

Mindmap

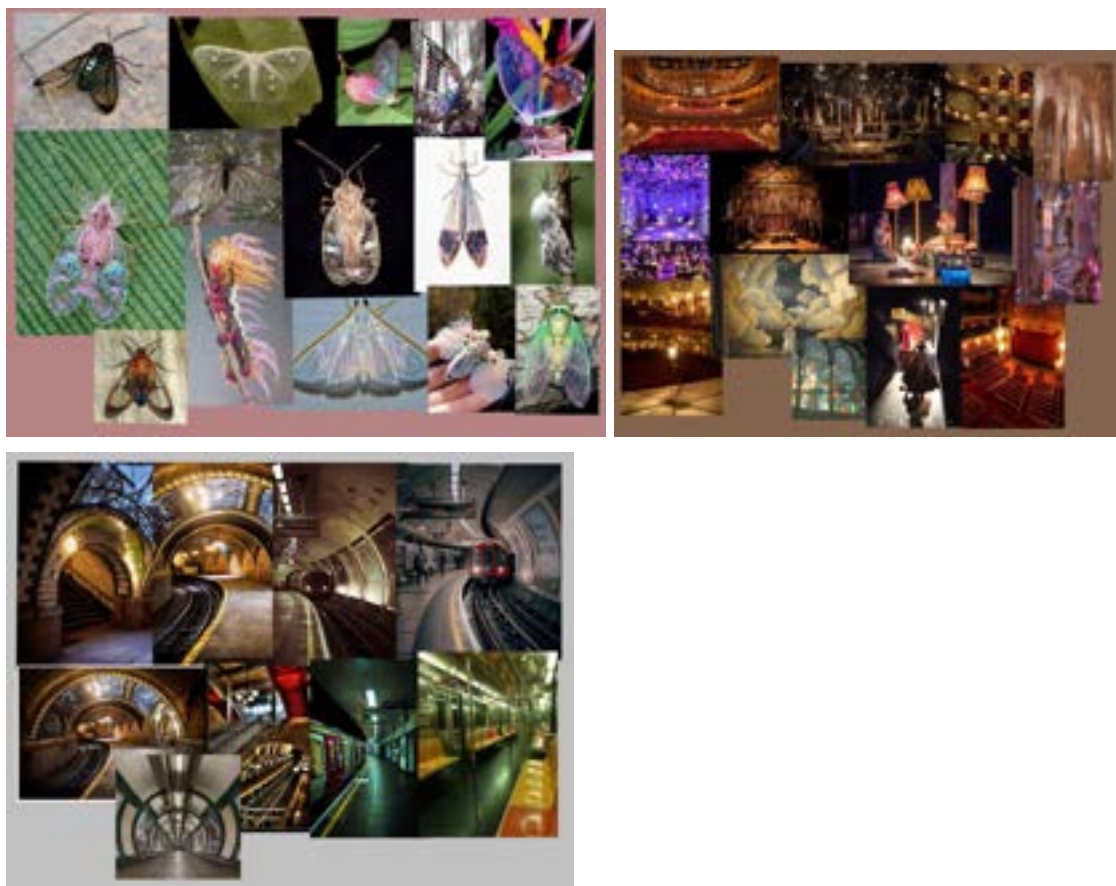


This was the mindmap I used to organize my thoughts and decide what I want to do for this project. I explored various topics and ideas, they are all different styles and have different feelings. Because I want to do a fantasy world with a lot of dreamy and imaginary elements. Therefore I didn't consider the real life scene for this project.

Moodboard

These are my mood board images. For my upcoming project, I want to focus on insects, specifically moths or butterflies, because I really like the glass-like texture of their wings. I had a dream where a moth was in a theater, and I thought it would be a great idea to recreate that scene.

I envision the theater having a cathedral-like style, creating a sacred atmosphere. I plan to design the moth's wings using stained glass or a semi-transparent texture to enhance the overall divine ambiance.



This was the second idea that came to me, as moths represent metamorphosis, so it made me think of the London Underground. The unique design of the London Underground, where many of the stations have a rounded shape, made me relate to the chrysalis of the moth. I imagined a giant moth trapped in a moving subway, and the protagonist walking through a dream-like station, slowly entering the station, creating a sense of suffocation and oppression in the narrow space in which it is trapped.

But I didn't go with this idea, but with the first one, because I wanted to create a scene that conveyed more positive and complex emotions, and since I had a very clear picture of the first scene, I felt it would be more appropriate for this work.

Concept Art

This is an idea I got when I was on my way back home, I noticed a uniquely shaped camera in the middle of the road that, from a distance, resembled a bird. This sparked an idea for a sci-fi apocalyptic scene where the world has already ended, and surviving humans are being monitored by these bird-like robotic creatures. They are forced to live a life of constant evasion and hiding. However, due to the incomplete nature of this concept, I ultimately did not choose to pursue it.



Story and Meaning of My Scene



The idea I want to convey with this artwork is a pursuit of psychological change in an individual. I chose the setting as a musical theater because it represents a connection. In a theater, people usually dress formally and sit quietly in their seats while watching a performance. However, what unfolds before them is a completely different world—one that may contain mixed emotions and tragic stories, providing people with a deeper understanding of the hidden pain or a different perspective. Like other forms of art, drama and theater brought the audience to another world through the stage and performance.

For the other main character in the scene, the moth, I thought of integrating an enormous moth into the setting, creating a sense of surrealism and dreaminess. Moths are nocturnal insects, making them more associated with dreams. Most of the symbolism they have is negative, they symbolize death and blind pursuit. On the other hand, they may also represent transformation and the pursuit of light despite reckless abandon. In this world, the moth, lost in its pursuit of light, encounters a young girl representing innocence and purity in the theatrical space.

They continuously try to understand more about the world. Perhaps, from the girl's perspective, the moth is an imaginative figure, a dream of her imaginary and creativity. For the moth, the girl embodies the tranquility and light that it wanted. I also use the texture of stained glass in the theater, although it does not make any sense in the real world but I would like to highlight the atmosphere of dream and imagination, which anything could be possible. Behind this idea is my belief that stained glass is composed

of fragments of different colors, each representing the complexity of the characters' emotions and self-pursuits.

Character Design

This is the design sketch for my moth character, primarily inspired by these two images. I particularly like the furry texture on the left and the wing design on the right. Since this is a character from a fantasy world, I didn't reference the realistic color of moths but instead opted for dreamy shades of blue, pink, and green, enhancing the base brown with additional colors in the fur. As it will be a close-up, I also want its eyes to be special, giving a reflection of the starry sky, creating a surreal feeling. I'm considering adding emission to make parts of the moth glow.

Due to my limited knowledge of rigging, the character might not have extensive movement. However, I aim to create a slow, gradual appearance, emphasizing the contrast in size and the sense of wonder between the little girl and the moth. This contrast can enhance the dreamy atmosphere, that in reality, moths are much smaller than humans, but in this world, it's the complete opposite.



