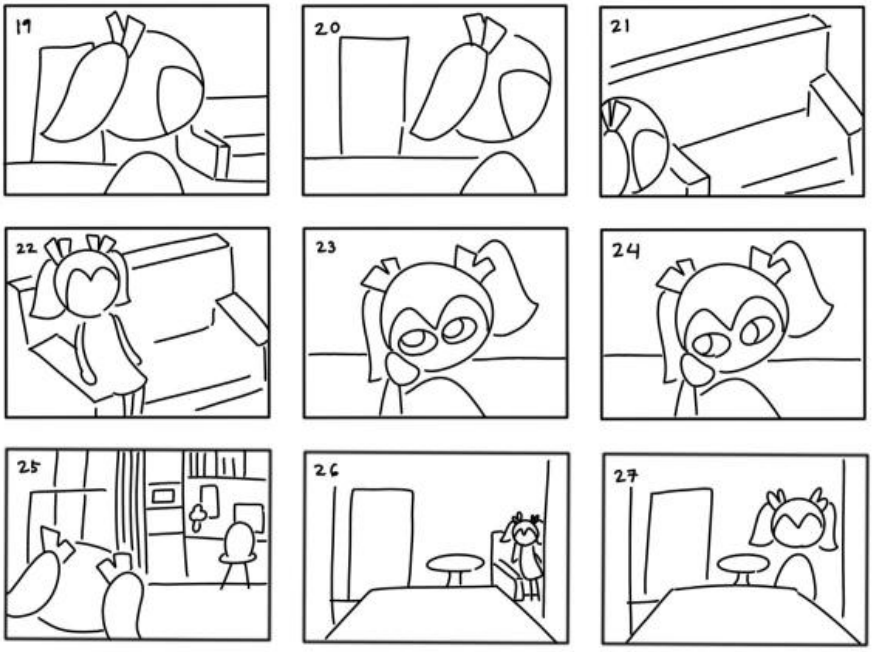


Figure 31: The Locket's Curse's thumbnail page 3

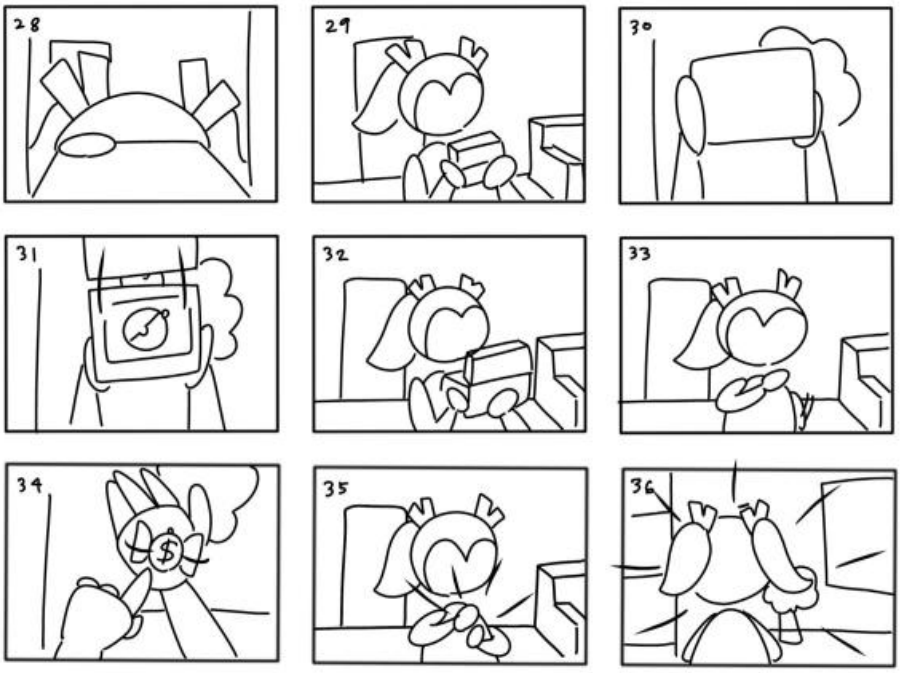


Figure 32: The Locket's Curse's thumbnail page 4

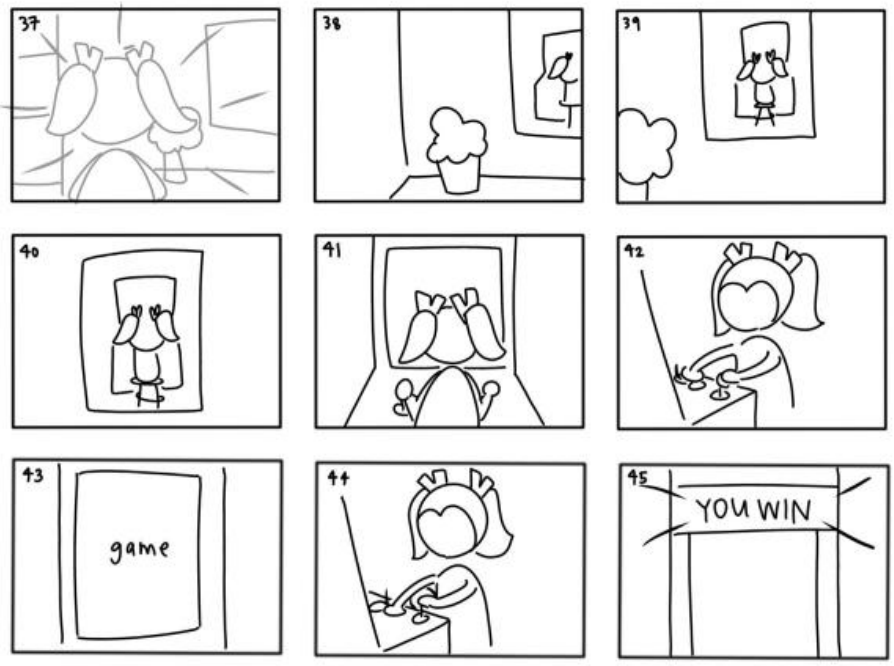


Figure 33: The Locket's Curse's thumbnail page 5

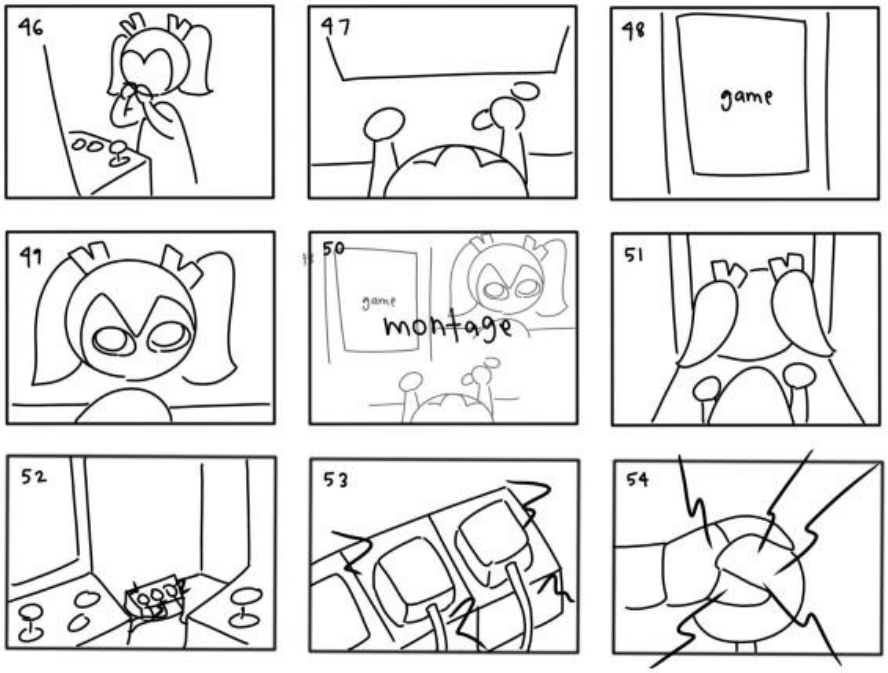


Figure 34: The Locket's Curse's thumbnail page 6

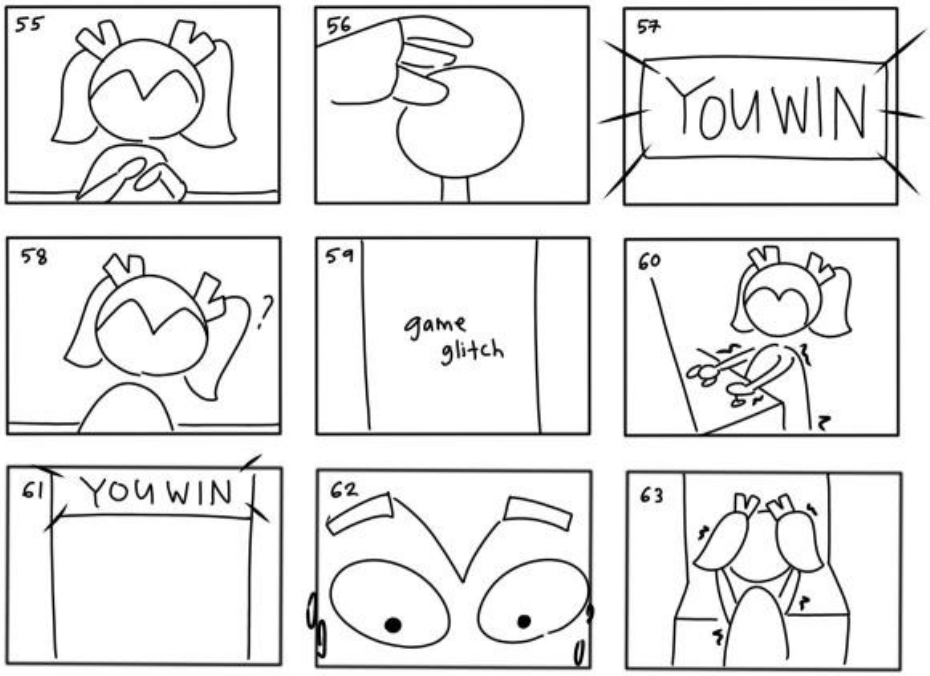


Figure 35: The Locket's Curse's thumbnail page 7

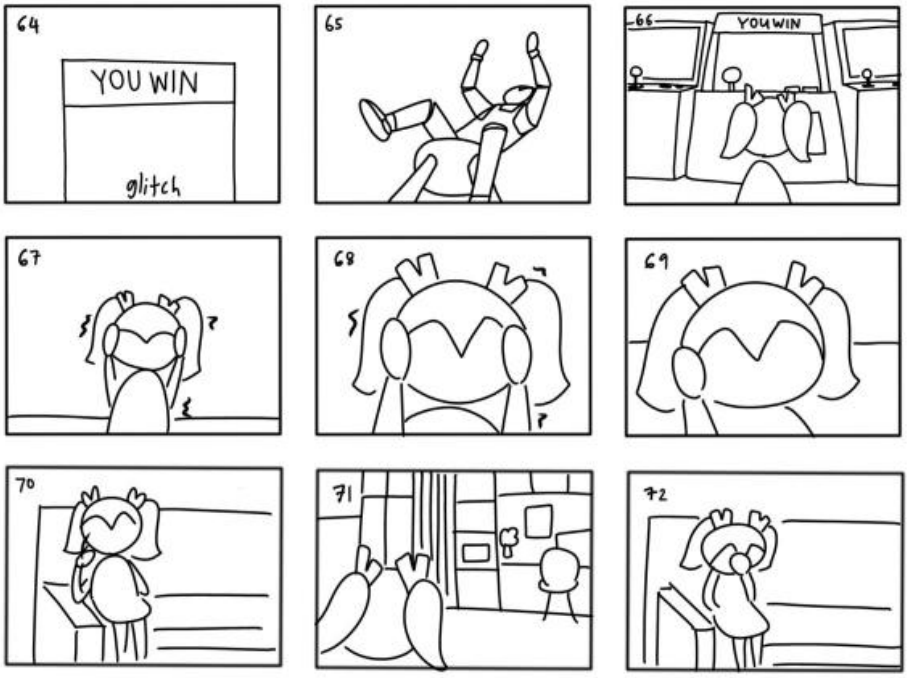


Figure 36: The Locket's Curse's thumbnail page 8

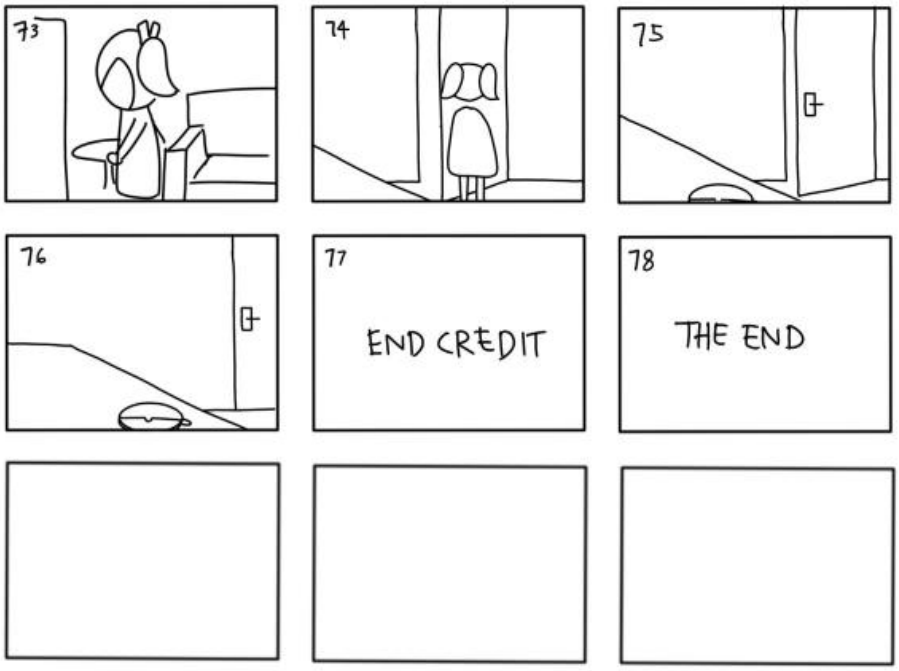


Figure 37: The Locket's Curse's thumbnail page 9

4.7 Storyboard

A storyboard is a visual planning tool used to outline a story's plot in animation, or multimedia 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, organizing the sequence of events, and guarantee story and pacing consistency before starting the actual production.

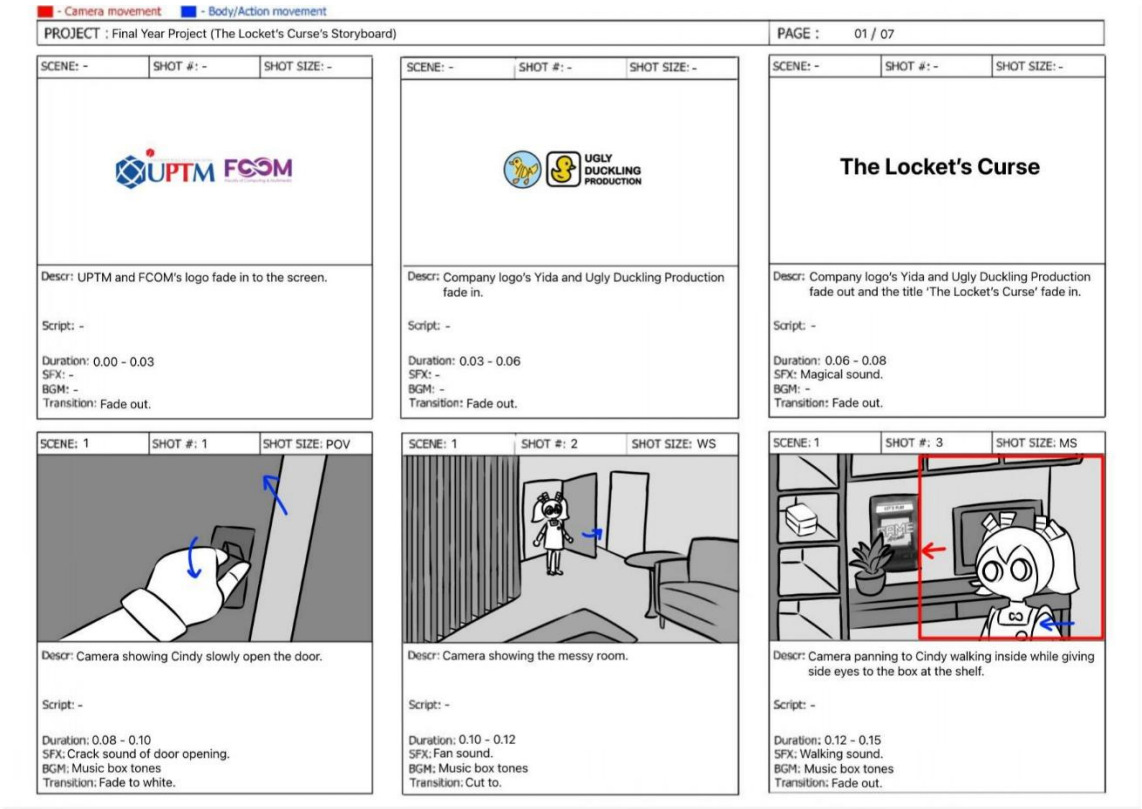


Figure 38: The Locket's Curse's storyboard page 1

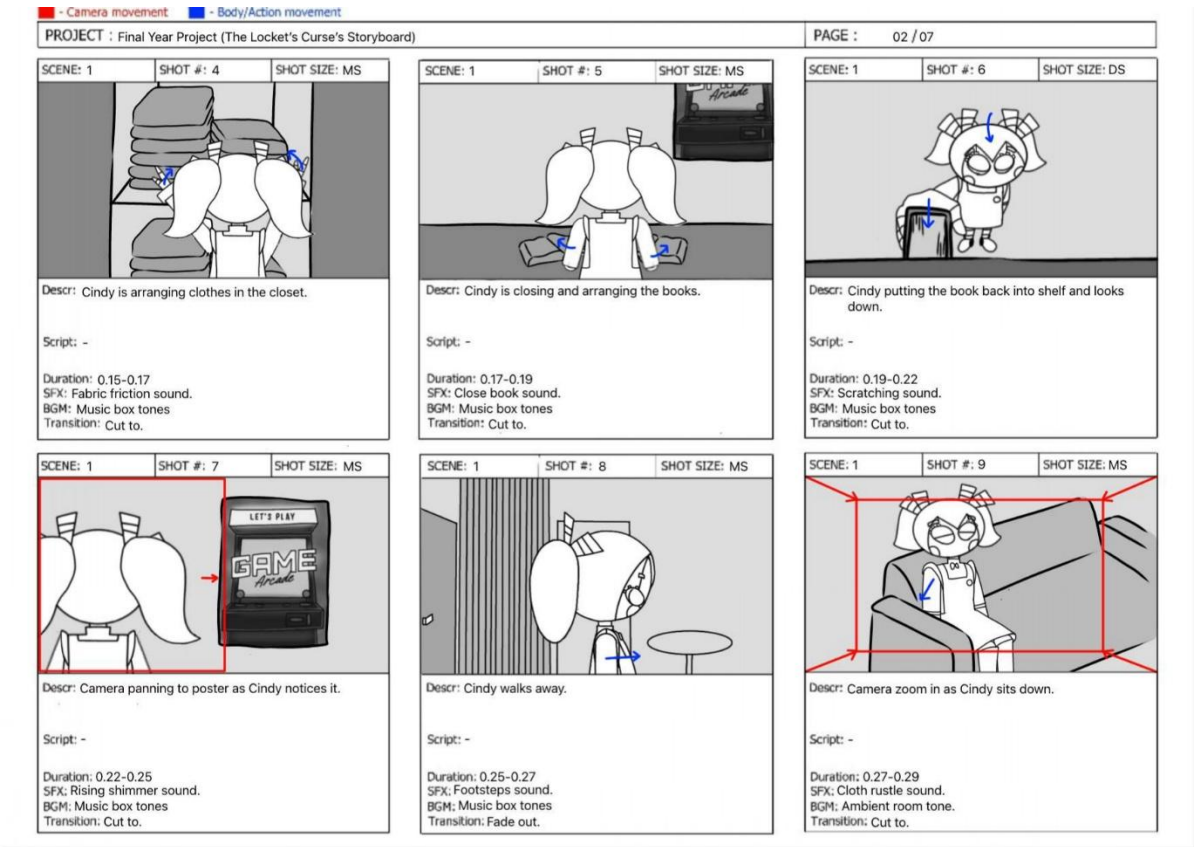


Figure 39: The Locket's Curse's storyboard page 2

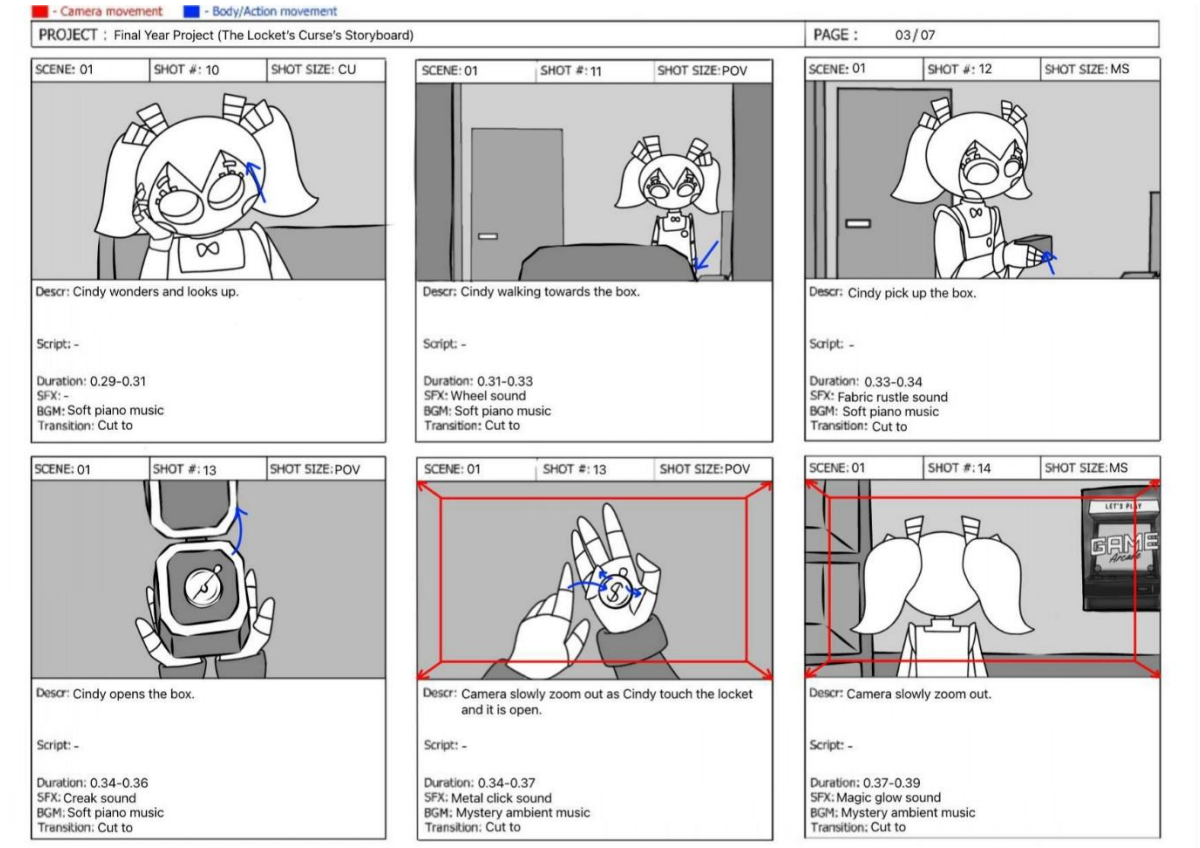


Figure 40: The Locket's Curse's storyboard page 3

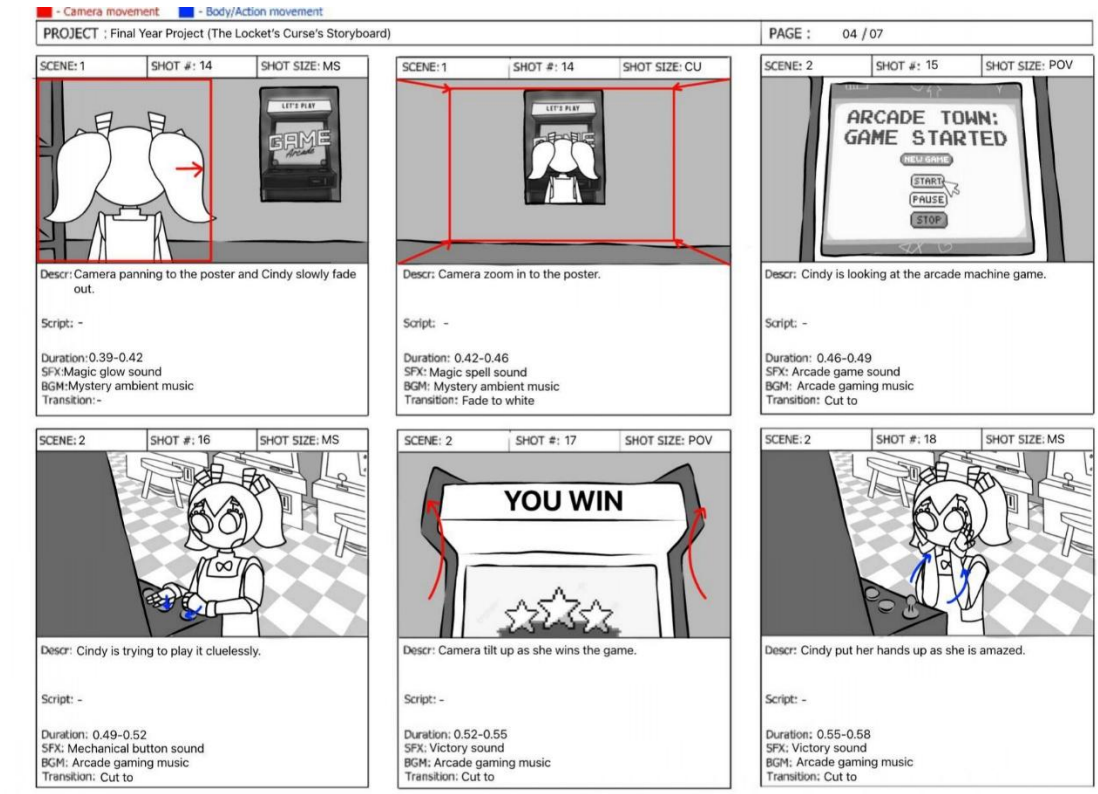


Figure 41: The Locket's Curse's storyboard page 4

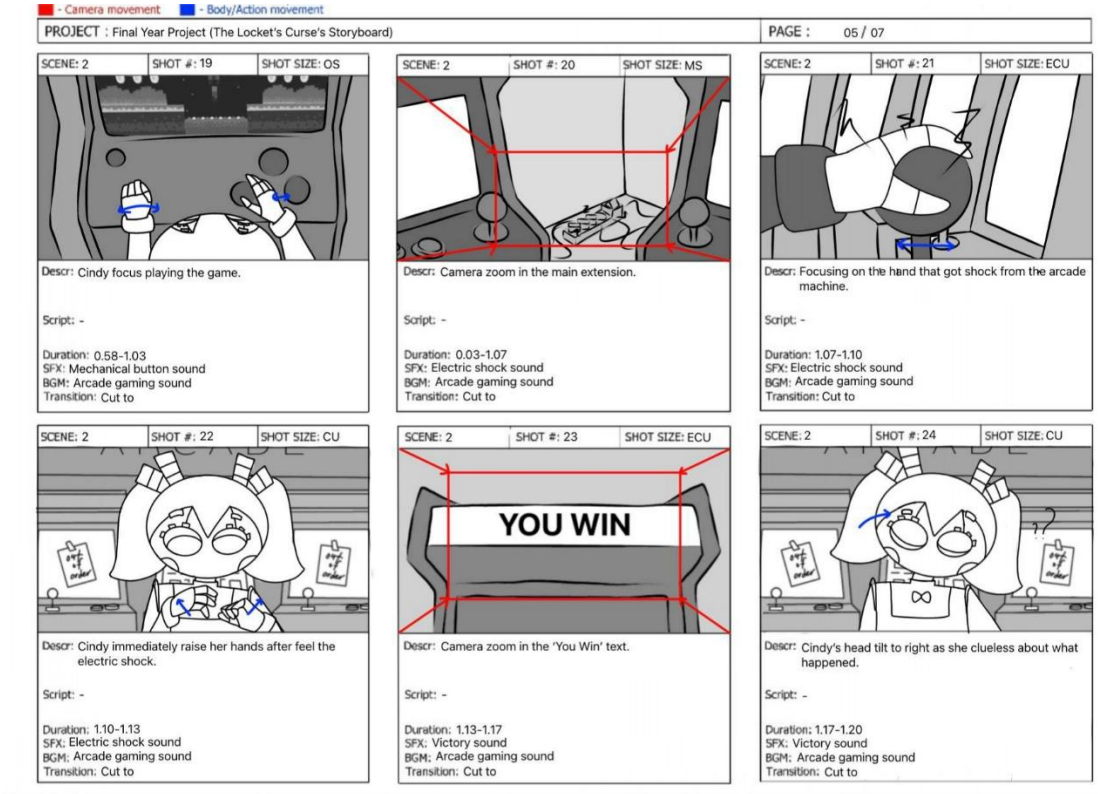


Figure 42: The Locket's Curse's storyboard page 5

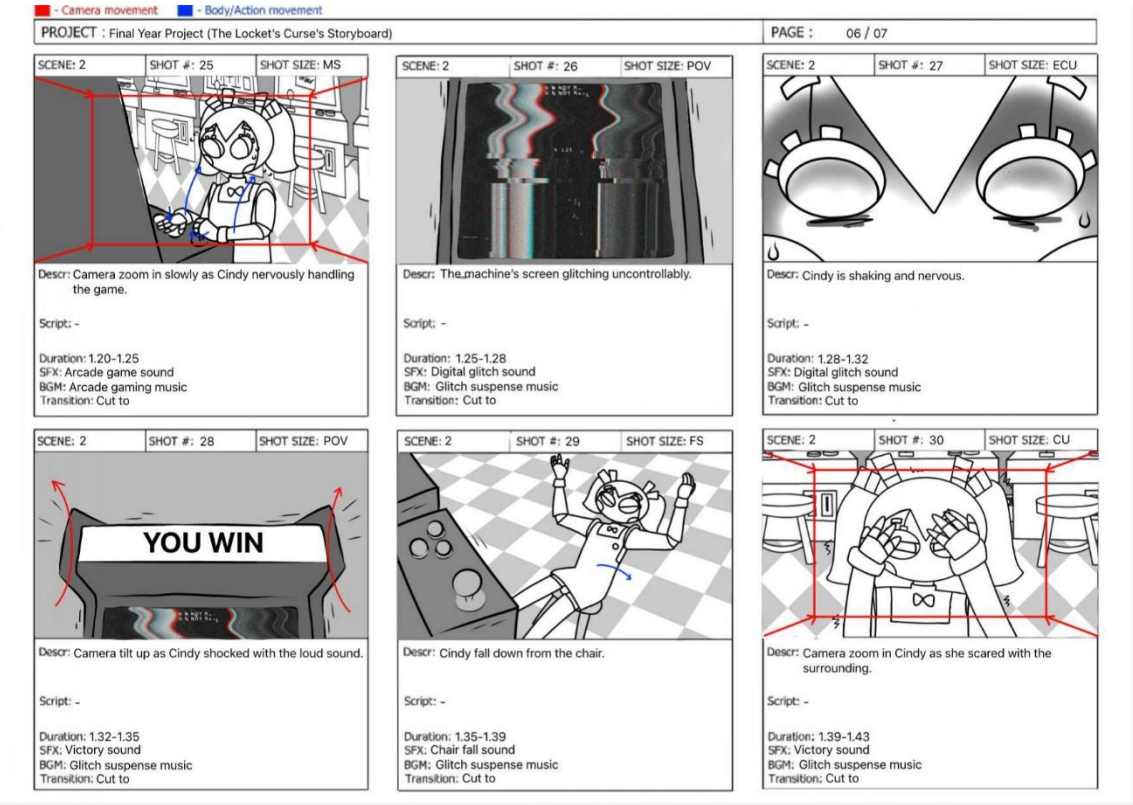


Figure 43: The Locket's Curse's storyboard page 6

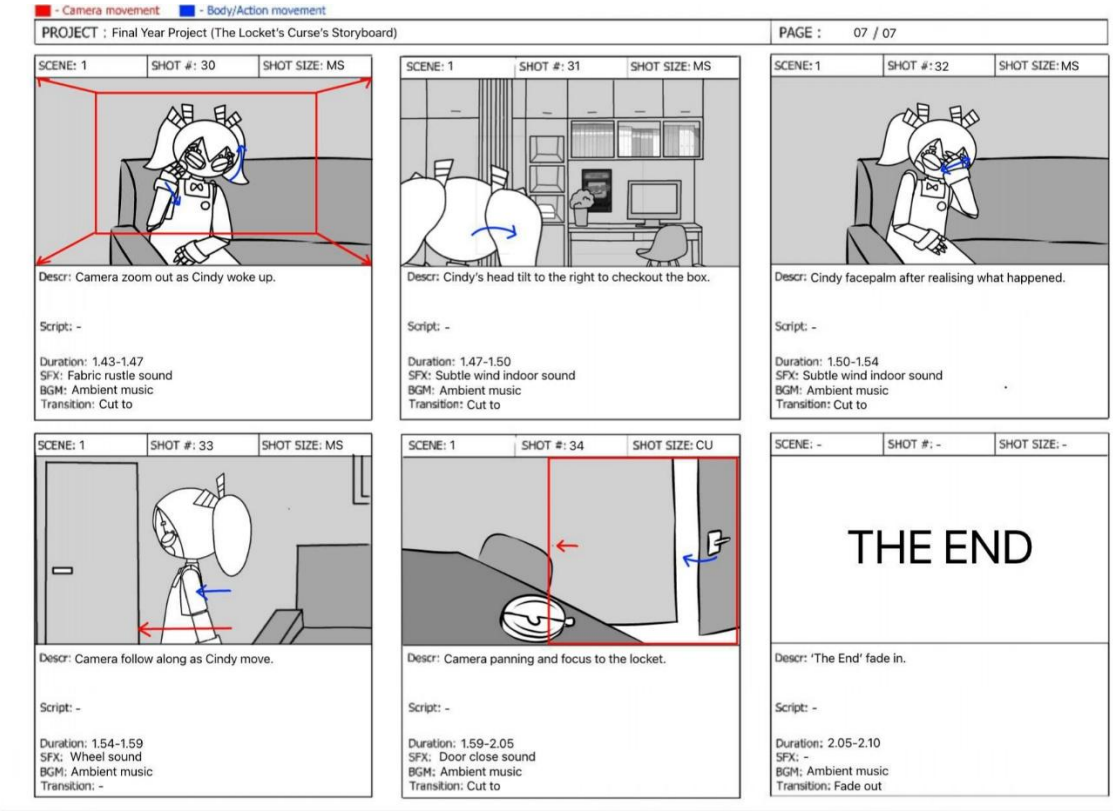


Figure 44: The Locket's Curse's storyboard page 7

4.8 Animatic

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

Figure 45: Animatic animation in ibisPaint

Every scene was redrawn in ibisPaint, with moving elements set apart from the background. To show movement inside the scene, keyframes or extra drawings were used to animate these divided layers. After being separately drawn, each animation scene was imported into Adobe Premiere Pro for editing and combining. To finish the final sequence, effects, transitions, sound effects, and background music were added during the editing phase.