Rig – Kayla by Josh Sobel

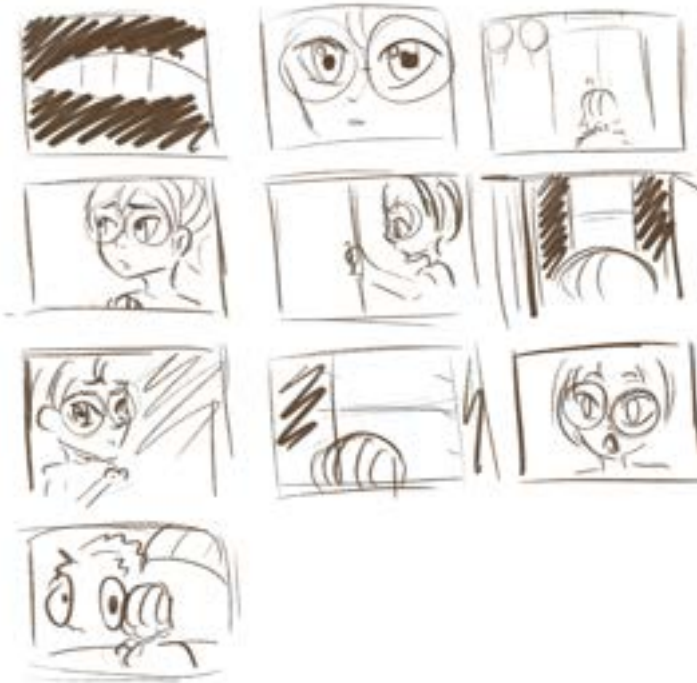
This is the rig I've chosen to use. Due to time constraints this time, I didn't have the opportunity to create my own character, and I believe my knowledge in this area is not extensive enough. I hope to rig my own character in the future after further practice. I chose Kayla for my character because her image as a little girl aligns with my scene imagination, and she has many joints that I can use for various movements and expressions. However, as the character has a more cartoonish style, I need to adjust the textures in my scene to better blend the two. In order to achieve this, I plan to depict the scene's textures in a more cartoonish way rather than using highly realistic materials.

I also plan to change the rig's colors. I find the original colors too vibrant. I want to make them more subdued with less saturation. Therefore, I chose black for her hair. To add some contrast, I changed her headband and shoes to orange, to depict the idea of fire, while the clothes and pants are in darker brown and purple. I believe these changes will help her better fit into my scene. I didn't alter the eye color; it remains the original blue because I feel this blue complements the lighting in my scene and creates better reflection effects.



Storyboard

This is my storyboard. Initially, I struggled with determining the camera angles, as I wasn't quite certain about them. However, recognizing the importance of outlining the story first, I chose to create the first version. After experimenting with various angles, I found better perspectives, leading me to redraw the second version, which I am more satisfied with. I've also added the desired lighting effects and depicted the events in each scene, facilitating better alignment during the animation production. Originally, I didn't incorporate the requirement for three scenes into my initial vision of the camera angles, resulting in multiple angles for the entire story. Following suggestions from teachers and classmates, I designed three camera angles to better suit my animation production. While the final product underwent many changes, the second version represents the ultimate iteration of my initial sketches.



First Version



Second version (final Version)

Assets List

Characters:

The moth

The Girl

Environment:

Chairs

Balcony X12

Stages

Doors2

walls 7

frames

curtain (small) X12

Curtain (Big) X1

Sketches

I found it challenging to create a space only based on imagination, therefore I made sketches of the scenes I needed in my setting as references. This approach has significantly helped my production process as it gives me a clearer idea of how these elements should look. For instance, the stage, a crucial part of the scene, drew inspiration from various musical stages. I aim for a blend of natural and magical elements. Regarding colors, I decided to use a diverse palette, with gold, white, and blue as the primary hues. For the entrance lighting, I'd like to use spherical lights, as I believe they contribute to a fantastical forest ambiance, fits well with my theme and setting.



Creative Writing

A little girl wakes up groggily from her dream, looking around to find herself not in her familiar room. In the dim light, she sees two massive doors standing before her. Dragging her somewhat sore body, she slowly gets up from the ground and gazes at the doors with hesitation.

She has no idea what lies behind them, yet there's a strange force pulling her, urging her to open that door. Carefully, she walks towards the doors. The handles are a bit high for her, so she tiptoes to reach them. With some effort, she manages to pull open the heavy doors. Before she can see clearly what's inside, bright spots of light rush towards her. Startled, she covers her face, only to realize that the glowing figures flying past her are a group of luminous moths.

"This is so strange..." she mumbles to herself, convinced that she must be dreaming. However, the surreal sensation makes her doubt that notion. Ignoring the pitch-black interior beyond the doors, she walks inside, deciding to follow the voice in her heart.

A seemingly endless corridor unfolds before her. As she progresses, the doors slowly close, making a sound that scares her. She quickens her pace, unintentionally ignoring the row of paintings quietly illuminated behind her.

Thinking it's just a dark room without lights, the girl is about to explore when a dazzling light blinds her. As her eyes adjust, she steps back in amazement.

A colossal shadow eclipses the colorful lights.

It's a giant moth.

Climbing gracefully onto the railing, the girl realizes she's in an enormous musical theater, however the stained glass windows above signal its uniqueness.

The moth gently explores with its antennae and flutters its massive wings. Its wings sparkle like jewels, with light penetrating through them.

From initial shock and fear, the girl gradually feels a comforting presence as the moth makes non-threatening gestures. Slowly, she approaches the moth, and the creature gazes at her with its enormous eyes.

In this moment of eye contact, everything seems to slow down. The music hall transforms into a dreamlike realm where reality intertwines with fantasy. The moth flutters its wings, casting kaleidoscopic patterns of light, creating a captivating spectacle. The girl senses a profound understanding and resonance with the mysterious world around her.

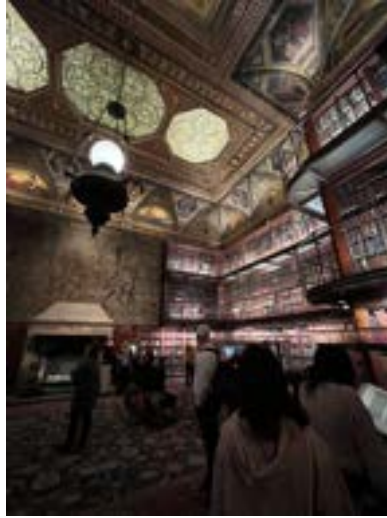
At this very moment, the stage curtains rise slowly, revealing a breathtaking scene. A surreal world filled with scenes she has never seen before. The girl gazes upon this magical landscape, realizing she is part of something beyond imagination.

With newfound courage, the girl steps through the open doors, guided by the moth's gentle presence. As they walked into the unknown together, the theater behind them gradually fades away.

Research

Trip Inspiration

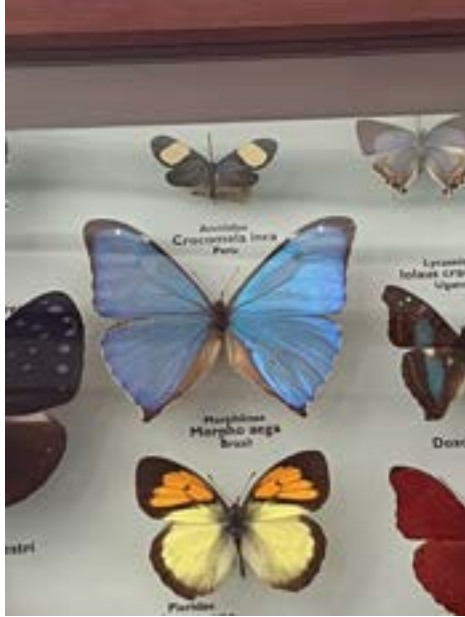
These are the inspirations I gained during my Christmas holiday travels. The first one is a photo I took at Radio City in New York while watching a musical. I found the lighting and shapes of this scene to be quite similar to my own. Although I initially experimented with similar lighting in my scene, I eventually chose to use stained glass lighting to make it more vibrant.