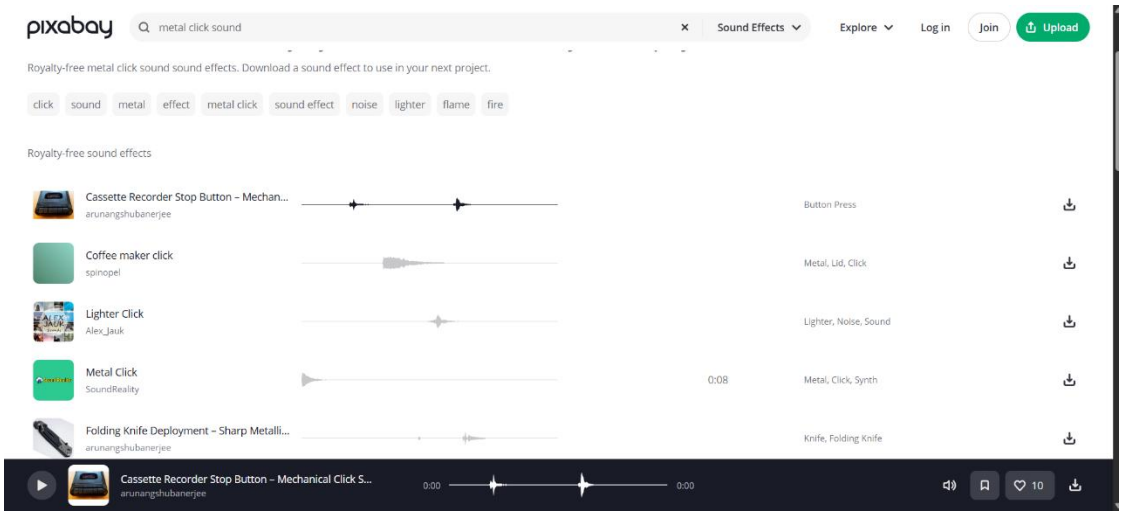


Figure 46: Choose sound effect in Pixabay

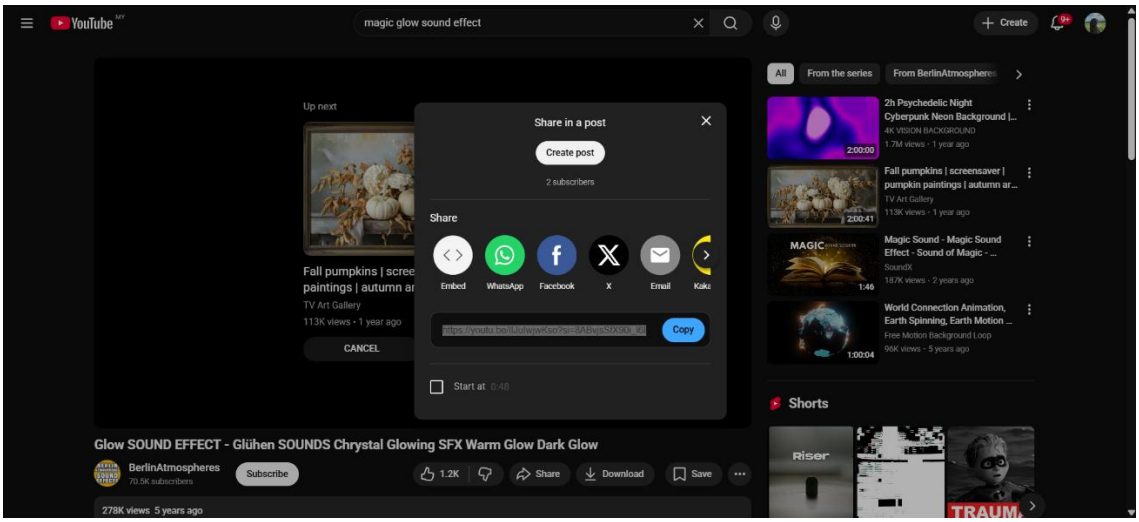


Figure 47: Choose sound effect in Youtube

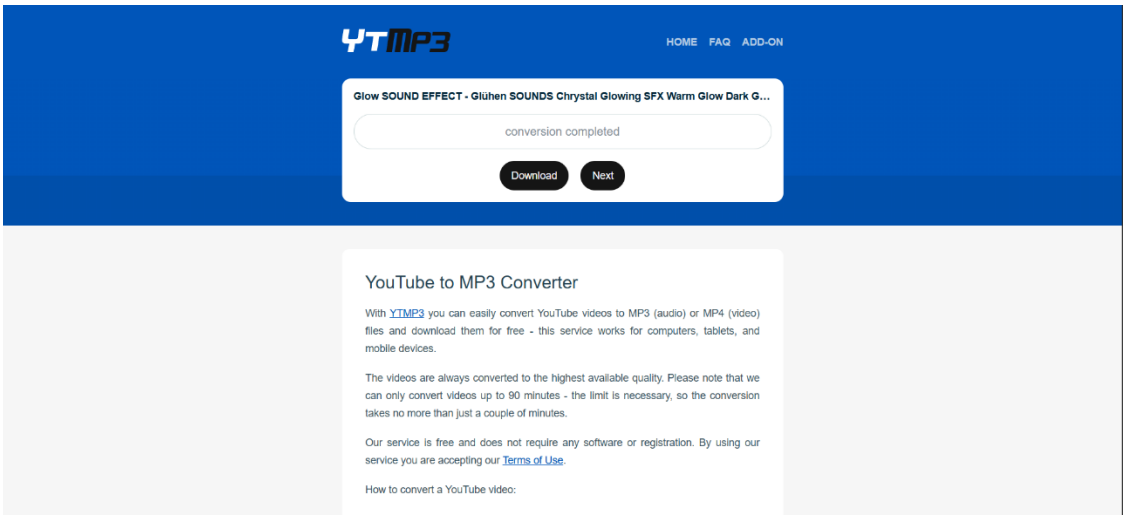


Figure 48: Convert the sound effect in YTMP3

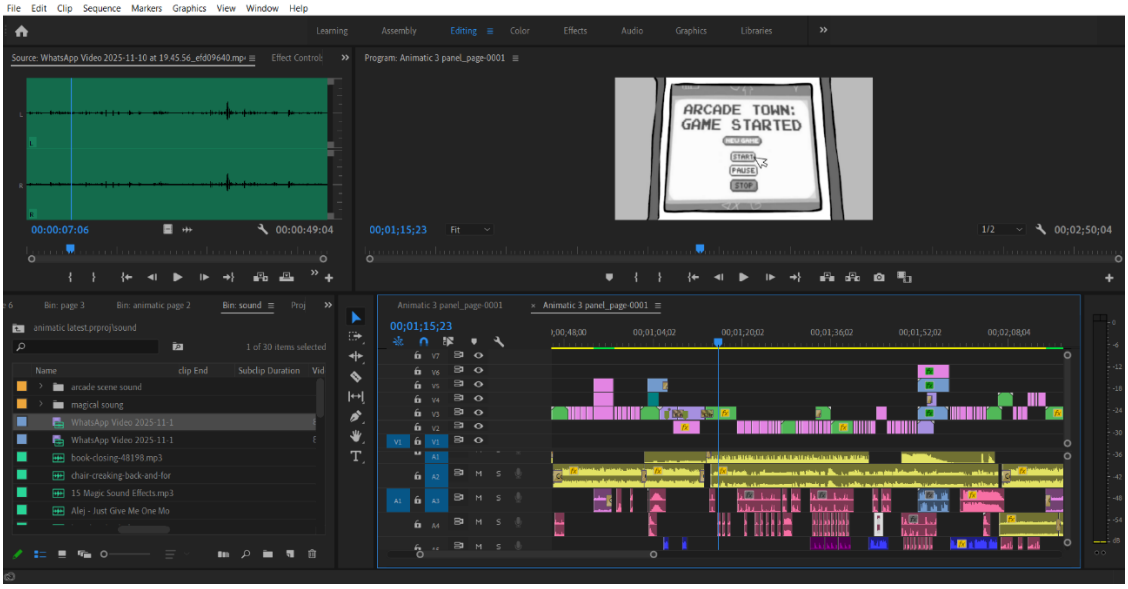


Figure 49: Animatic editing in Adobe Premiere Pro

4.9 Conclusion

In summary, the animation's pre-production stage forms the basis of the whole undertaking. To ensure a clear picture of the finished product, it involves careful planning and creation of characters, environments, storyboards, thumbnails, and animatics. This phase establishes the animation's storyline, visual style, pace, and general flow, enabling the production team to operate effectively and consistently. Good pre- production reduces mistakes, speeds up production, and ensures that the finished animation follows the planned visual path.

5 PRODUCTIONS

5.1 Introduction

In the animation process, production stage where early concepts finally take shape on screen. Ideas shaped during earlier steps come alive here, brought into being through actual visuals. Each part of the workflow gets put into motion such as modelling, texturing, rigging, lighting, animation and rendering. While earlier phases mapped out strategy and structure, this period tests whether such designs hold up under real demands. Outcomes revealed now show what works, what does not, shaping the outcome with clarity. Production takes the highest effort among stages. A well-run workflow here depends heavily on solid groundwork before shooting begins. Staying on track means planning carefully ahead of actual filming.

5.2 Modelling

Building 3D model and scenes happens here, part of making animations real looking. In this phase, every part likes characters, objects, backgrounds, takes physical form after early sketches were made. How well these shapes turn out matters because they shape how everything looks, moves, feels. Focus shifts here to shape, anatomy, and small features to make sure the figures can handle texturing, rigging, and animation without issues. When modelling works properly, it smooths out what comes next, speeding up tasks down the line while lifting how everything looks once finished.

5.2.1 Character

Starting from concept art, a 3D version of the main figure takes shape through careful build up. Movement feels smooth because parts fit together right, giving space to flow when scenes unfold. For the character to be seamlessly animated and rigged, good topology is important. Additionally, the character's personality and function in the narrative are reflected in their design, which helps in the audience's comprehension of the character.

5.2.1.1 Cindy

Main character, Cindy seems simple at first glance, but that is far from the truth. Her smooth and rounded proportions make her significantly more challenging to model without relying on a topology. This character's body starts off as a cube before additional edges are added and carefully organized in keeping with the character sheet to obtain her final design, while her head begins as a cube but make it smooth after. Her twin pigtails, big hollow dark eyes, and accessories like the hair clip, bow tie, and mood tracker all received extra attention.

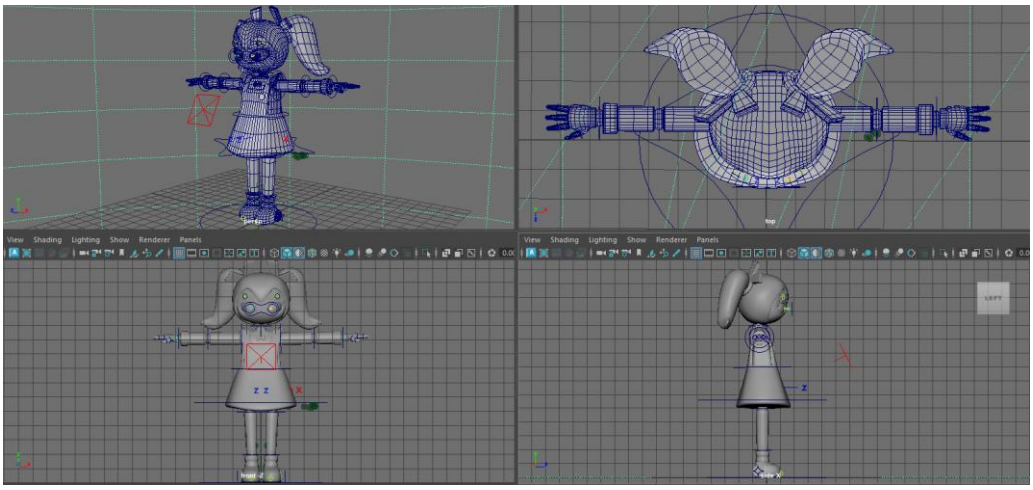


Figure 50: Cindy model from perspective, top, front, and side view

To give the character a youthful appearance, pigtails were added to the hairstyle. To model the hair, using a cube, pull it with extrude and shaped into the flowing pigtail shape extrude and edge loop tool. For the hair clips, they were modelled separately to model like ribbon shaped. Lastly, the eyebrows were created by adding tiny cube and added several edge loops, giving the face subtle expression as shown in figure 51.

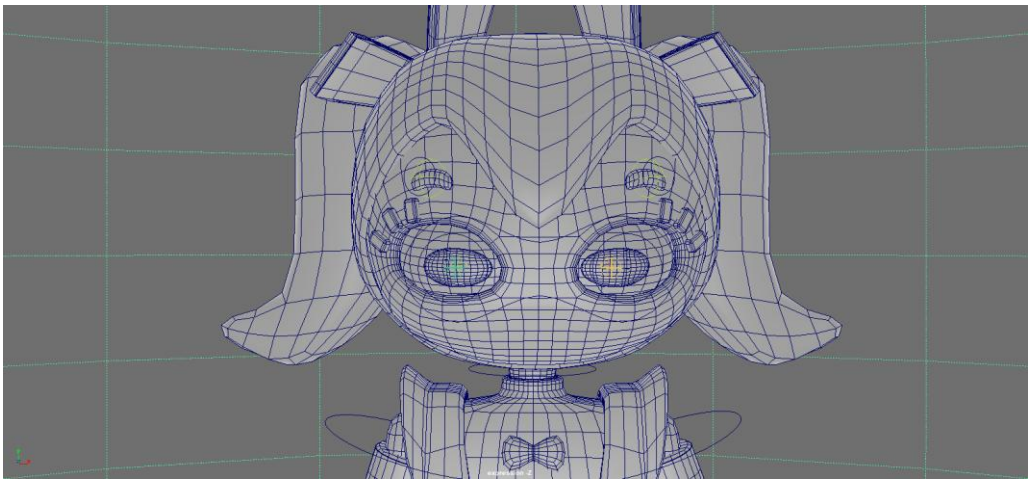


Figure 51: Cindy's head

In figure 52, to emphasize the character's feminine appearance, an apron skirt was put over the main clothing. A separate flat mesh laid on top was used to simulate the apron. Each joint, such as the neck, shoulders, arms, fingers and legs, was constructed as a separate object to guarantee smooth movement for animation later.

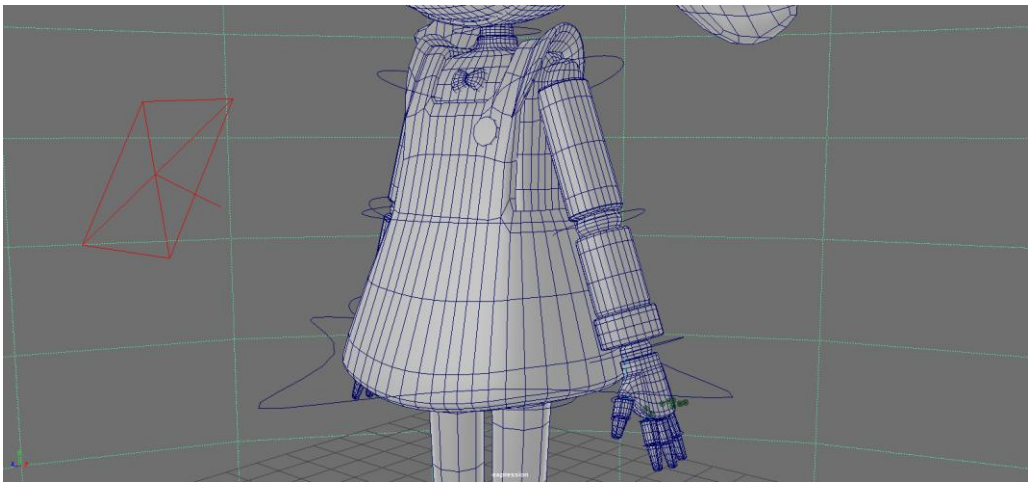


Figure 52: Cindy's body

5.2.2 Environment

Even if it isn't as complex as the character, the modelling environment is crucial for establishing the animation's mood. It improves the animation storytelling by helping the viewer comprehend the world the character lives in through a realistic and detailed setting. Effective background modelling also contributes to the story's increased visual appeal and interest.

5.2.2.1 Bedroom

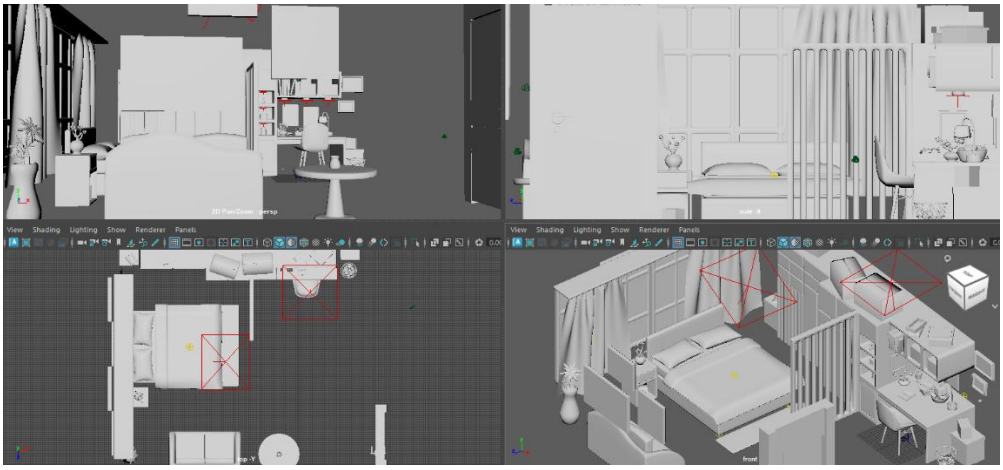


Figure 53: Bedroom side, front, top and perspective view

Before adding larger furniture pieces like the bed, wardrobe, desk, and bookshelf, the bedroom's base was at first built. In order to give the area a more lived-in and organic feel, little clutter items like plants, books, a trash can, and desk accessories were placed last. While finer elements were modelled as distinct polygon meshes to avoid overloading the primary item with extra topology, the majority of bigger objects were constructed utilizing extrusion from a single polygon, maintaining clean base geometry.