This is a photo I took at the JP Morgan Library in New York. I really like the design of this library. The patterns on the carpet, walls, and ceiling have given me a lot of inspiration for stained glass and other pattern designs. I also considered scanning some of these patterns to use as textures, but I didn't know how to remove the shadows and overexposed parts, so I had to abandon that idea.

Gallery/museum Visit

These are photos I took at the Natural History Museum in New York. This museum focuses on insects, which is very helpful for my theme. There are many real butterflies and moths, as well as specimens and photos. This information is very useful for my scene. I can get inspiration for patterns to add more details to my scene. The information related to moths is also very helpful for my model and patterns, as seeing real moths allows me to gain a better understanding of this creature.



這是在Natural History Museum中的蝴蝶館中看到的皇蛾，我真的被它特別的翅膀和花紋所震驚，真的很像一條蛇。

Artists/Works Inspiration

Call Me By Fire



This is a music show from China that I really like. One significant feature of this show is that its stage and lighting design is beautiful. While watching this show, I gained a lot of inspiration regarding lighting because these stage lights are what I hope my scene can have, fitting the design of a musical theater scene.

The first two images with yellow lights were initially what I wanted to use, with the primary light source being black and orange serving as auxiliary light to highlight key areas. However, I later thought this would appear somewhat monotonous, and my character might not be clearly visible due to insufficient lighting, making it challenging for the audience to understand my animation.

The last two stage lighting setups gave me inspiration, specifically the blue and orange lights that I ultimately chose. These two colors have a significant contrast, and I observed in this show's stage that such lighting looks beautiful and doesn't completely obscure the dark areas.

Artist

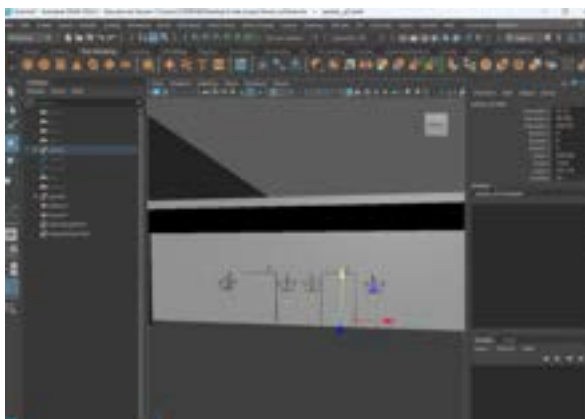
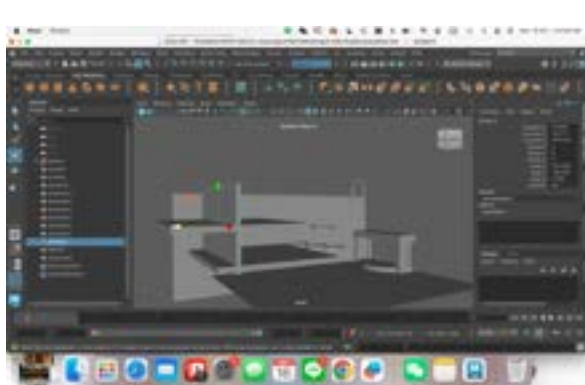
This artwork is "Eine Kleine Nachtmusik" by Dorothea Tanning. After visiting the Museum of Modern Art (MOMA) in New York, I was deeply inspired by surrealistic works such as Dali's "Melting Clock." Therefore after the trip I decided to explore more surrealistic pieces as a source of inspiration for my project. I discovered that Tanning's artwork captures the feeling I desired. Although her style and emotions lean towards the eerie, the presence of a giant sunflower and figures in peculiar attire within what appears to be a normal room creates a powerful sense of surrealism for the viewer. The slightly ajar door emitting a yellowish glow in the background also gave me inspiration for the closing door element in the second scene. I feel that this piece has significantly inspired my creativity, providing me with a clearer direction to complete my own artwork.

Modeling

Blocking – Scene

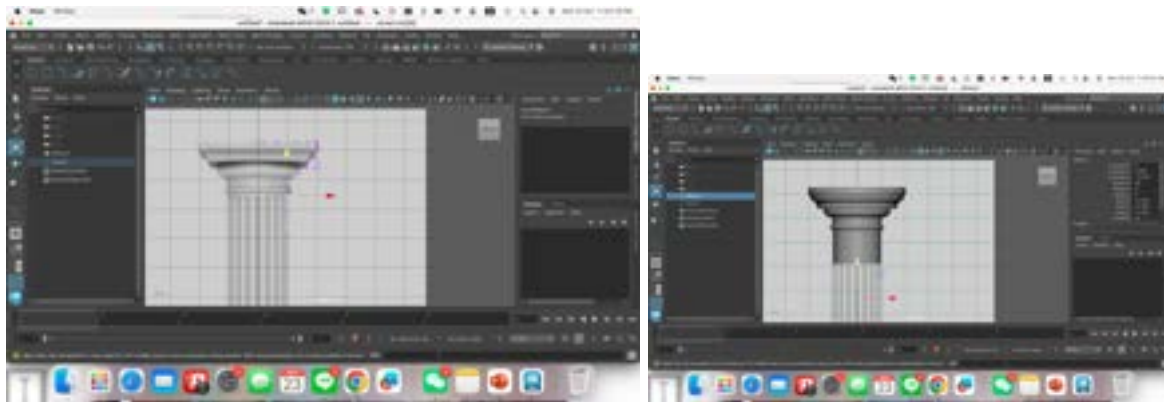
Creating this scene's first step was to block out the scene. I roughly arranged the scene based on my ideas and sketches, using the built-in character in the MAYA system as a reference to create a scene that aligns with reality. However, I later found that it wasn't necessary for my project, and it actually increased the difficulty of production. The scene was too large, resulting in large file sizes. This caused MAYA to crash occasionally, even losing some of the work in progress. Therefore, next time, I might build the scene around the basic mesh of the mouth to avoid similar issues and reduce the burden on my computer.

Blocking is crucial because it allows me to understand the approximate positions of each object, facilitating the subsequent stylization process. I wanted the most crucial parts of my scene to be the stage and the entrance area. Due to the constraints of the animation camera, some parts of the scene could be hidden from the final animation. To control the file size, I didn't model the first-floor and third-floor sections of the audience area, only creating the visible second-floor part. Although I modeled the latter half of the audience area, I later realized it would make the animation too long and walking for the character is challenging for me. As a result, it was blocked from view in the final piece.



Pillar

The way to make a pillar is a technique I learned in a tool kit class, and I found it very useful and convenient. I used curve to draw half of the shape in my sketch, and then used the revolve function in surface to make the shape into a complete polygon. However after the shape is generated I still had to tweak it a lot to get the shape I wanted. One of the columns I wanted to have some depressions, but I couldn't get it right. Since this pillar won't be very visible in the final animation, I decided to leave and not trying keep on making it perfect to save time. But I hope I can learn how to make good looking columns later.



Xgen

This is the Maya built-in system I used to create the hair on the moth. Initially, I thought it would be challenging, but after learning, I found it to be a very useful and enjoyable feature. I've only learned the basics for now, and I hope to explore more in the future. To create the hair, I first added an XGen interactive groom to the mesh and adjusted values on the right side to change the hair's length, density, and thickness. The most interesting part, in my opinion, is using the XGen tools to comb and adjust the hair, making it look more natural.