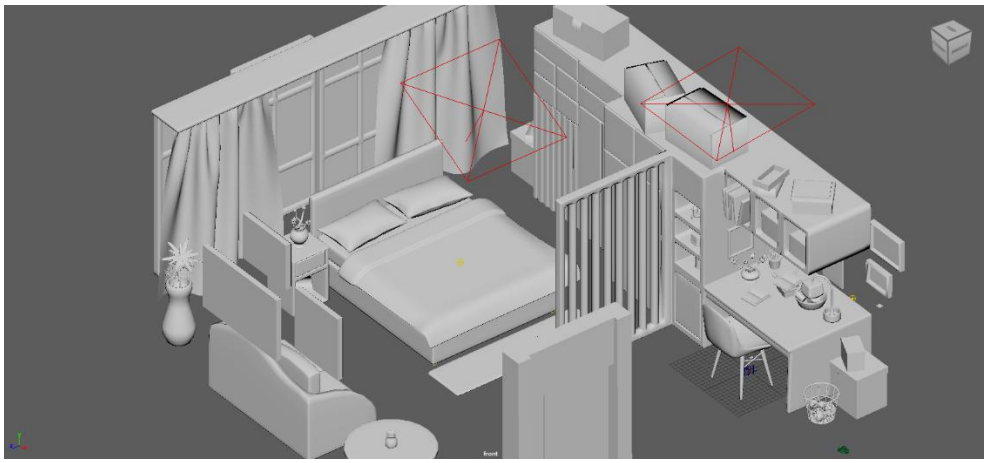


Figure 54: Bedroom from perspective view

5.2.2.2 Arcade

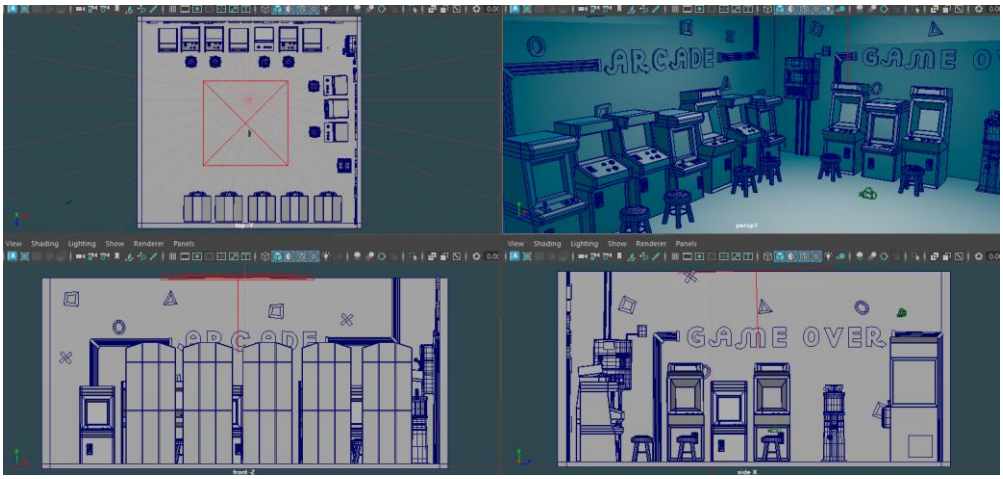


Figure 55: Arcade side, front, top and perspective view

The second environment modelled is an arcade room. The arcade's main props were rows of arcade cabinet machines, each of which was modelled using cube. The screen, control panel, joystick, and button elements were defined by adding edge loops and extrude to a cube. To further emphasize the theme of the setting, wall decorations such as the bold "ARCADE" and "GAME OVER" 3D typography were added as extruded text geometry. To fill the room and provide visual interest, extra props like pipe, fuse box, and floating geometric shapes were placed around.

Figure 56: Arcade from perspective view

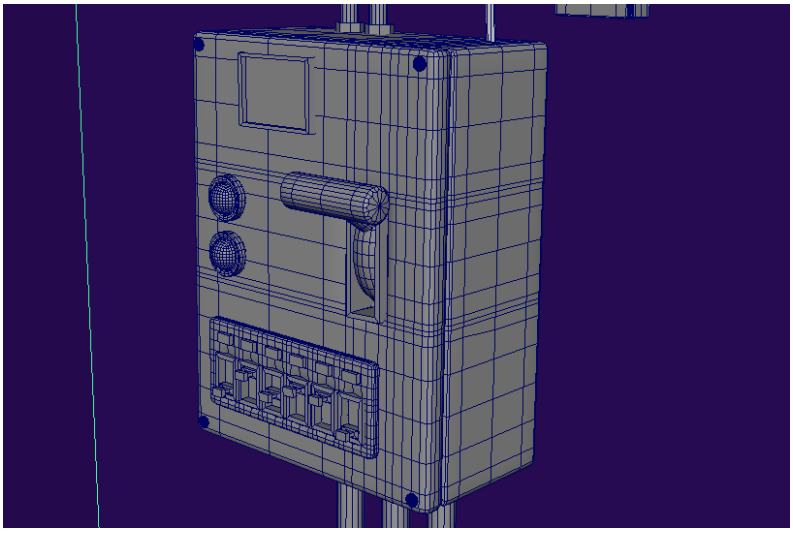


Figure 57: Fuse box

In figure 58, a box and locket assets was also modelled as a symbolic prop. The total assets give the box a polished, stylized appearance that supports the animation's visual tone by softening the rough edges with bevel.

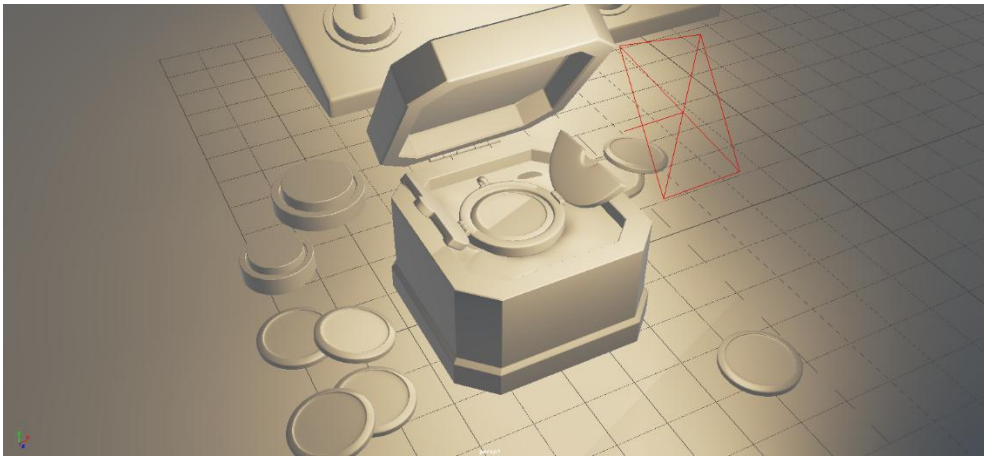


Figure 58: Asset model

5.3 Texturing

A crucial stage in the 3D animation process, texturing adds surface detail, colour, and material characteristics to modelled objects to make them come to life. To replicate real-world characteristics like wood grain, fabric, metal rust, or skin texture, 2D image mappings are applied to the surface of 3D objects. Two methods to texturing were applied to this project, like using Adobe Substance Painter, a specialized texturing plugin that enables more realistic and detailed surface painting across the 3D geometry and using pre-existing materials and base colours directly within Maya.

5.3.1 Character

The most effective way to give characters the proper appearance and style is to use the Adobe Substances plugin. Based on figure 59, the texturing process starts with UV unwrapping each item and separating areas within a polygon that will have different materials or textures. The item will be imported as an OBJ file after that.

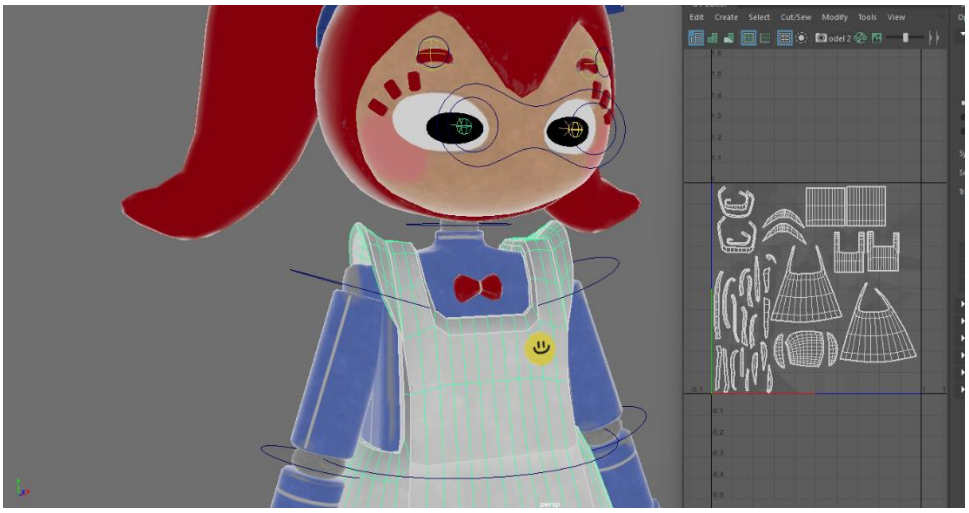


Figure 59: UV unwrap the mesh

After that, the OBJ file will be imported into Adobe Substance so that the proper material and texture can be added. The software's paint option will be used to manually apply any customized details. For instance, the blush, smile and line at arm and leg, in figure 60 were created by hand using the option for a paintbrush. The texture will be exported in Maya Software after it has been completed and baked. All of the exported textures will be loaded into Maya as new texture options using the Adobe Substances plugins before being applied to the desired object.

Figure 60: Adding texture and material in Adobe Substances

5.3.2 Environment

For the environment, the Adobe Substances plugin was also used as seen in figures. Aside from that, applying an existing texture in Maya or using base is another method of texturing that is frequently used in environments colour in Maya. This is generally done for smaller objects or tiny details attached to larger objects.

Figure 61: Bedroom's texture

Figure 62: Arcade's texture

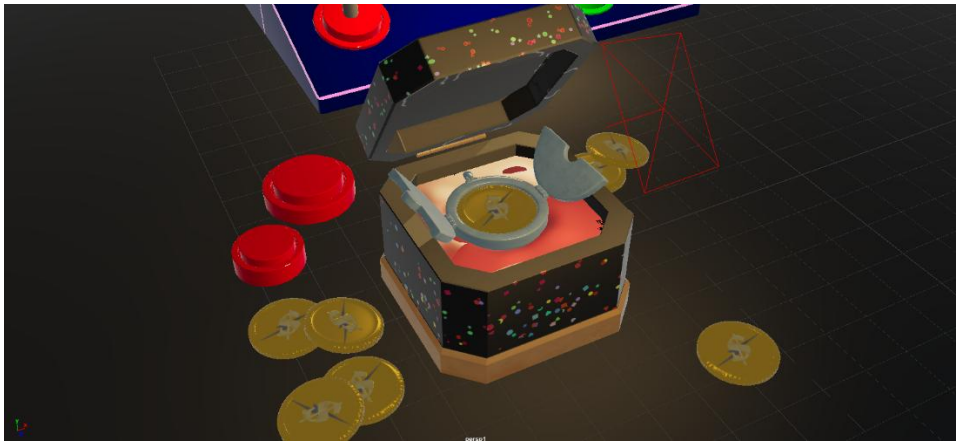


Figure 63: Asset's texture

5.4 Rigging

The technique of building a digital skeleton inside a 3D character model to enable natural movement and flexibility during animation is known as rigging. From the spine and limbs to the individual fingers, this skeleton is composed of a hierarchy of bones and joints that are arranged to correspond with the character's anatomy. After the skeleton is set up, the skinning technique is used to attach the character's mesh to the bones such that the surrounding geometry moves in sync with a bone's rotation or movement. Rigging is a crucial stage between modelling and animation since without it, a 3D character would be a static model with no movement.

5.4.1 Skeleton

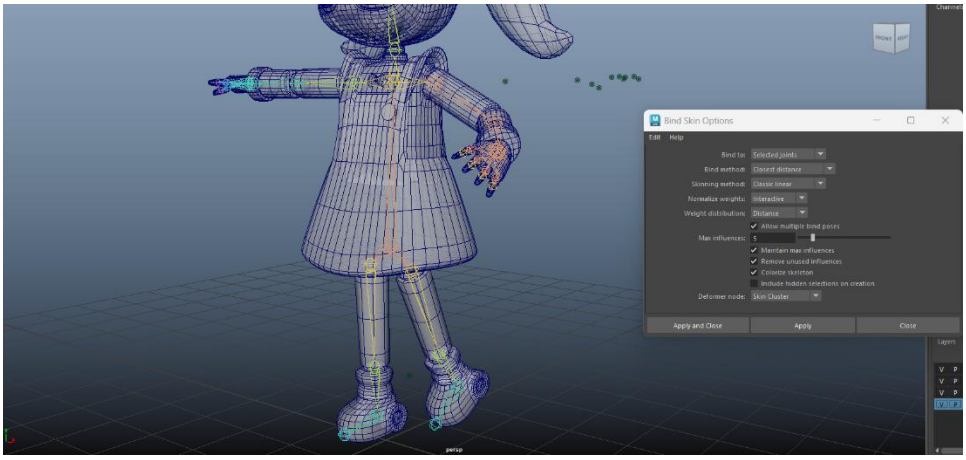


Figure 64: Joint on Cindy's 3D model

To achieve exact positioning within the mesh, the rigging procedure started by inserting joints around the character's body using the side and front orthographic views. So as to maintain the joints visible through the geometry, X-ray mode was activated, which made it simpler to locate each placement without interference. To be able to manage how the surrounding geometry changes in response to joint movement, the mesh was attached to the joints using Bind Skin using selected object method as shown in figure 64, once the entire skeleton was built.

5.4.2 Controller

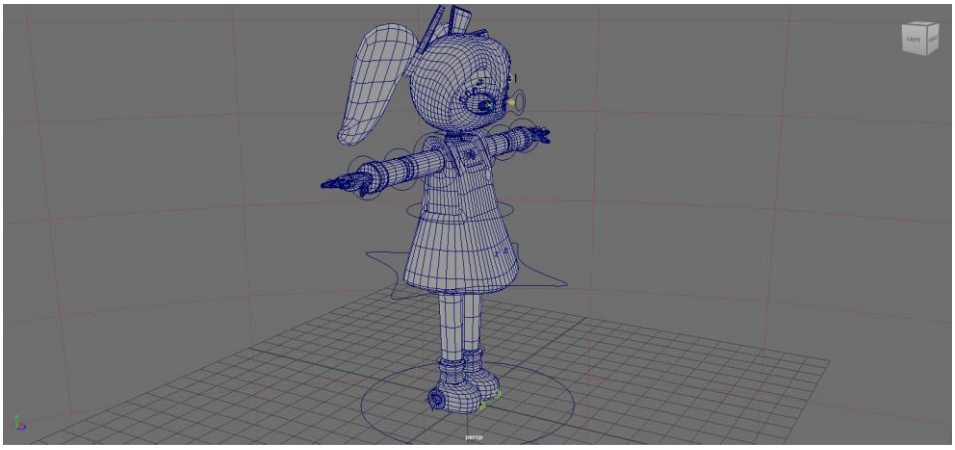


Figure 65: Controller on Cindy's 3D model

In 3D, controllers are used for bone rigging, which greatly simplifies and speeds up the animation process. Complex character will lead to complex joint location which may make it more difficult to choose or identify between the joints. Figure 65 shows how the controller, whose shape may customize, resolves the problem for the animator. It stops unwanted changes to the mesh or skeleton. It provides more precise and accurate control, resulting in smoother and realistic animation.

5.4.3 Paint Weights

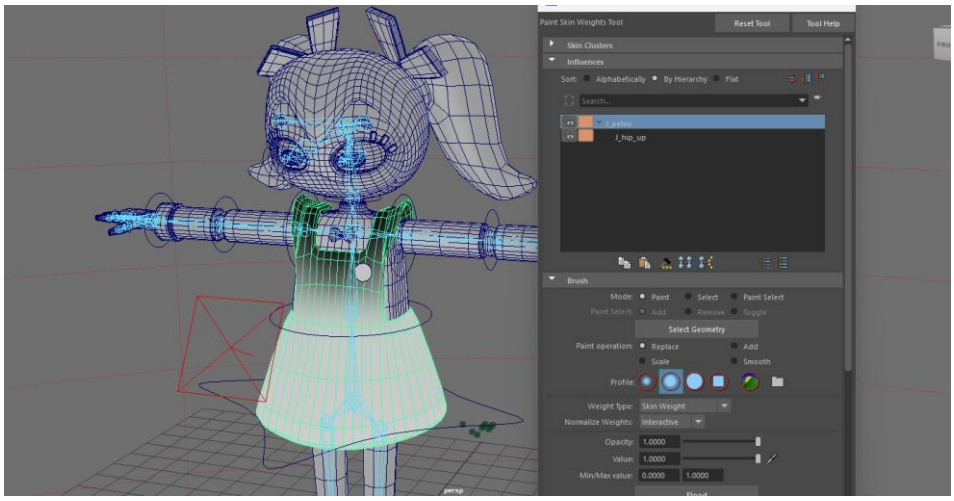


Figure 66: Paint Weights on Cindy's 3D model

Paint weight is a rigging step that determines the level of effect each joint has over the surrounding topology by adjusting how the mesh deforms when a joint moves. The mesh's coloured areas, which may be individually painted and changed to adjust deformation smoothness show the weight influence of a particular joint. Due to the Bind Skin with Selected Joints techniques used during the skinning process, paint weight was only added to the clothing mesh for this character because it was the only area that was clearly impacted by joint movement.

5.5 Animation

The last stage of development is animation, which uses movement to give rigged characters life. To achieve this, keyframes are set at places in the timeline, showing the character's position, rotation, and scale at those times. The software then uses a technique known as projection to figure out the in-between frames. To make sure that movements feel organic, reasonable, and expressive, animators follow to the 12 principles of animation, which include squash and stretch, anticipation, and follow through. All the earlier pipeline steps come together in an effective animation, which turns static models into an emotionally engaging and appealing visual story.

5.5.1 3D Animation

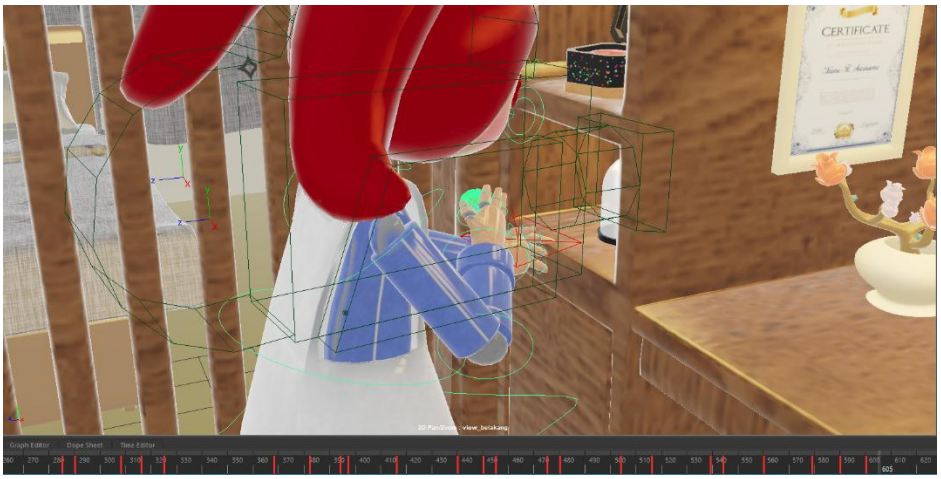


Figure 67: 3D animating in MAYA software

Maya software was used to complete the 3D animation process for this project. All the animation was created by key framing the camera's movement for different dynamic shots as well as each movement on the timeline. As shown in figure 67, the character was also key framed and animated in certain scenes.

5.6 Conclusion

To sum up, the production phase of this project animation pipeline is a crucial step where all the pre-production preparation was brought to life. Because each stage is linked with the others, it must be completed with precise planning. If there is even one mistake in any part of the phase, it will have to be redone from the start, which will take time away from the deadline. Because of this, every component must be carried out precisely and checked several times to ensure that the finished product fulfils the animation's planned vision.

6 POST – PRODUCTION

6.1 Introduction

The last stage of the animation production process is called post-production, during which all the components made during production, including video, sound, visual effects and rendering, are combined and polished through editing. It is crucial in deciding the final animation's overall quality since it allows editors to correct small problems, modify animation timing, and add finishing touches to produce a polished and appealing final product.

6.2 Lighting

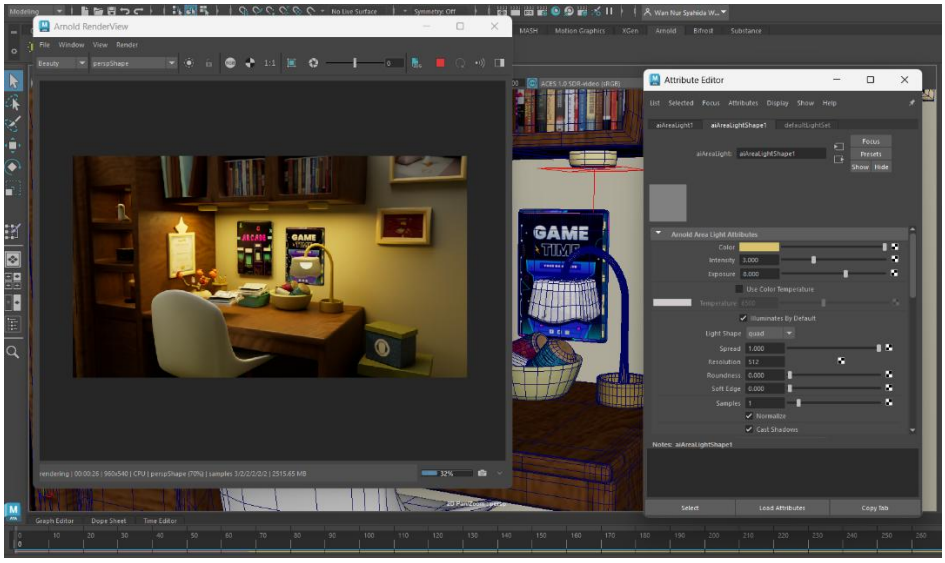


Figure 68: Lighting setup in 3D Maya software

Figure 68 shows an example of lighting in one of the scenes for this project. Based on the Arnold Area Light settings, the light was arranged with a warm yellow colour to simulate the glow of a desk lamp within the bedroom scene. The kind, colour, and intensity of lighting differ based on the scene's atmosphere and conditions. Since most of the scenes in this project are inside, more lights were needed to properly highlight the surroundings. These lights included lamps and other shining items in the scene. To ensure that the lighting significantly improves to the overall atmosphere of the animation, each light was carefully adjusted to fit the ambience and mood of its matching scene.

Figure 69: Rendered scene lighting sample

6.3 Rendering

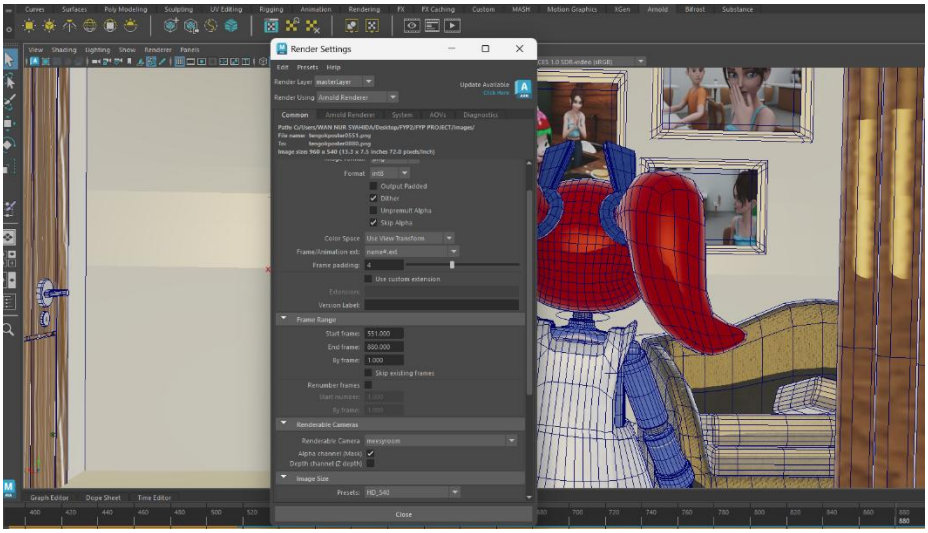


Figure 70: Render setting

The finished 3D scenes are collected as final images from the software during the rendering stage of post-production. To enable to reduce total rendering time and balance the process with the current hardware capabilities, each scene was produced as separate PNG frames for this project before being combined into a video using video editing software. All scenes were selected using the GPU rather than the CPU, and the image quality was adjusted to 720p and 540p HD resolution to reduce rendering time. Each scene was rendered separately on multiple saved files to further improve rendering quality, ensuring that the hardware resources were given entirely to one scene at a time.

6.4 Compositing

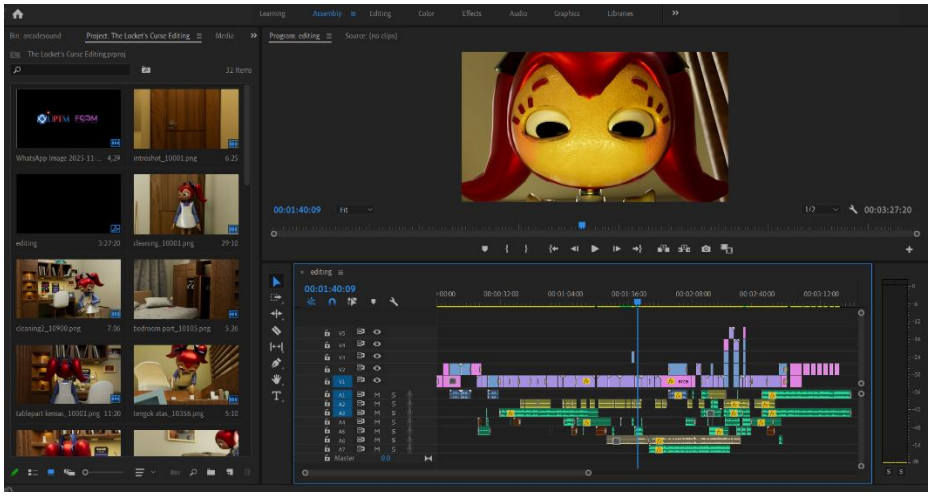


Figure 71: Compiling video scene in Adobe Premiere Pro

Combining different visual components to create a single, consistent image or scene is known as compositing. The process of compiling all produced PNG frames into video scenes and placing them in the proper order along a single timeline is known as compositing in this project. At this point, each scene's timing might be examined ad adjusted to better fit the overall plot, with certain sequences being cut, speed up, or slowed down as necessary. Only after the timing and flow were finalized were background music and sound effects added. This is because any changes made after the audio was added could disrupt the timeline and require an adjustment of every piece, which is a long and challenging procedure.

6.5 Visual Effect

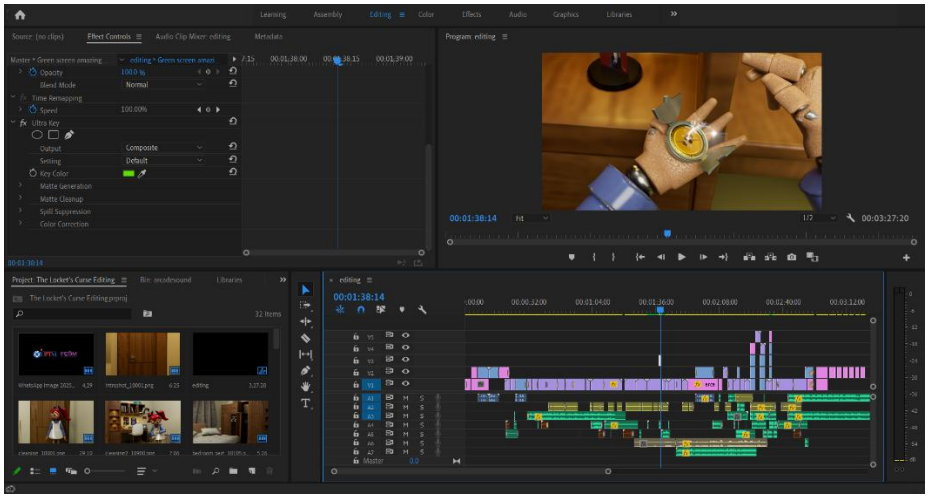


Figure 72: Sparkle effect added using Adobe Premiere Pro

Adobe Premiere Pro was used to create a sparkling visual effect to one of the sequences. To accomplish this, a free green screen glitter movie was imported and layered over the scene video. The green background was then eliminated using the Ultra Key effect, revealing only the sparkling element. The same clip repeatedly placed to produce a more vibrant and varied look, and the sparkle was resized and relocated to match the desired location inside the scene. Lastly, the overlay and screen blending modes were selected for the sparkling layers, allowing them to mix in with the scene without any visible borders.

6.6 Final Output

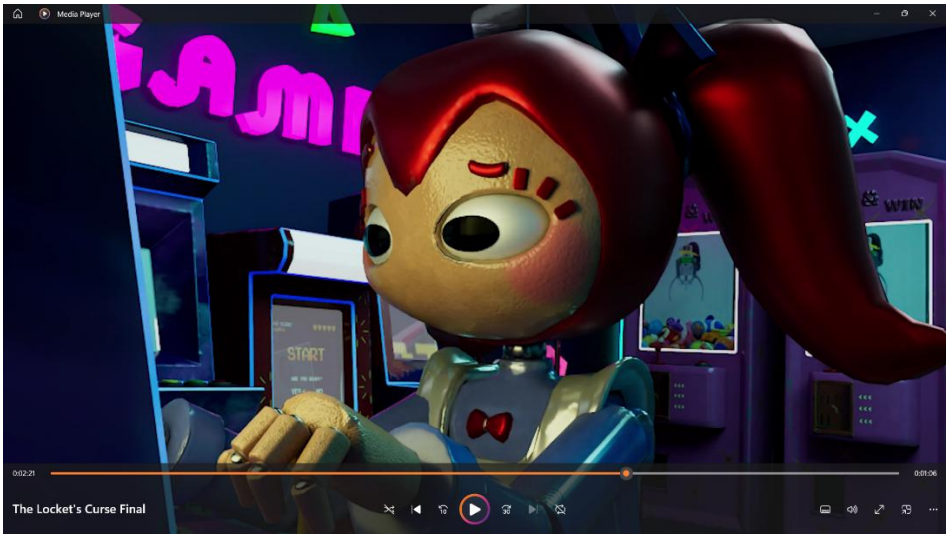


Figure 73: Screenshot of the final output video

Exporting the finished video is the last stage of the post-production process. The project was exported as an MP4 video file once all editing, compositing, and sound mixing were verified to match the required standard and vision. The introduction and end credits are included in this final export, creating a finished and viewable animation that marks the result of the production process. Click this link to view the video.

6.7 Conclusion

In summary, post-production is a crucial phase in the animation process where all media components are put together and polished to create a finished result. The animation's overall quality and emotional impact is significantly enhanced through procedures including compositing, visual effects, and audio design. Additionally, this phase saves time while maintaining a high level of output through allowing small changes to be made without going back to previous stages. It is the last stage before the animation is prepared to be shown to viewers.

7 EVALUATION

7.1 Introduction

This chapter focuses on evaluating the project's overall result through an analysis of audience feedback and survey results. The information gathered is used to evaluate the project's operational performance, visual quality, and efficiency as well as figure out its advantages and disadvantages. The evaluation's conclusions serve as a basis for reflection and offer insightful information that can guide and enhance future projects.

7.2 Evaluation Method

7.2.1 Questionnaire

Google Forms was used to create a survey to get audience feedback regarding the animation project. The 12 questions on the form were designed to assess the project's overall worth as well as the success of its primary goal, which was to spread awareness of the dangers of addiction and the impact of breaking the rules, especially to younger audiences.

No.	Question	Answer
1	What is your age group?	Answer option consists of: • Under 18 years old • 19-24 years old • 25-30 years old • Above 30 years old
2	What is your gender?	Answer option consists of: • Male • Female • Prefer not to say
3	Have you watched short 3D animated films before?	Answer option consists of: • Yes, often • Sometimes • Rarely • Never
4	How would you rate the character design (Cindy's appearance, robot features, expressions)?	Answer option consists of: • Rating

5	How would you rate the background design (the room, arcade environment, visual atmosphere)?	Answer option consists of: • Rating
6	Was the storyline easy to understand?	Answer option consists of: • Yes • No • Maybe
7	How interesting did you find the storyline?	Answer option consists of: • Rating
8	Do you think the theme of curiosity and its consequences is relevant to today's audience?	Answer option consists of: • Yes, very relevant • Somewhat relevant • Not relevant
9	Please rate your level of awareness about the dangers of unchecked curiosity and temptation after watching this video.	Answer option consists of: • Rating
10	Do you agree this video is able to deliver the message about the importance of self-control and resisting temptation?	Answer option consists of: • Yes • No • Maybe
11	What is your overall opinion about this 3D animation? What message or feeling did you take away from Cindy's experience?	This question uses text base answer. Relying on the audience personal thought and opinion.
12	Overall, how would you rate "The Locket's Curse"?	Answer option consists of: • Rating

Table 8 : Survey's questions

7.3 Conclusion

To sum up, the evaluation stage offered insightful information about the animation project's performance and general audience response. Feedback was effectively obtained from both the aimed group of people and others by using **Google Forms** to deliver the questionnaire. The responses provided an extensive review of the project's impact by highlighting important elements such as the viewers' background, general perceptions of the animation, the success of the project's main objective, and possibilities for development.

8 DISCUSSION OF FINDINGS

8.1 Introduction

The survey results that were discussed in the previous chapter are presented in this chapter. For clarity and convenience of understanding, pie charts are used and 37 people had completed the survey. The results are presented in the following parts according to the order in which the questions were asked.

8.2 Evaluation Results

8.2.1 Questionnaire Feedback

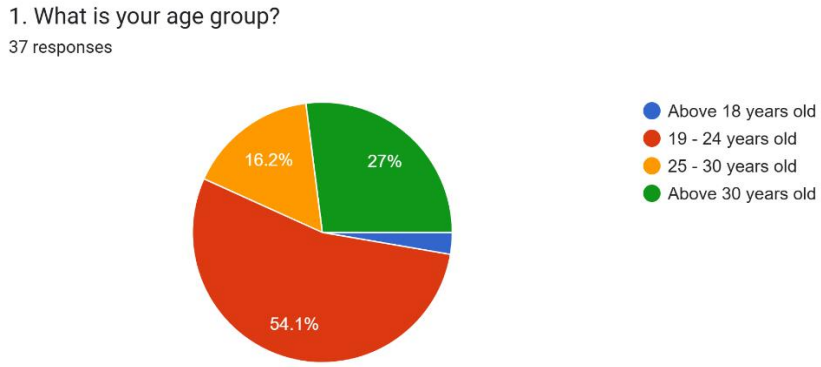


Figure 74: Questionnaire's first question result

Based on the figure above, there are 20 respondents are around 19-24 years old, 10 around above 30 years old, 6 around 25-30 years old, and 1 round under 18 years old.

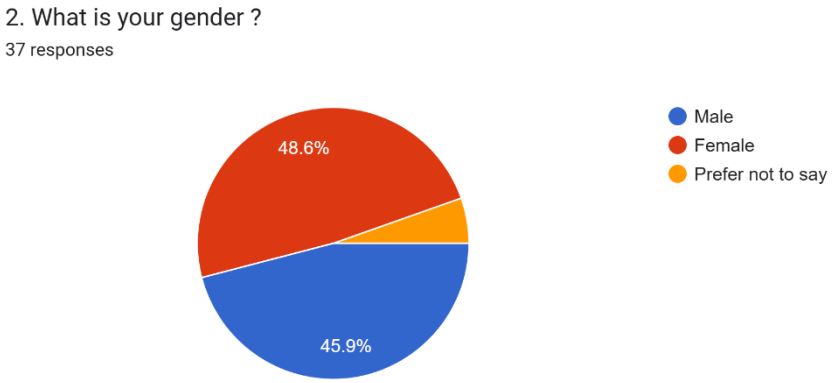


Figure 75: Questionnaire's second question result

Based on the figure above, there are 18 female, 17 male and 2 prefer not to mention their gender respondents for this evaluation survey.

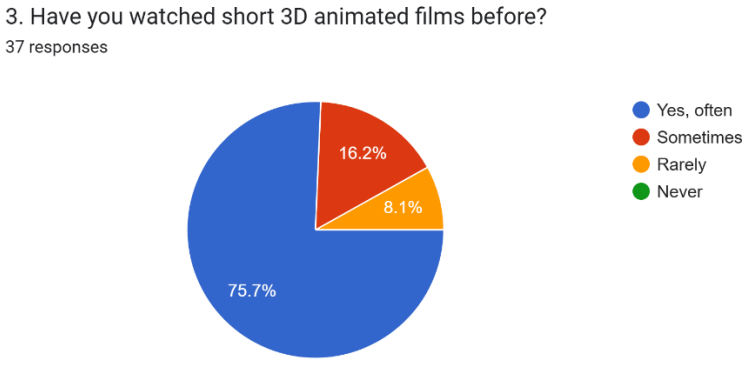


Figure 76: Questionnaire's third question result

Based on the figure above, there are 28 respondents answers it yes, 6 respondents answers sometimes and 3 respondents rarely watched short 3D animated films.

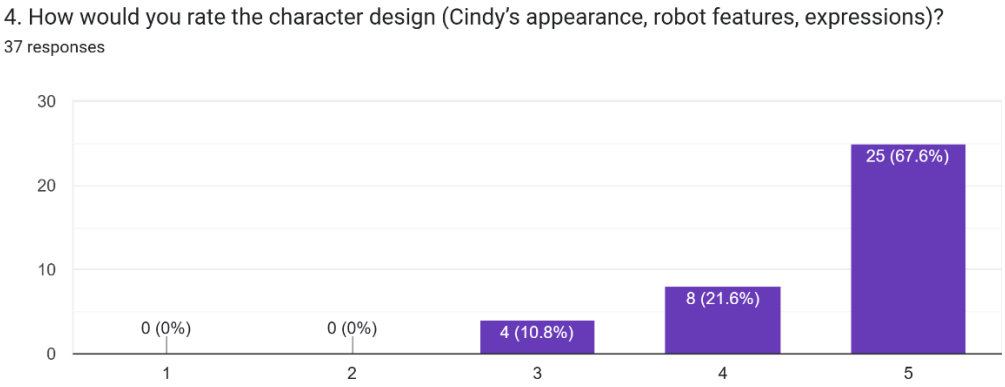


Figure 77: Questionnaire's fourth question result

Based on the figure above, there are 25 respondents rate it 5, 8 respondents rate it 4, and 4 respondents rate it 3 for the character design.