During the production, my computer couldn't handle MAYA well, so I chose to work on my moth in a separate file. However, when I completed the hair, I realized I hadn't adjusted the size properly, and the XGen Interactive Groom system couldn't allow me to scale it up. After researching, I found a solution: converting XGen to polygons. I created a Line wire under my XGen description, then combed the hair again before converting it directly to polygons. This not only improved the speed of my computer compared to using XGen directly, but it also allowed me to scale the polygon freely.



Wings

I contemplated various methods for creating the wings, attempting to do it manually, but encountered some difficulties. Later on, I found a side-view image of a moth online and used it as a reference to outline the shape of the wings. Originally, I considered using textures for the wing's appearance, but I felt that this wouldn't capture the unique feeling I desired for the wings. After watching several tutorial videos, I came up with the idea of using a diamond look to create wings that could reflect different colors of light, making them look more distinctive and eye-catching.

To achieve this, I chose to use the Multi-cut tool to cut out the shapes, mainly using triangles. Then, I hardened the edges to ensure that each edge was visible. Afterward, I applied a diamond material from the preset options, adjusting the lighting and colors to achieve the final effect. I'm satisfied with the final result, but I hope to enhance it by adding more color reflections and unique designs, as it currently looks a bit monotonous. Nonetheless, for a first attempt, I am pleased with the outcome.

Joint

Because I would like to make my moth capable of climbing the railing, I decided to use a simple rigging technique, which involves creating joints. I first positioned the mesh to the place where I

want and created the skeleton. After completion, I parented each joint to the mesh, creating a basic rig. To allow for smooth movement, I also used the "Create IK Handle" feature to ensure the entire leg moved as one. This process turned out to be easier than I initially thought. I had assumed that I would need to rig the entire body for the climbing motion, but simple functionalities allowed me to achieve the desired movement, providing significant assistance and enhancing my learning experience.

Patterns

Because there are a lot of balconies in my scene, I wanted to make the railings look more fancy by creating some patterns to add depth. I used the "Create Polygon" feature to make these patterns. First, I drew sketches of the patterns, using colors to differentiate each component. This way, after completion, I could assemble them into a three-dimensional design, as I found flat pattern a bit boring and can't really react with the light, therefore after drawing with the "Create Polygon" tool, I used the "Extrude" function to give it a three-dimensional shape.

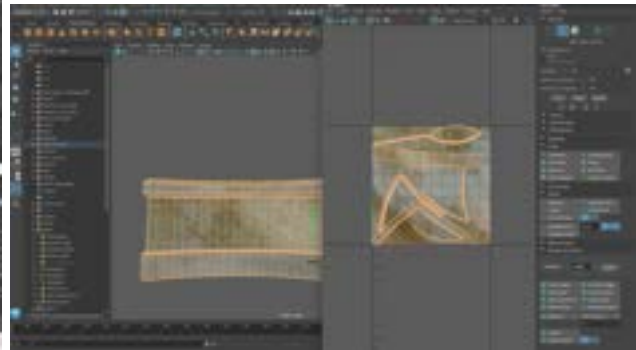
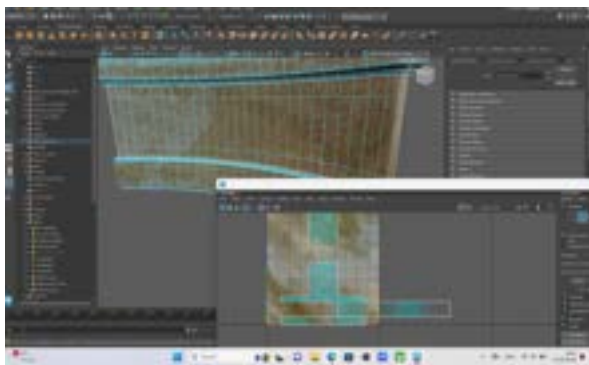
However, I encountered an issue where the edges of these patterns looked too sharp after creation. I attempted to use the "Bevel" function to smooth them out, but due to the way the geometry was arranged, it couldn't be beveled or smoothed. To resolve this problem, I had to manually rearrange the geometry to make the shape more reasonable and suitable for smoothing or beveling. Since this process was time-consuming, I only completed a small portion, leaving the minor areas unchanged. I adjusted the material and lighting to ensure that these areas wouldn't be noticeable in the animation. However, this is something I need to learn to address in the future.



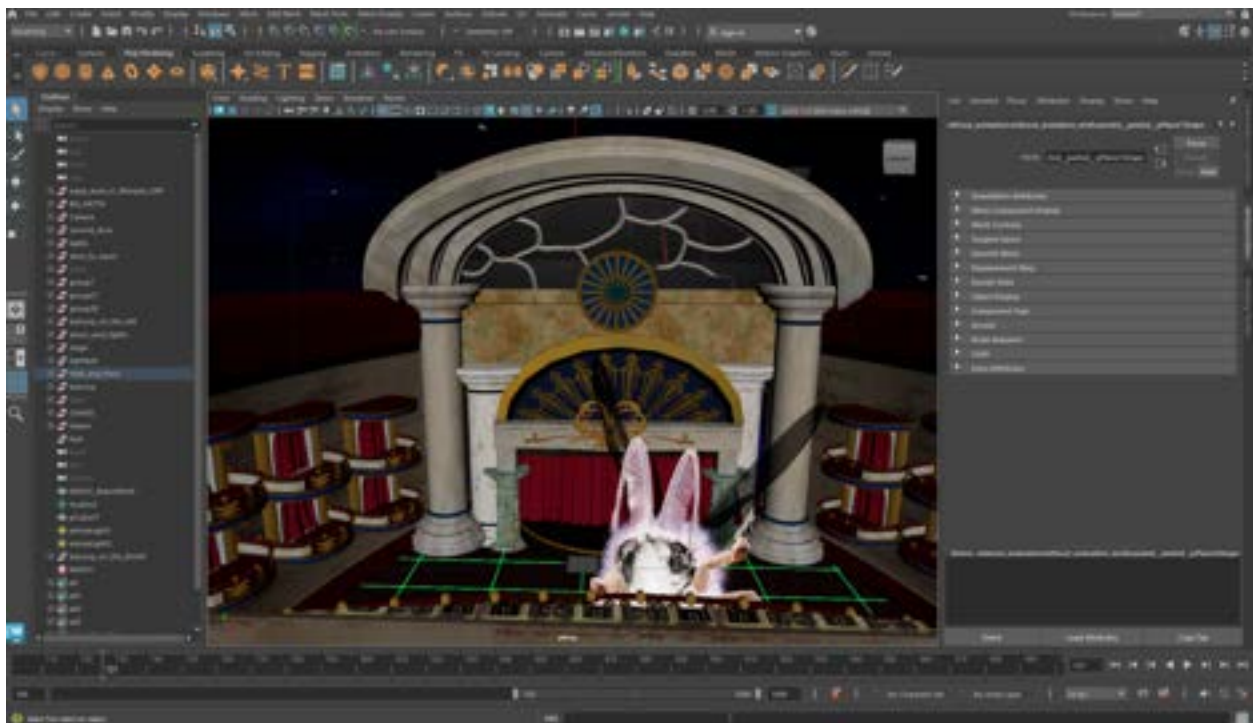
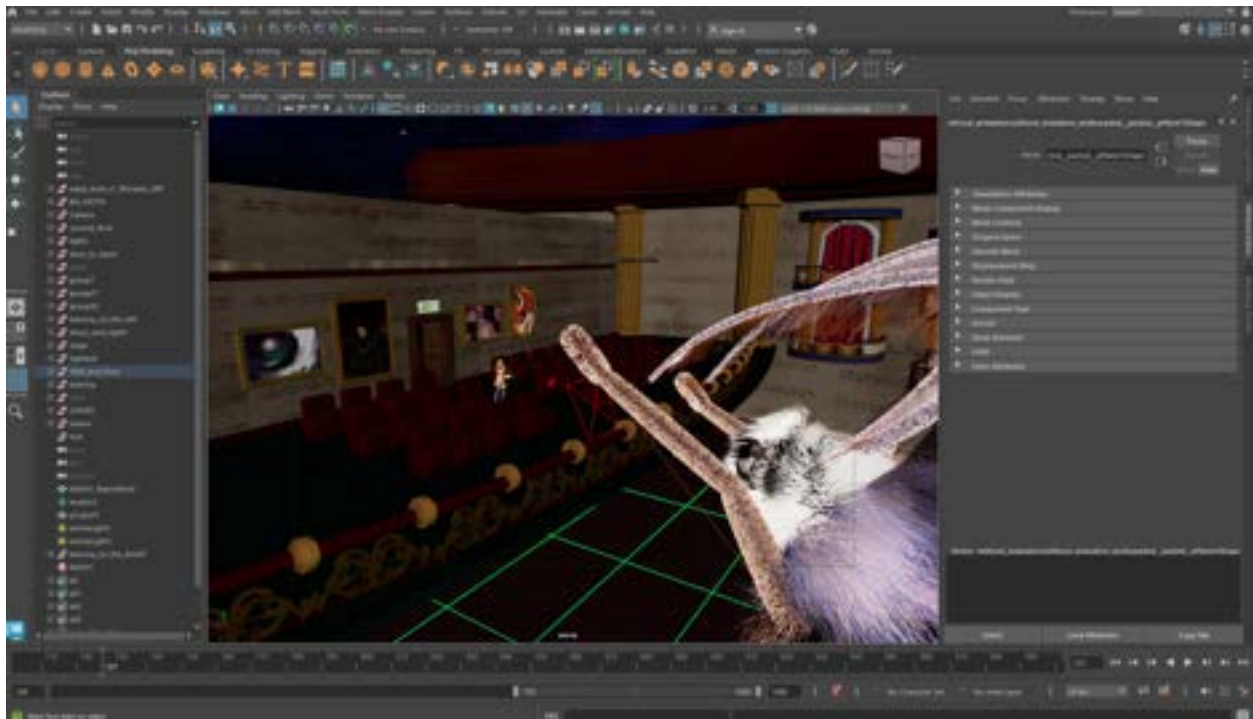