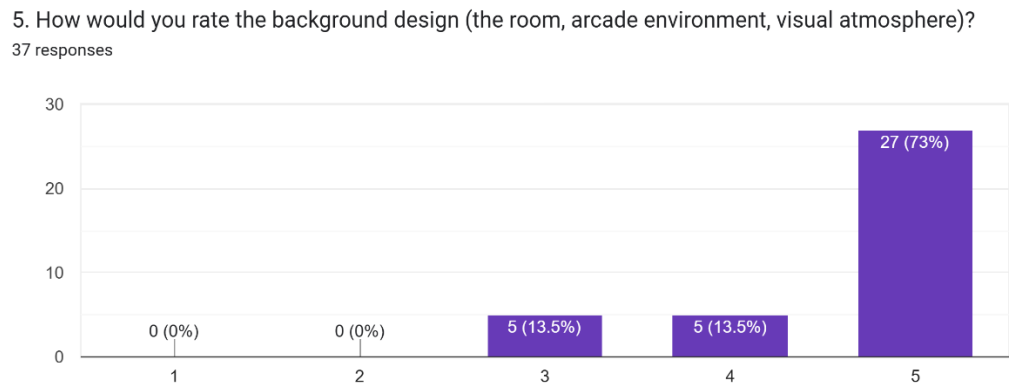


Figure 78: Questionnaire's fifth question result

Based on the figure above, there are 27 respondents rate it 5, 5 respondents rate it 4, and 5 respondents rate it 3 for the background design.

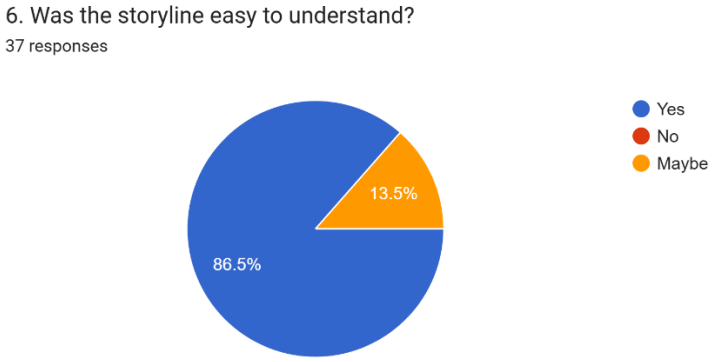


Figure 79: Questionnaire's sixth question result

Based on the figure above, after watching the animation, there are 32 respondents who are understand the storyline, meanwhile other 5 respondents maybe understand the storyline.

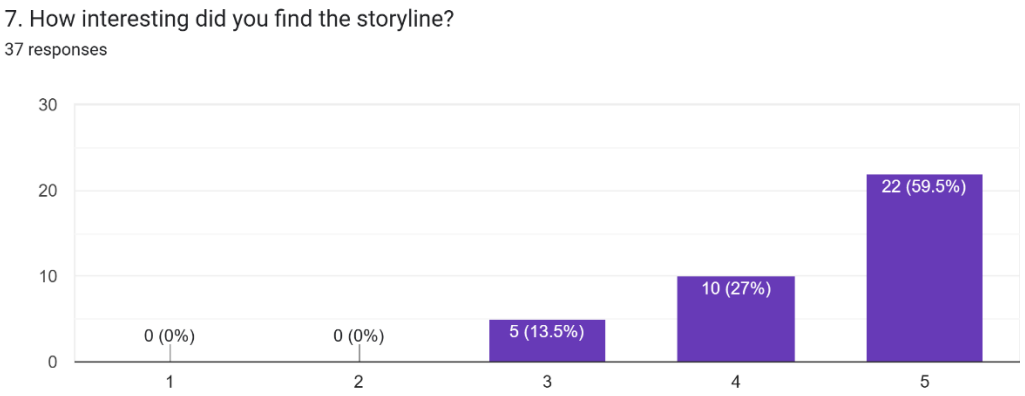


Figure 80: Questionnaire's seventh question result

Based on the figure above, there are 22 respondents rate it 5, 10 respondents rate it 4, and 5 respondents rate it 3 about storyline's interesting.

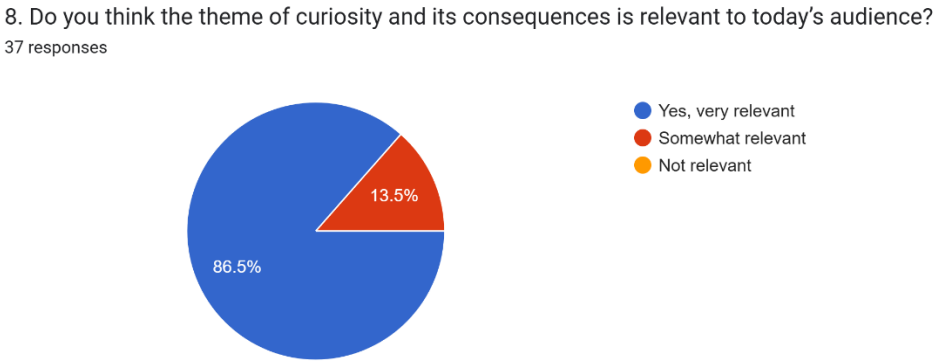


Figure 81: Questionnaire's eighth question result

Based on the figure above, there are 32 respondents found the story relevant to today's audience, meanwhile other 5 respondents found it somewhat relevant.

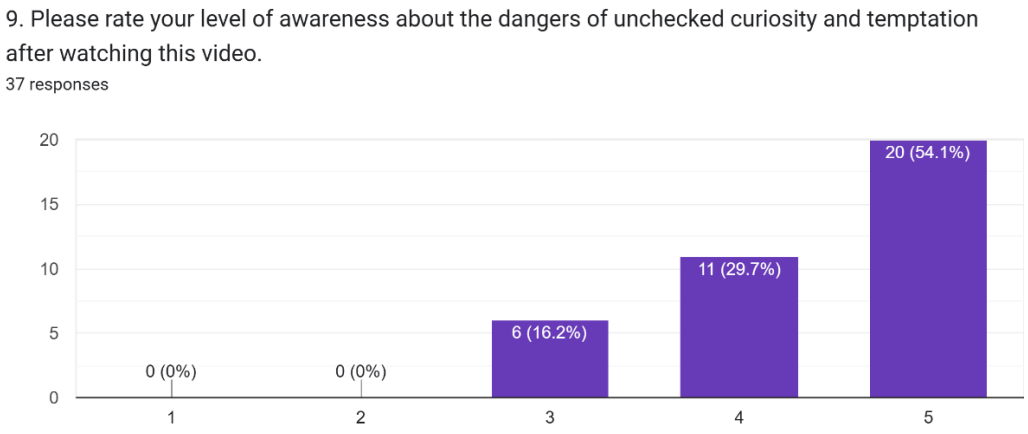


Figure 82: Questionnaire's ninth question result

Based on the figure above, there are 20 respondents rate it 5, 11 respondents rate it 4, and 6 respondents rate it 3 for the level of awareness after watching the video.

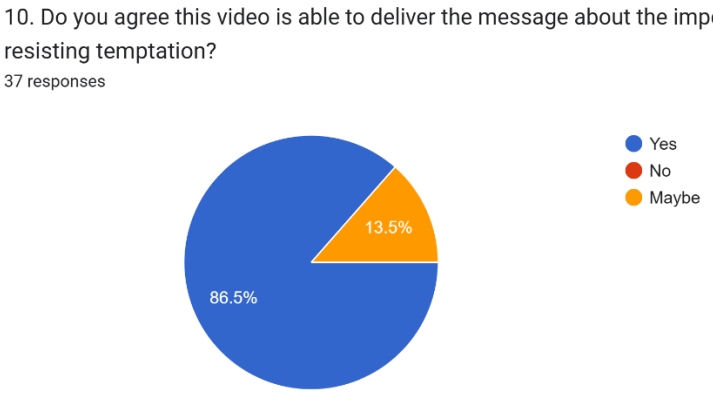


Figure 83: Questionnaire's tenth question result

Based on the figure above, there are 32 respondents agree, meanwhile other 5 respondents maybe agree that the video able to deliver the message.

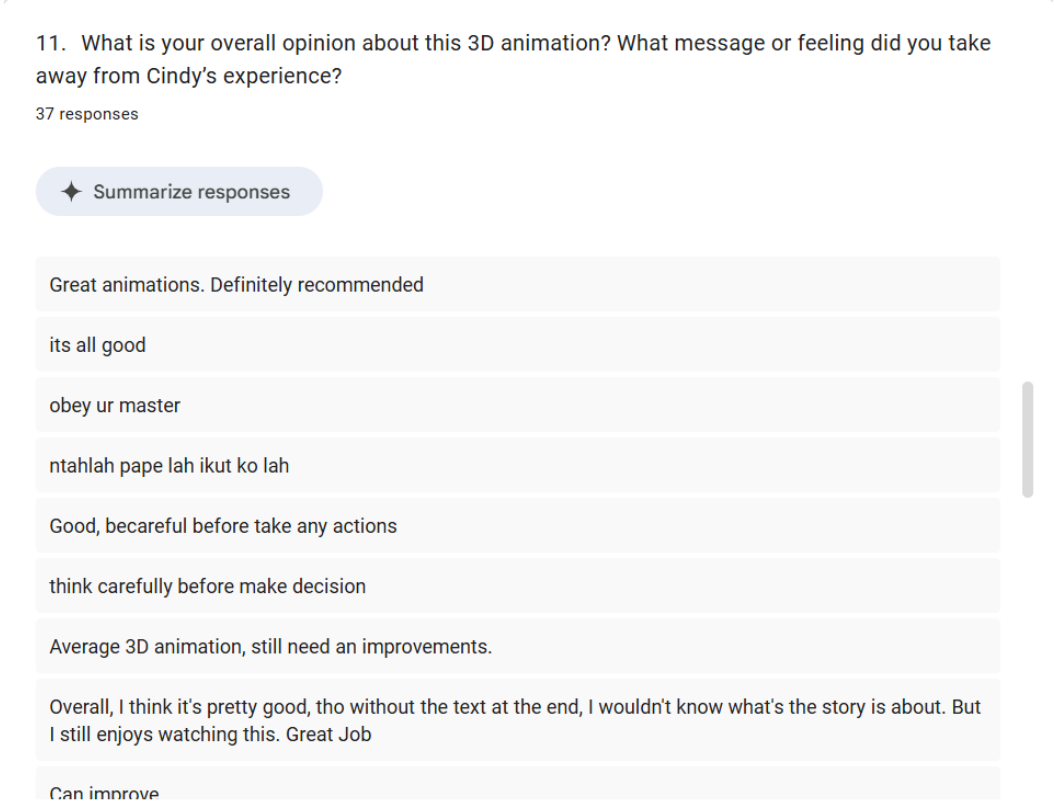


Figure 84: Questionnaire's eleventh question result page 1

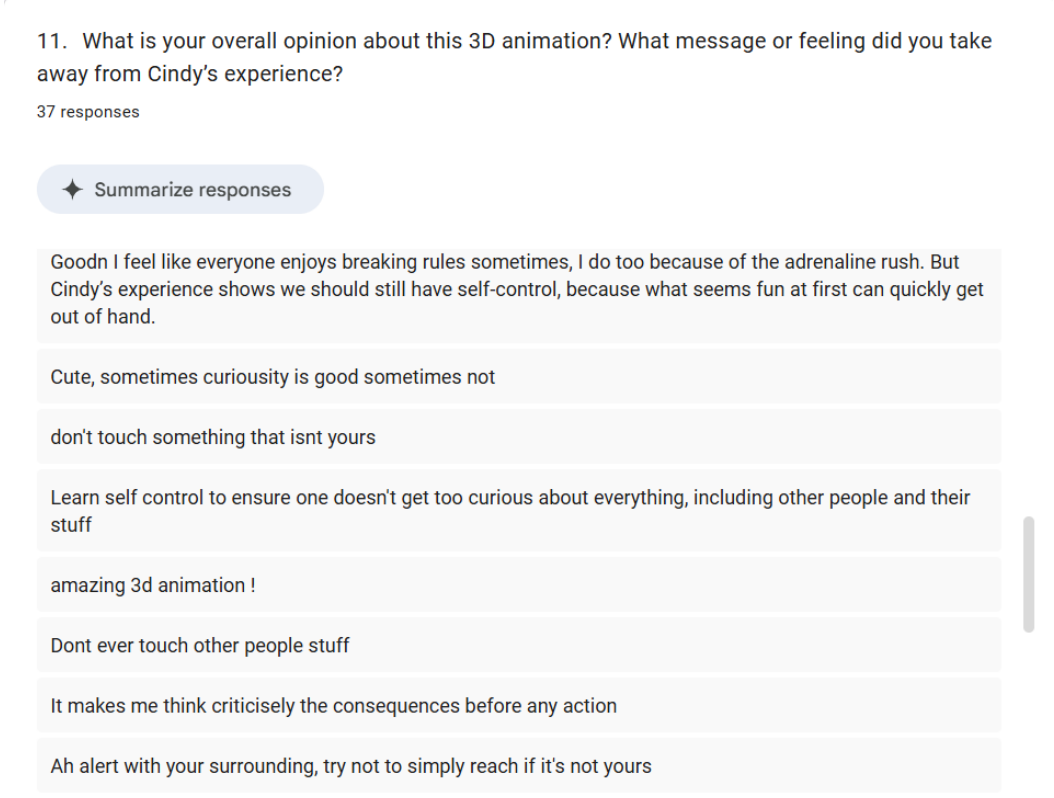


Figure 85: Questionnaire's eleventh question result page 2

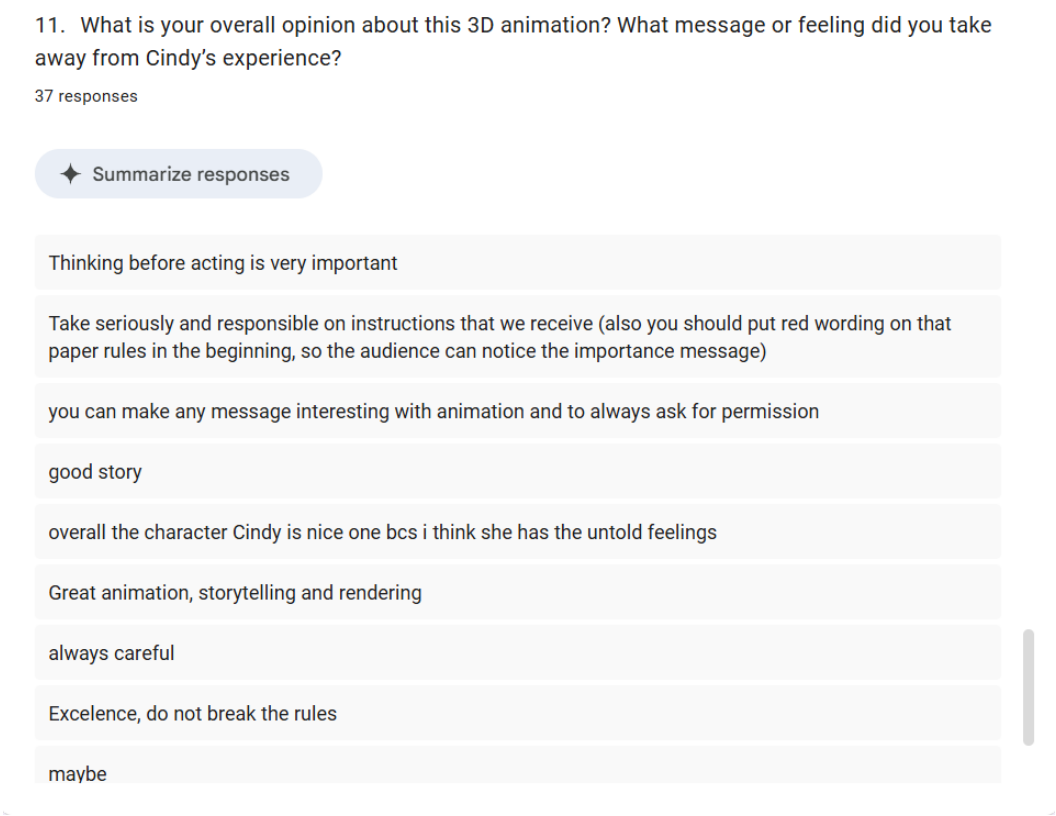


Figure 86: Questionnaire's eleventh question result page 3

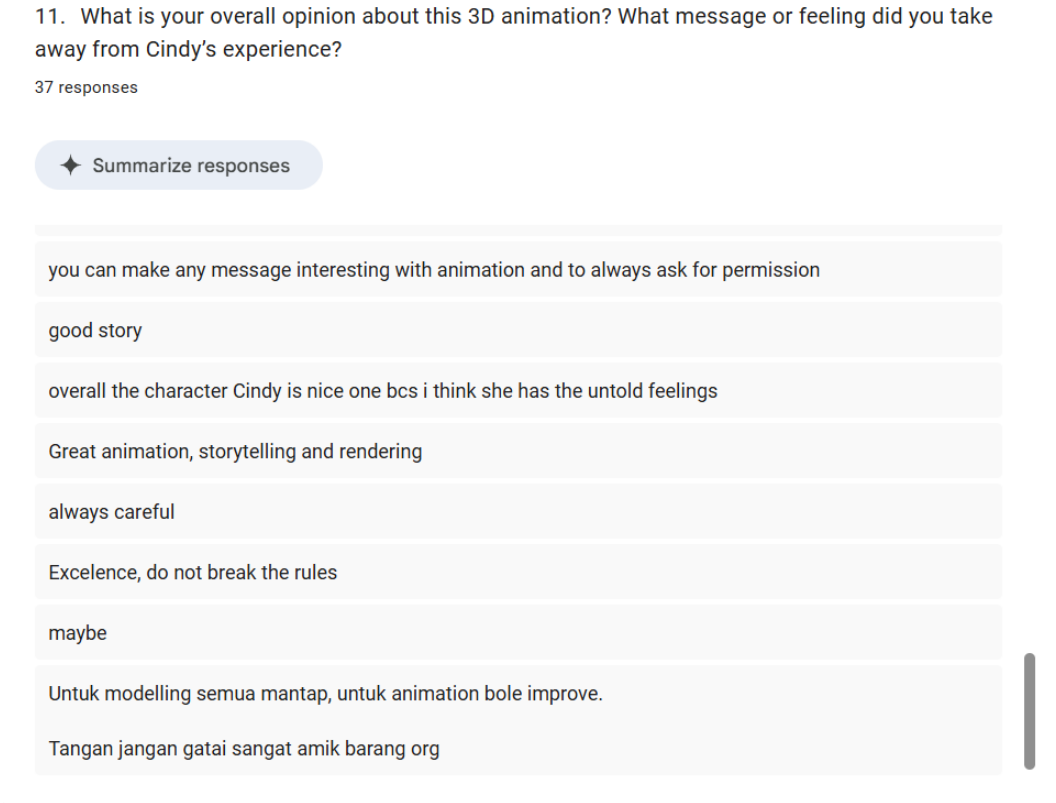


Figure 87: Questionnaire's eleventh question result page 4

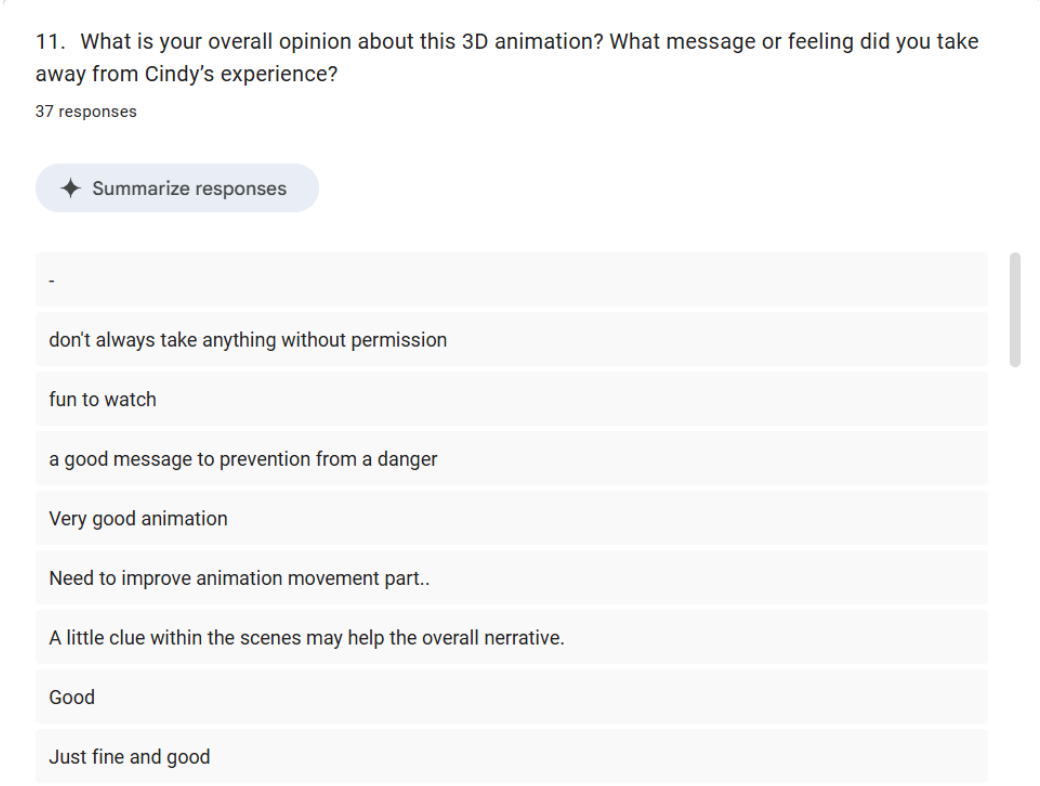


Figure 88: Questionnaire's eleventh question result page 5

Based on figure 84 - 88, the survey responses revealed that most of the respondents successfully understood the project's core messages, especially those related to the importance of sticking to rules, maintaining self-control, and consequences of curiosity driven actions. The primary goal of the animation is reaffirmed by respondents' observations that apparently simple activities can suddenly turn intro serious consequences.

In terms of quality, opinions ranged from very positive to average, with some suggestions to improve animation movement and modelling. In terms of narrative detail, while the majority thought the story was entertaining, one respondent pointed out that it was hard to understand the story's context without the conclusion text, such highlighted word on the rule paper, could improve the story overall.

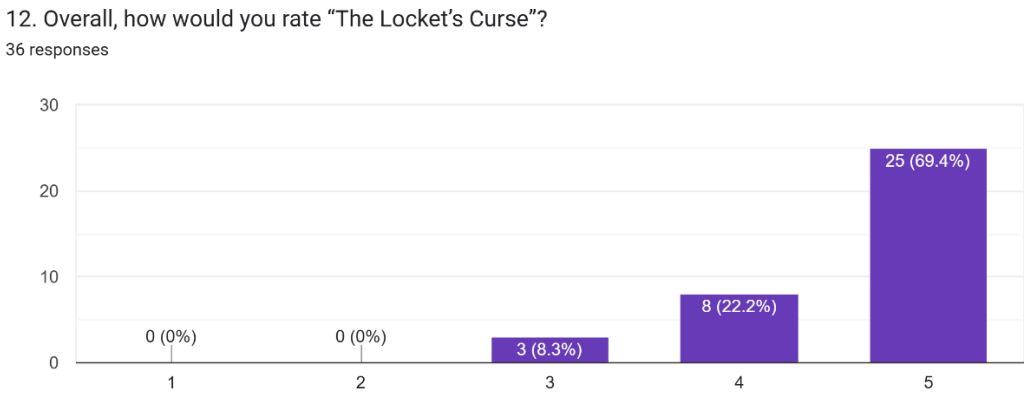


Figure 89: Questionnaire's twelfth question result

Based on the figure above, there are 25 respondents rate it 5, 8 respondents rate it 4, and 3 respondents rate it 3 for overall video.

8.3 Discussion

A very balanced group of 37 respondents, mostly between the ages of 19 and 24, completed the poll, with nearly equal numbers of male and female participation. They are a relevant and knowledgeable audience for this project because most respondents said they watch short 3D animated movies. Character design, background design, and storyline involvement all received good scores, showing the level of quality and effort put into the production process. Overall, the animation was well received.

Regarding story effectiveness, after watching the animated film, 32 out of 37 respondents said they understood the plot, and an equal amount said the content was appropriate for today's audience. 32 respondents agreed that the animation effectively conveyed its intended message about rules, self-control, and consequences. Most viewers rated the animation at the highest level, suggesting that it met its primary learning goal. The amount of awareness created among viewers also scored positively.

However, there were a few small areas that needed work, especially in the areas of storyline clarity, modelling quality, and animation movement. Stronger visual storytelling clues could further improve audience understanding, according to one respondent who pointed out that the story's content was more difficult to understand without the conclusion text. Despite these small complaints, most respondents gave the video a score of five out of five, suggesting that it was well accepted and that the project was successful in producing an animation that was both visually appealing and meaningful.

8.4 Conclusion

In summary, the results of the survey showed that the animation project's audience responded positively to it, successfully achieving its main goal of conveying a powerful and understanding message. A great deal of audience knowledge and comprehension further speaks to the animation's capacity to convey its intended message in an interesting and approachable way. Small criticisms about story clarity and animation refining are helpful suggestions that can be used to increase the quality of future projects, promising constant improvements in both technical performance and storytelling.

9 CONCLUSIONS

9.1 Introduction

This chapter summarizes the main conclusions, insights, and results that were discovered over the process of the research. It reviews the project's goals and analyses how well they were met while also recognizing the advantages and disadvantages of each production phases. This chapter wraps up the study with concluding remarks and suggestions for future improvements based on the data offered by survey respondents and the project's overall execution.

9.2 Achievements

9.2.1 First Point of the Objective

According to the survey results, the project's objective which is to emphasize the value of following the rules, was well accomplished. 32 out of 37 respondents said they comprehended the plot and thought the animation's message was applicable to today's viewers, and the same proportion said the video successfully conveyed its intended message. Most respondents strongly agreed with the animation's message that breaking the rules, even when motivated by pure curiosity, can have huge and unexpected consequences.

This is consistent with the idea that following by the rules is firmly established in social norms and individual beliefs rather than just being about avoiding punishment. As supported by research, people follow rules out of respect and a desire to live up to social standards. The animation's plot, which is visually appealing and accessible, supported this idea. The audience's positive reaction speaks to the project's success in spreading awareness and conveying a significant message about the value of obeying to rules and boundaries.

9.2.2 Second Point of the Objective

Based on the survey results, the second objective, to use animation to show the risks of the gaming addiction, was also successfully achieved. The survey revealed that 20 out of 37 respondents gave the video the highest rating for raising awareness, and 11 more gave it a 4 out of 5. This shows that the animation successfully improved the audience's understanding of the topic. Additionally, respondents noted that the animation well illustrated what seems harmless and enjoyable activities can progressively turn into something uncontrolled, which closely resembles the reality of gaming addiction.

Research shows that obsessive gaming impact the brain's capacity for self-control, making it more challenging to quit even when the negative consequences are noticed. The effort made it easier for younger audiences to understand the dangers of gaming addiction by using animation to show this pattern of addiction.

9.3 Problem and Constraints

There were difficulties during the production process, especially in the context of technical. The biggest challenge was the character rig for Cindy, particularly her facial emotions, which took a long time to build and involved a lot of trial and error. This alone turned out to be one of the most time-consuming aspects of the entire production, requiring patience and numerous tests before a workable solution was discovered.

Another happening again issue with rendering was the need for numerous re-renders and constant adjustments due to inconsistent lighting and noise levels across scenes. Additionally, there were some problems with texture disconnection, where textures lost their file path connection. To make sure all textures showed correctly, trial renders were required before to each final render. At one point, several continues software problems that could not be resolved by traditional troubleshooting also required a complete reinstallation of Maya Software.

Despite these difficulties, all problems were eventually fixed by careful testing, troubleshooting, and manual changes. Beyond just finishing the project, overcoming these issues gave me valuable hands-on experience and a deeper understanding of the technical reality of 3D animation production. These insights will help me deal with similar challenges in future projects.

9.4 Future Work

Several improvements can be taken into consideration for upcoming work based on the survey responses and the overall project reflection. One of the most obvious weaknesses of this project was the animation's short duration, which made it challenging for viewers to understand the plot in its entirety at once because the pacing went quickly without giving viewers enough time to focus on important details or meaningful moments. This occasionally caused viewers to become confused by sudden scene changes. A more complex plot, improved scene pacing, and a stronger emotional bond with the audience could all be achieved by expanding the animation into a longer format, series, or even a short film.

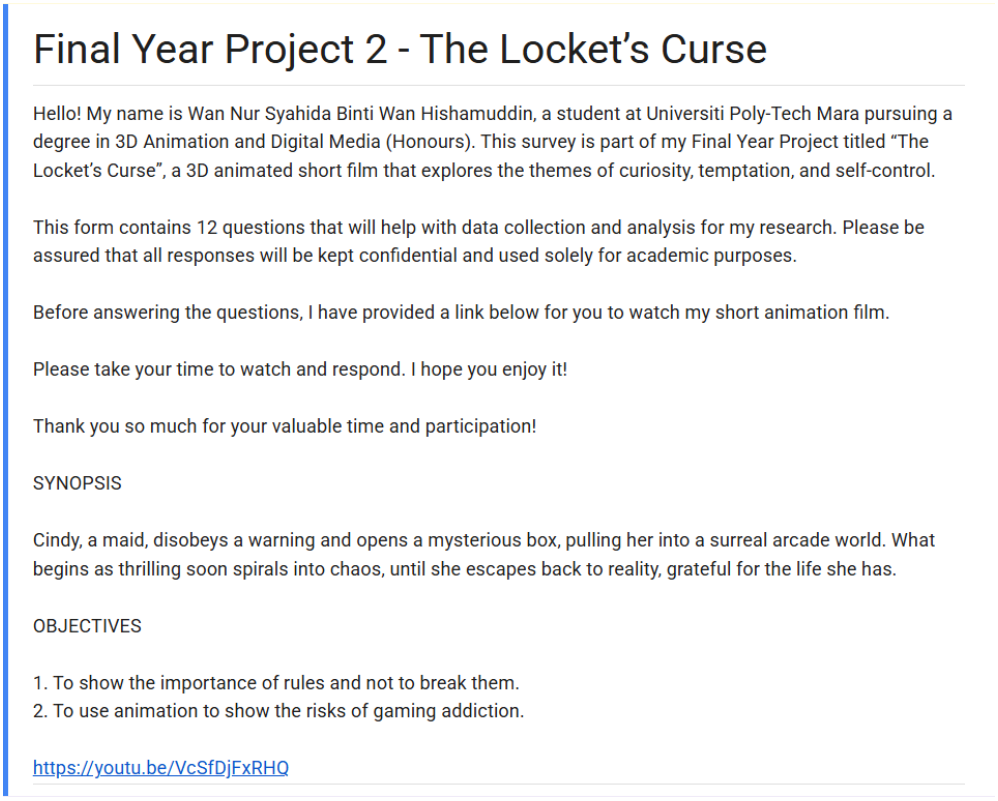
Technically speaking, the animation's overall visual polish would be much improved by more rigging, rendering quality, and texture resolution enhancement. Time management also contributed to the final result's limitations because the production's original vision was not fully realized due to the strict timeline. Future projects could be completed more thoroughly and satisfactorily without sacrificing quality under time constraints with improved planning and time management.

Clearer visual transitions would enhance audience comprehension and narrative clarity, especially in intense moments like flashback or hallucination. Additionally, the animation would be more accessible to its target audience if it rooted the global environment in local Malaysian culture. The animation's relevance would be further increased, and it would be able to reach a far larger audience if it were expanded into a more engaging or educational format, or if its scope was expanded to include other psychological and emotional difficulties.

9.5 Conclusion

To conclude, this project successfully met both of its main objectives which is to show the importance of rules and not breaking them, and to use animation to highlight the risks of gaming addiction, through emotional storytelling and impactful visuals. The evaluation's findings confirmed the animation's overall success by demonstrating great audience engagement, emotional connection, and message clarity. Despite the numerous difficulties that occurred during production, such as rigging, rendering, and texturing problems, each one was effectively overcome, contributing important technical knowledge and solving problems experience to the process. The audience's positive reactions and helpful recommendations show that there is a lot of room for future growth. Potential paths include extending the animation, improving its technical quality, adding local cultural elements, and digging deeper into mental health issues. In the end, this project not only achieved its creative and technical objectives but also serves as a significant first step in using animation to tell more meaningful and powerful stories.

Appendix A – Questionnaire



Final Year Project 2 - The Locket's Curse

Hello! My name is Wan Nur Syahida Binti Wan Hishamuddin, a student at Universiti Poly-Tech Mara pursuing a degree in 3D Animation and Digital Media (Honours). This survey is part of my Final Year Project titled "The Locket's Curse", a 3D animated short film that explores the themes of curiosity, temptation, and self-control.

This form contains 12 questions that will help with data collection and analysis for my research. Please be assured that all responses will be kept confidential and used solely for academic purposes.

Before answering the questions, I have provided a link below for you to watch my short animation film.

Please take your time to watch and respond. I hope you enjoy it!

Thank you so much for your valuable time and participation!

SYNOPSIS

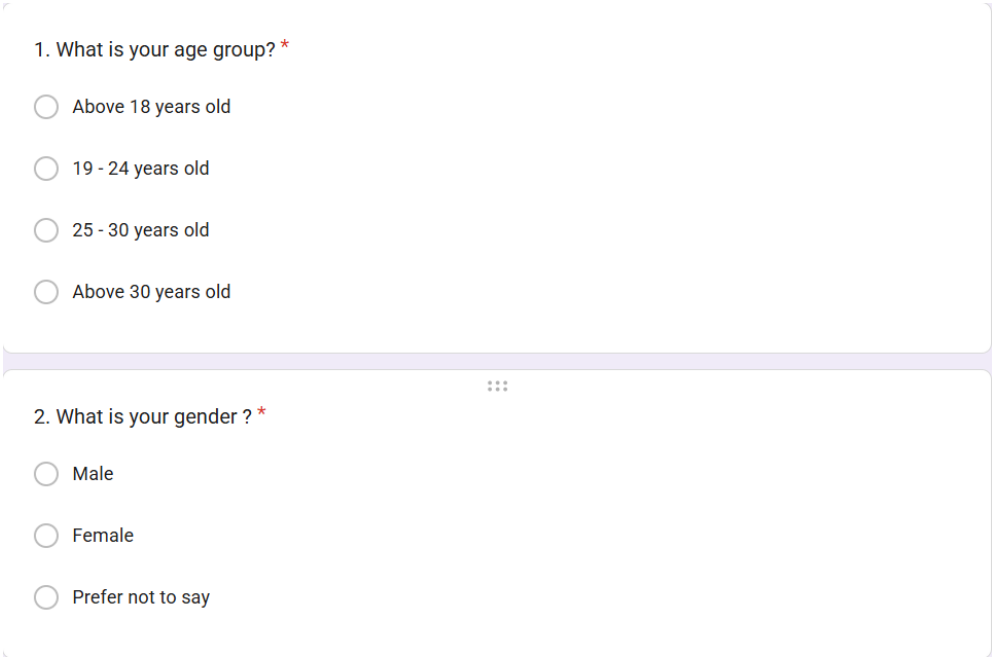
Cindy, a maid, disobeys a warning and opens a mysterious box, pulling her into a surreal arcade world. What begins as thrilling soon spirals into chaos, until she escapes back to reality, grateful for the life she has.