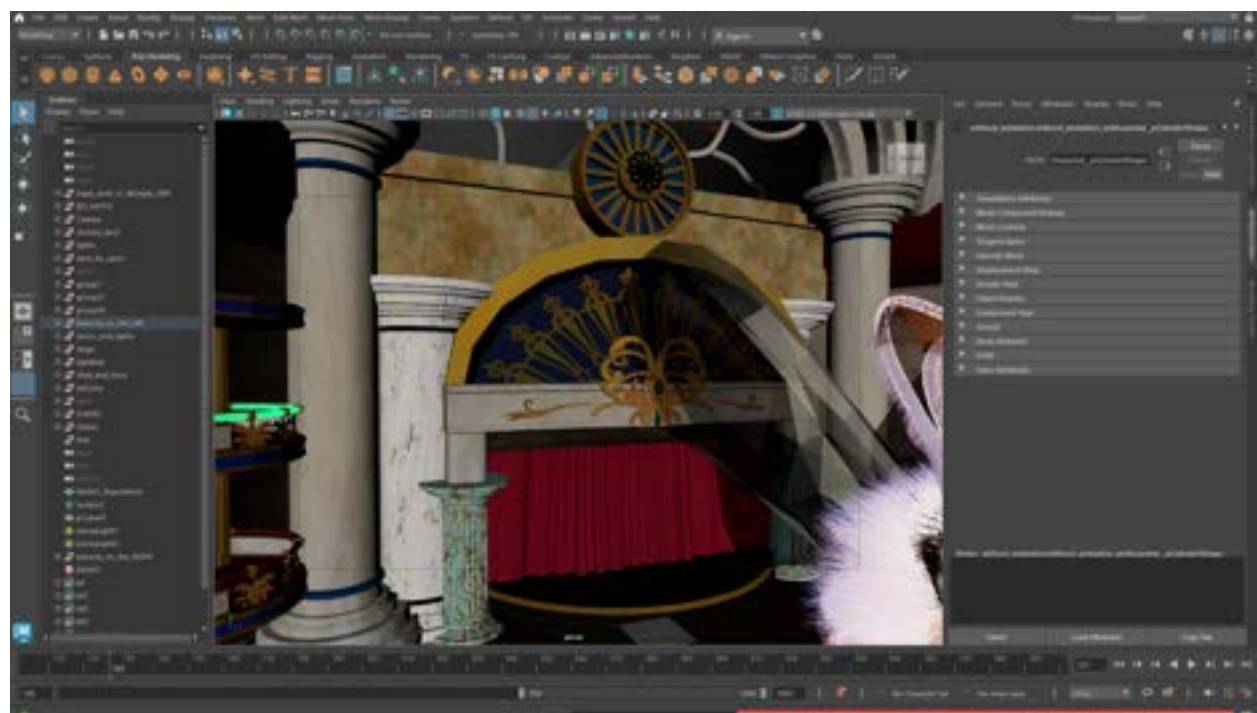
UV Unwrap

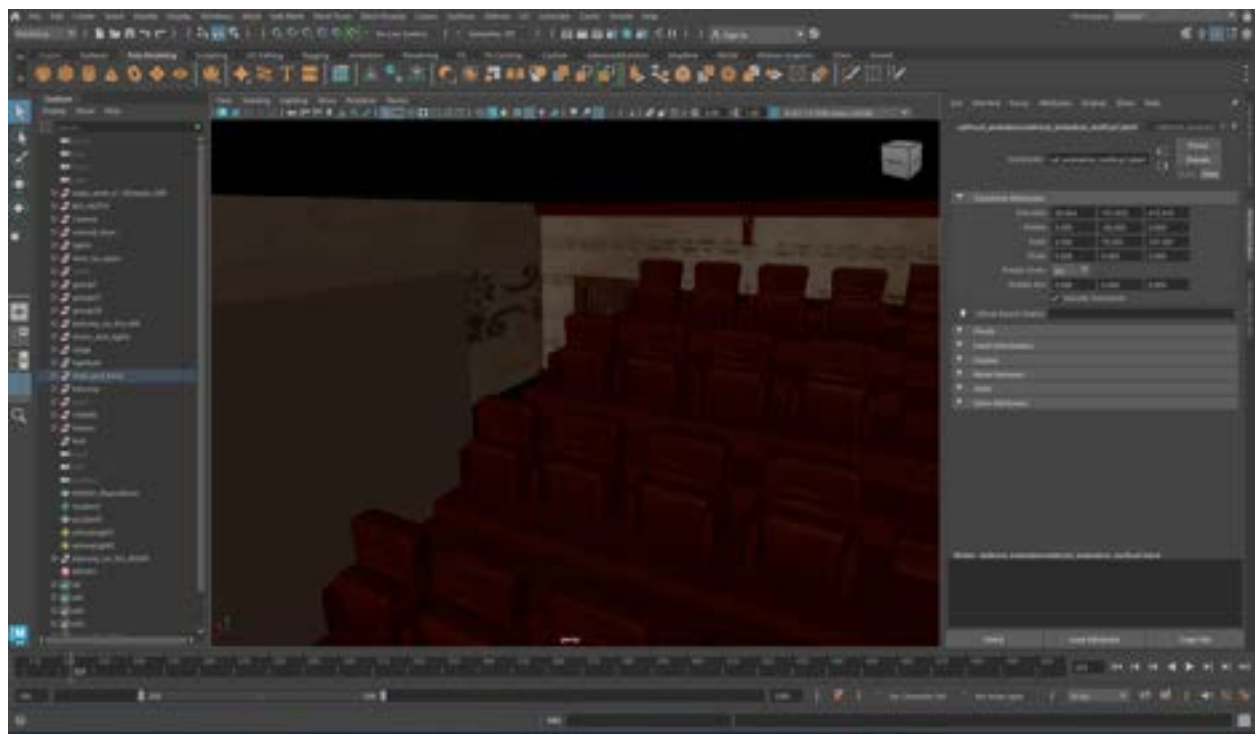
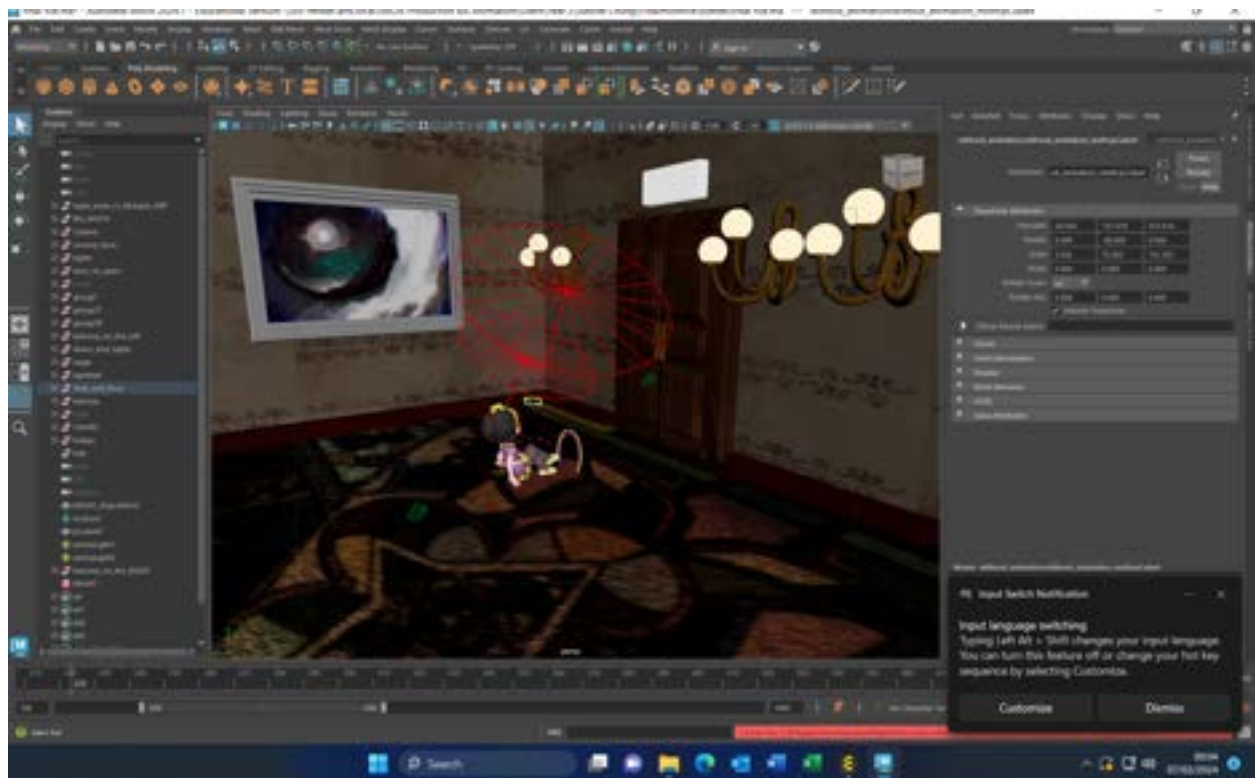
I have less opportunities this time to practice UV unwrapping because most of my materials were not heavily influenced by UVs. However, I still made some adjustments to the UVs for each mesh to make them appear more organized. The screenshots show my UV unwrapping process for the walls. I needed to move the patterns to appropriate locations to avoid abrupt seams in the material. I chose to cut the seams along the edges of the walls so that even if the material was split, it wouldn't be noticeable. However, since I hand-painted this material without considering the object's size, adjusting it often resulted in awkward seams. As a solution, I decided to create a new material. Through this process, I realized that UV unwrapping indeed enhances the cleanliness of the scene and the aesthetics of the final product. While my objects were relatively simple, UV unwrapping was not a challenging step for me.



Final Scene

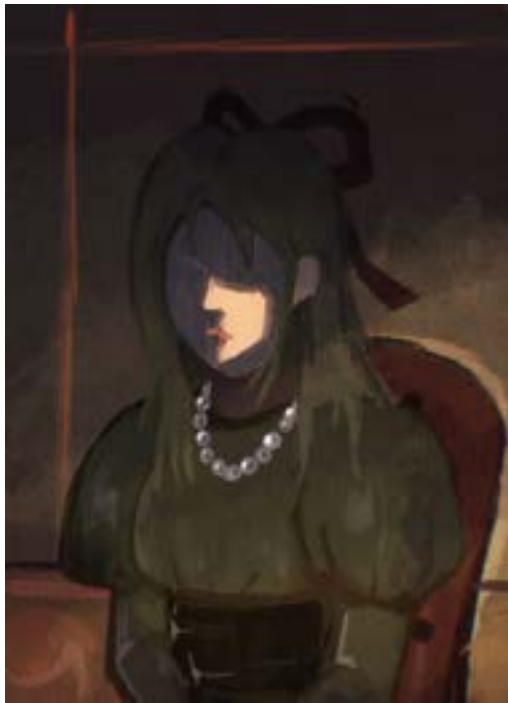
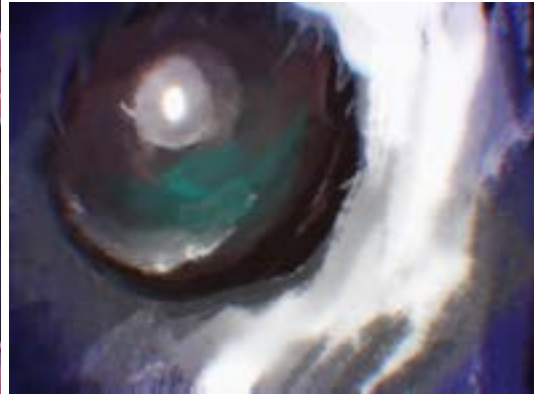