OBJECTIVES

1. To show the importance of rules and not to break them.
2. To use animation to show the risks of gaming addiction.

https://youtu.be/VcSfDjFxRHQ

Figure 90: Page 1 of the questionnaire form



1. What is your age group? *

- Above 18 years old
- 19 - 24 years old
- 25 - 30 years old
- Above 30 years old

2. What is your gender ? *

- Male
- Female
- Prefer not to say

Figure 91: Page 2 of the questionnaire form

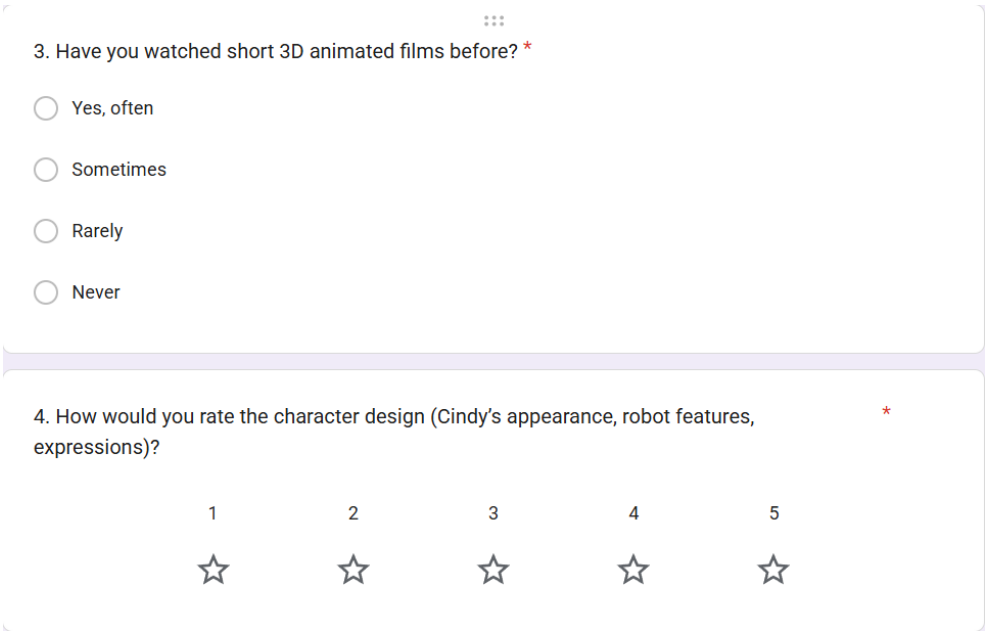


Figure 92: Page 3 of the questionnaire form

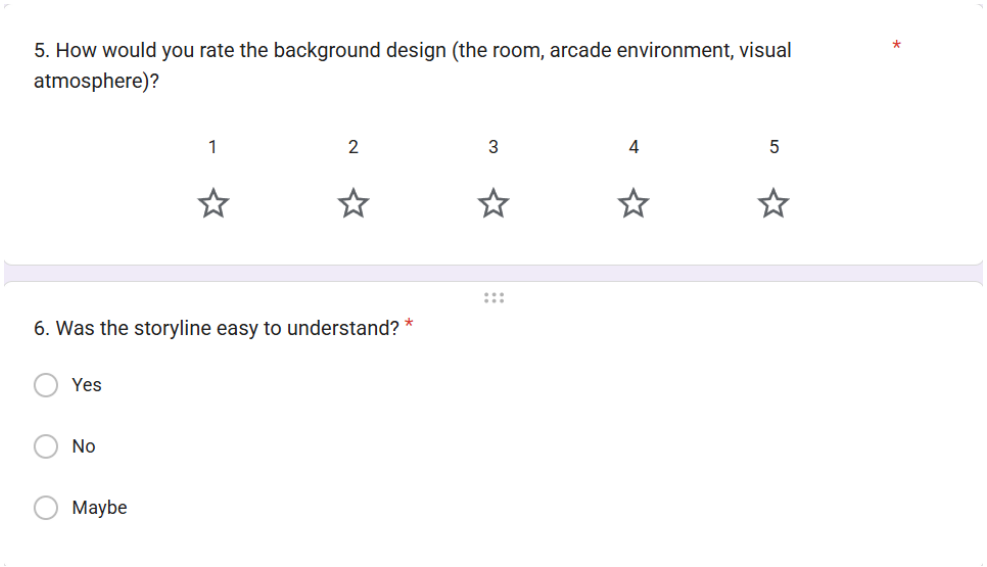


Figure 93: Page 4 of the questionnaire form

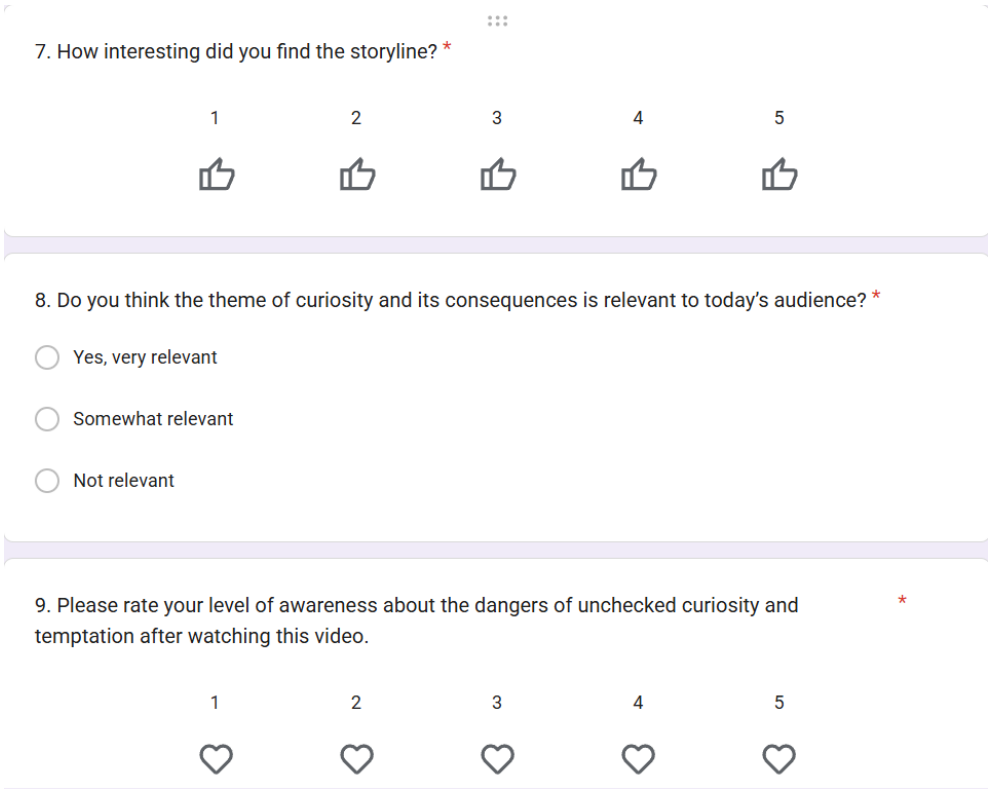


Figure 94: Page 5 of the questionnaire form

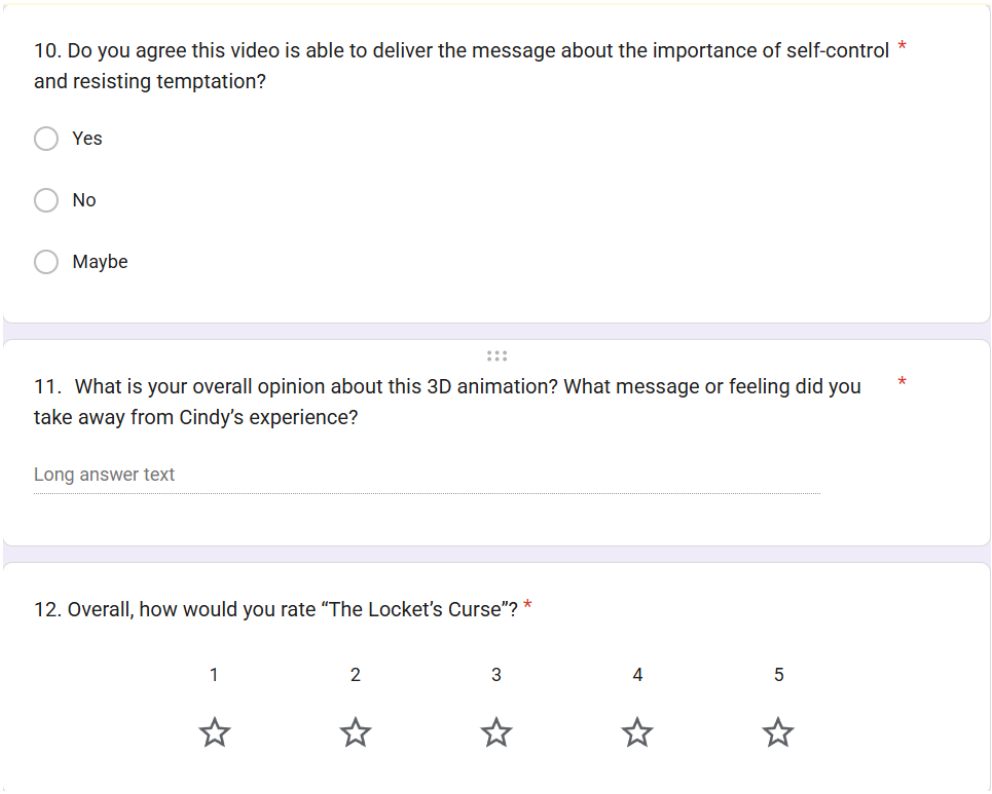


Figure 95: Page 6 of the questionnaire form

Appendix B - Turnitin Result

turnitin Page 2 of 40 - AI Writing Overview Submission ID trn:oid:::3618:134534203

*% detected as AI

AI detection includes the possibility of false positives. Although some text in this submission is likely AI generated, scores below the 20% threshold are not surfaced because they have a higher likelihood of false positives.

Caution: Review required.

It is essential to understand the limitations of AI detection before making decisions about a student's work. We encourage you to learn more about Turnitin's AI detection capabilities before using the tool.

Disclaimer
Our AI writing assessment is designed to help educators identify text that might be prepared by a generative AI tool. Our AI writing assessment may not always be accurate (i.e., our AI models may produce either false positive results or false negative results), so it should not be used as the sole basis for adverse actions against a student. It takes further scrutiny and human judgment in conjunction with an organization's application of its specific academic policies to determine whether any academic misconduct has occurred.

Frequently Asked Questions

How should I interpret Turnitin's AI writing percentage and false positives?
The percentage shown in the AI writing report is the amount of qualifying text within the submission that Turnitin's AI writing detection model determines was either likely AI-generated text from a large-language model or likely AI-generated text that was likely revised using an AI paraphrase tool or word spinner.

False positives (incorrectly flagging human-written text as AI-generated) are a possibility in AI models.

AI detection scores under 20%, which we do not surface in new reports, have a higher likelihood of false positives. To reduce the likelihood of misinterpretation, no score or highlights are attributed and are indicated with an asterisk in the report (*%).

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.

Figure 96: Page 1 Turnitin Result

turnitin Page 2 of 38 - Integrity Overview Submission ID trn:oid:::3618:134542271

27% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Match Groups

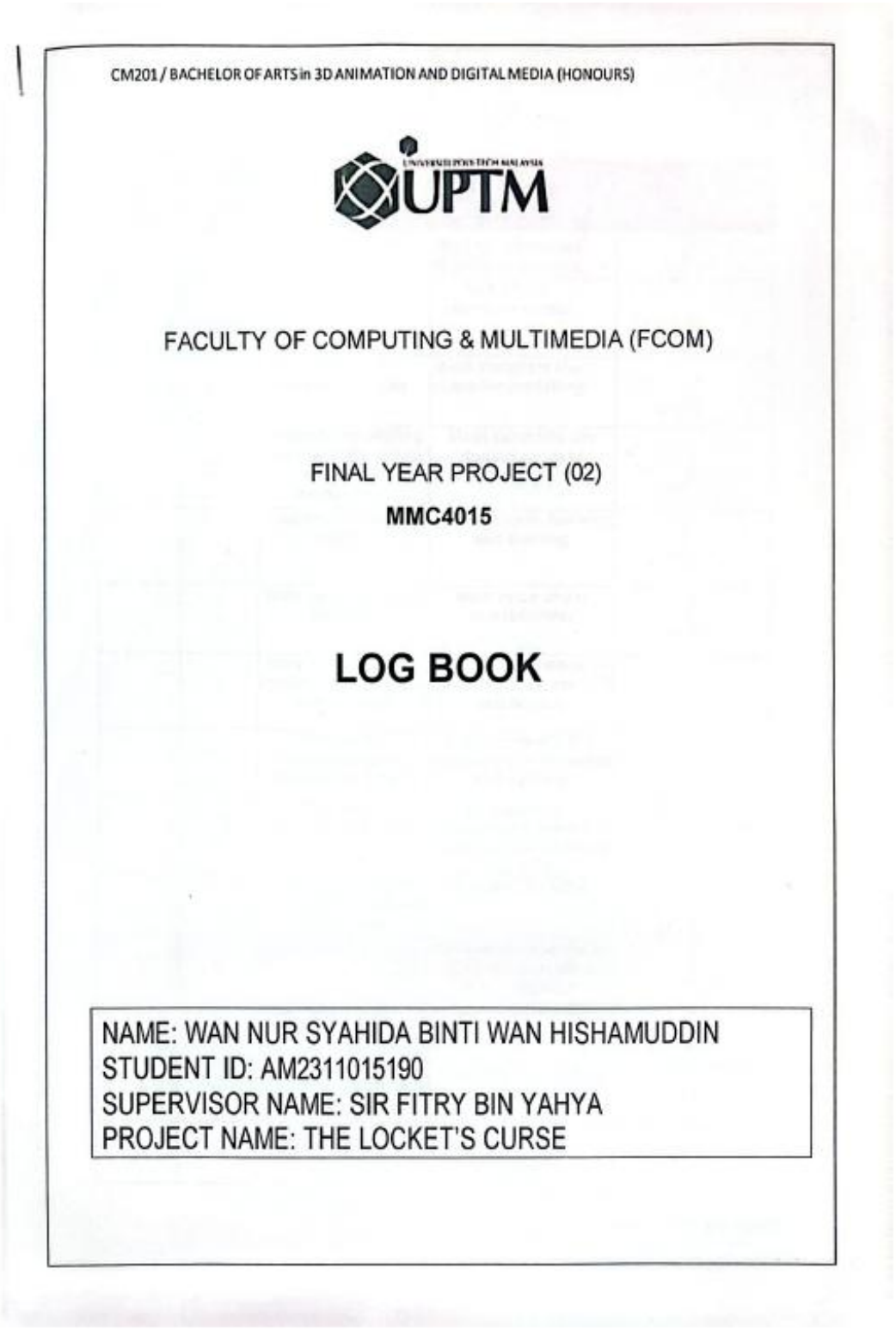
- 138 Not Cited or Quoted 27%
  Matches with neither in-text citation nor quotation marks
- 3 Missing Quotations 0%
  Matches that are still very similar to source material
- 0 Missing Citation 0%
  Matches that have quotation marks, but no in-text citation
- 0 Cited and Quoted 0%
  Matches with in-text citation present, but no quotation marks

Top Sources

1% Internet sources
0% Publications
27% Submitted works (Student Papers)

Figure 97: Page 2 Turnitin Result

Appendix C – Log Book



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

UPTM

FACULTY OF COMPUTING & MULTIMEDIA (FCOM)

FINAL YEAR PROJECT (02)

MMC4015

LOG BOOK

NAME: WAN NUR SYAHIDA BINTI WAN HISHAMUDDIN
STUDENT ID: AM2311015190
SUPERVISOR NAME: SIR FITRY BIN YAHYA
PROJECT NAME: THE LOCKET'S CURSE

Figure 98: Page 1 Log Book

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

Date & Week		Agenda	Next Agenda	Signature (Supervisor / Coordinator)
	1	Start to model the assets	Start the character modelling process	
	2	50% of character modelling process	80% of the character model	
	3	80% of character modelling process	Must complete the character modelling	
	4	Character modelling done and started to model the background	Must complete the rigging process	
	5	Rigging process done	Full walk cycle (walking and running	
	6	Walk cycle needs to be fixed	Walk cycle under construction	
	7	Walk cycle is done, continue to model the background	Background needs to unwrap the uv, rename and texture	
	8	Texture the background in Substance 1 by 1	Fully complete the background with texture and lighting	
	9	80% of the background done	Complete the background and do a facial expression for the character	
	10	Facial expressions are done and proceed to animate	Animate the story	
	11	Animating Process	Adjustment needed to make the animation look smoother	
	12	Animating and Rendering Process	Render all scenes	
	13	Rendering Process	Complete the editing process	
	14	Presentation	Project & Report Submission	

MOHD FITRY BIN YAHYA
Ketua Program CM201
Fakulti Pengkomputeran & Multimedia
Universiti Poly-Tech Malaysia

Figure 99: Page 2 Log Book

References

Amsterdam, U. van. (2025, May 26). Why we follow rules – even when no one's watching. Universiteit van Amsterdam. https://www.uva.nl/shared-content/uva/en/news/news/2025/05/why-we-follow-rules---even-when-no-ones-watching.html

Animation Workflow Guide: Step-by-Step Pipeline for Quality Animation - Educational Voice. (2025, August 13). Educational Voice. https://educationalvoice.co.uk/animation-workflow-guide

Dana Hatch, (2025, April 28). Rebel Yell and Why Your Brain Is Hardwired to Break the Rules. Brainz Magazine. https://www.brainzmagazine.com/post/rebel-yell-and-why-your-brain-is-hardwired-to-break-the-rules

Gao, Z. (2023). Time-Based Addiction. ArXiv.org. https://arxiv.org/abs/2304.06630

Gary Goldfield, Ph.D. (2025). I Want It Now! The Psychology of Instant Gratification. Psychology Today. https://www.psychologytoday.com/sg/blog/no-more-fomo/202503/i-want-it-now-the-psychology-of-instant-gratification

Liang, Z., Liao, X., & Cai, H. (2022). The Impact of Specific Psychological Characteristics on Decision-Making under the Different Conditions of Risk Self-Assessment. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.779246

Lopez, D. A., Foxe, J. J., Wijngaarden, E. van, Thompson, W. K., & Freedman, E. G. (2024). The longitudinal association between reward processing and symptoms of video game addiction in the Adolescent Brain Cognitive Development Study. Journal of Behavioral Addictions. https://doi.org/10.1556/2006.2024.00068

Newsroom. (2025, February 26). The Psychology of Online Gaming: Why Are Millions Addicted to Virtual Worlds? Modern Diplomacy. https://moderndiplomacy.eu/2025/02/26/the-psychology-of-online-gaming-why-are-millions-addicted-to-virtual-worlds

Tunçgenç, B., Newson, M., Sulik, J., Zhao, Y., Dezecache, G., Deroy, O., & Zein, M. E. (2022). Social alignment matters: Following pandemic guidelines is associated with better wellbeing. BMC Public Health, 22(1). https://doi.org/10.1186/s12889-022-13130-y

Venkat, G., Balaraman, K. K., & Vohra, N. (2025c). Hedonic Adaptation in the Age of AI: A Perspective on Diminishing Satisfaction Returns in Technology Adoption. ArXiv.org. https://arxiv.org/abs/2503.08074