Texturing

Painting

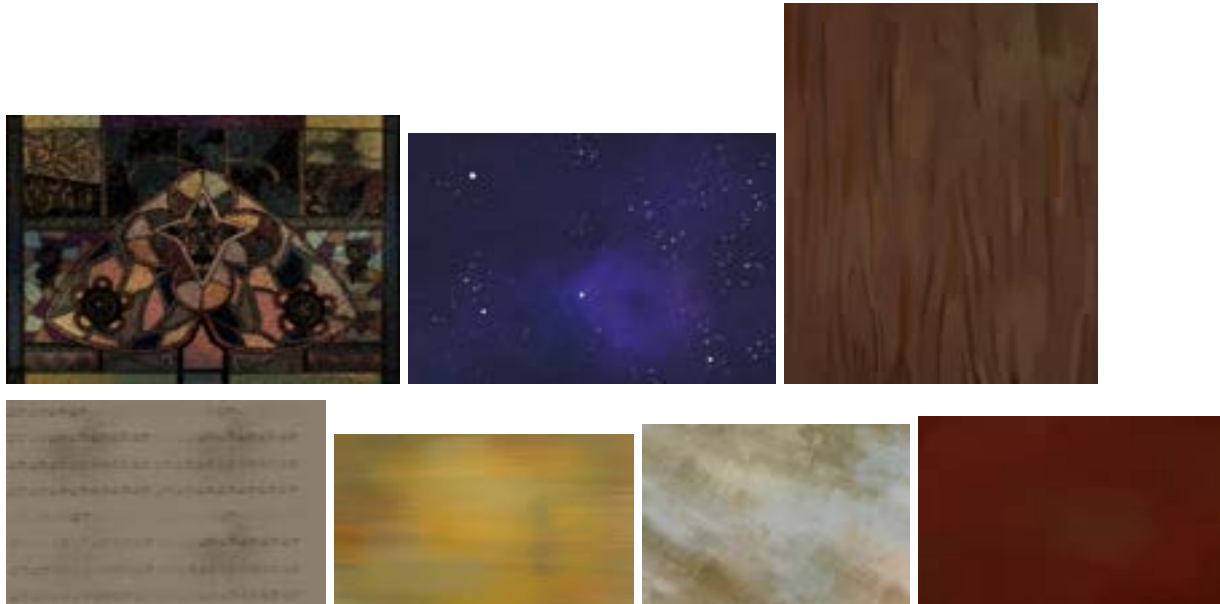


These are paintings that I created in Procreate to be placed on the walls in my scene. After completing the artwork, I imported them into Maya to use as textures. I hope these paintings provide the audience with some hints about the surprises in my final animation. The girl and the fire one carry metaphorical meanings. The young girl in the painting, representing a part of the envisioned story. I imagine that long before the arrival of the little girl, another girl had come and experienced something similar. Just

like being chosen by moths, she might have been the owner of this music hall. The painting on the right depicts the appearance of flames. In Chinese, there's an idiom "飛蛾撲火" implying a blind, persistent, and reckless pursuit, often with negative connotations. This idiom is closely related to flames. Hence, it serves as a hint regarding the protagonist that will appear later – the moth.

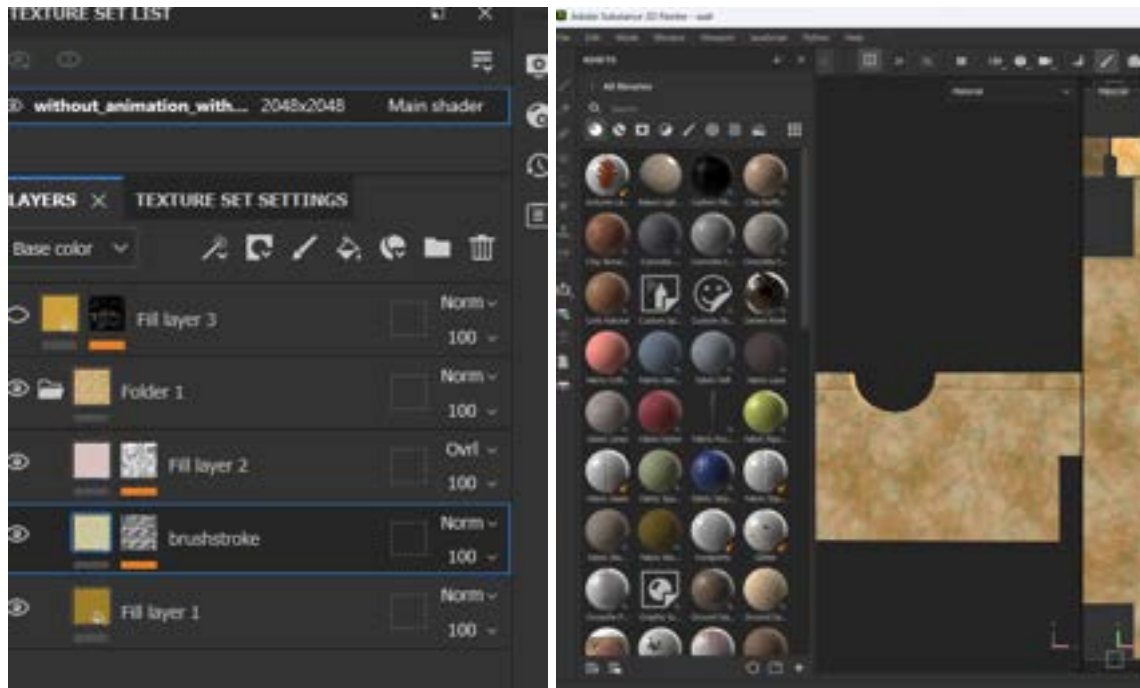
Handpaint Texture

I used Procreate to draw most of the textures for this scene, the result is not as good as Substance Painter, but it's hard to find all the textures I want on the internet, and using Substance Painter for every texture is time consuming. Therefore I chose to draw it myself, and only a small part of it was using a Substance Painter, so I can save more time. One of the main problems with drawing my own textures is that the colors and shadows around the edges of the pattern may cause a noticeable border when I try to scale it down on import. My solution to this problem is to draw the material smaller so that it has more room for scaling.



Substance Painter

This time, I mainly used textures that I drew in Procreate, but I also utilized Substance Painter to create some specific materials, such as marble or stone textures. Since Substance Painter has some smart materials, I just needed to use them as a base and make slight adjustments in color and texture to achieve the desired effect. However, I also experimented with new techniques this time. I wanted to create textures that are more styled rather than realistic. I used filters like blur slope and played with color combinations to achieve a hand-drawn feel. Although the results were not as good as I hoped, I consider it a valuable learning experience. I aim to learn more techniques in Substance Painter to enhance my future works.



Stained Glass

This is one of the light effects I wanted to create at the beginning. I've always loved the stained glass windows in churches and the soft, divine feeling they emit. Therefore, I decided to incorporate it into my artwork. Normally, a concert hall wouldn't have this kind of lighting, but since my scene is in a dream-like environment where unusual things happen, I want to convey a surreal and fragmented feeling. The presence of a giant moth and stained glass in a concert hall is not a scene that can be encountered in the real world, making it somewhat weird and illogical. The idea of stained glass shows the diversity of feeling and emotions the moment the girl and the moth met each other. As this stained glass is intended to be projected onto the ground and the character, I wanted to create intricate and colorful patterns for a more interesting lighting effect. The patterns predominantly feature the shape of the moth and some natural elements. I also used many fragmented pieces to create the sense of a mosaic glass effect.



Lighting

Overall Lighting

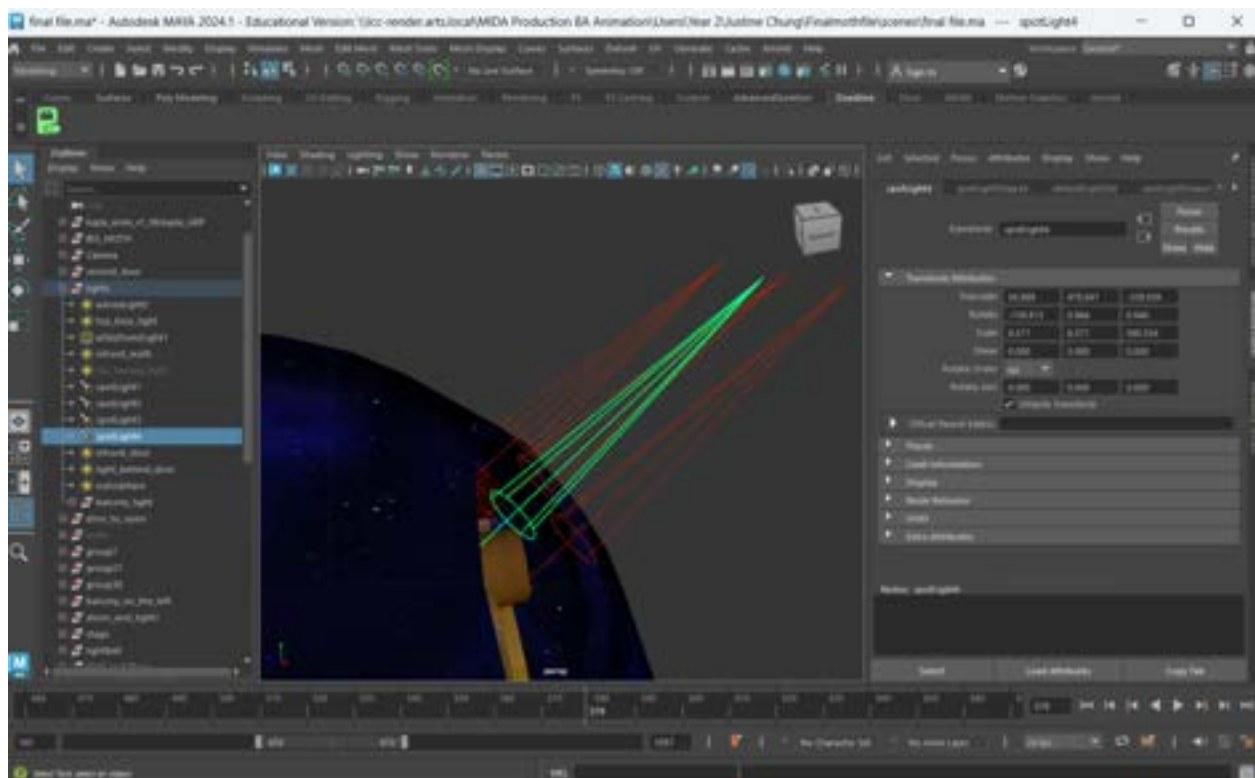
The main lighting in my scene is primarily in blue tones. I noticed in many images that stage lighting often involves strong contrasting colors. I particularly like the combination of blue and orange because blue imparts a mysterious and cold feeling, while orange brings warmth and a strong visual impact, and cold symbolized the idea of fire.

Therefore, I set the overall scene lighting to be slightly greenish blue, and all the other lights are mainly warm, with a focus on local color tones. However, due to potential rendering effects or device variations, the blue wasn't very clear to be seen in the final output. During the color correcting process in After Effects, I adjusted the hues to be more purplish. The combination of purple and orange is also one of my favorite color

combinations. The contrast between them creates a gentle and comfortable atmosphere, therefore I chose to bring the final artwork closer to this color scheme.

Stained Glass Lighting

This is the main light source in the third scene, created by the light passing through stained glass to focus the audience's attention on the central moth. I placed the stained glass image, which I drew, onto a plane as a texture. I adjusted both the specular and transmission properties of the plane to make it transparent with visible patterns, mimicking the appearance of real stained glass. I positioned a total of four spotlights behind the stained glass, each pointing in a different direction. Initially, I had only one, but I found that the lighting became too uniform and the direction too consistent. Since I wanted the wings to also emit light, I decided to duplicate the spotlights. These spotlights have different values, with the central one being the main light source and thus the strongest. The ones on the sides serve as support effects, with lowered exposure. To concentrate the light, I used a sphere and created a hole in accordance with the size of the window. This allows the light to pass through the hole and into the scene, creating a sense of sunlight streaming into the interior.



Atmosphere Volume

This is one of my favorite features in this project, as it makes my scene look more convincing. Since my scene has many light sources, having just the lights could make them appear abrupt and rigid. Therefore, I added an atmosphere volume to introduce some dust particles into the air of the scene. This way, the refraction of light becomes softer. However, I had to adjust this part extensively because it's easy to make the scene too bright or introduce too much haze.

Camera

Camera angles have always been an area where I lack proficiency and knowledge, and I didn't know how to best convey the language of the camera. In my first attempt, I chose to switch from a first-person perspective to a third-person perspective in the first scene. However, after consulting with my teacher, I learned that such an approach could easily confuse the audience about whose point of view it is and what is happening. Therefore, I changed this shot to a third-person perspective. From this experience, I learned that the camera angles need to vary continuously to keep the audience engaged. In the initial scene, I initially only had the camera move when the character stood up. However, after receiving feedback from my family and friends, they felt that this could make the audience feel tired because it was consistently from the same angle. Consequently, I modified this scene to follow the character as they stood up, moving the camera slightly, and zooming in and rotating it in front of the door to make the shot less monotonous.



The first shot is not really the first scene, it is the extra shot I added in order to fix the problem with the animation. The shot is not really refined before I rendered due to lack of time. But I think after adding thi scene the stand up part does not seems that out of place . But I really need to fix the camera angle and the character animation for this scene afterward.

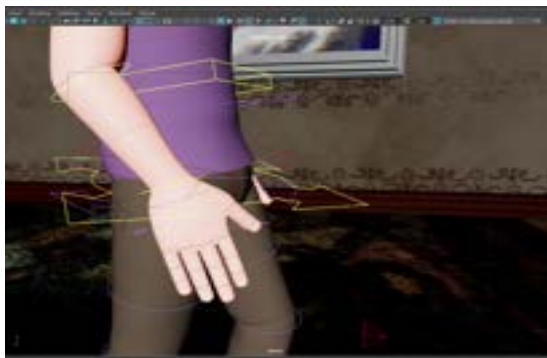


Animation

I found the animation part to be the most difficult and challenging aspect of my entire project. Before starting the animation, I thought moving the character would not be too difficult. However, I encountered a lot of problems than I anticipated. The first major issue was when I moved the main control of my rig. In order to make my character lie down, instead of moving her waist and feet, I flipped the main control. This caused issue to the entire rig, and when I tried to make her stand up, she ended up making a jumping motion. Since I discovered this problem only after completing the entire scene, I didn't have the time to delete and redo the entire portion. Moreover, importing a new rig would make my file too large. So, I had to leave this erroneous part in the animation, and I believe it somewhat compromises the integrity of my work. I hope to fix this issue after the project is completed.

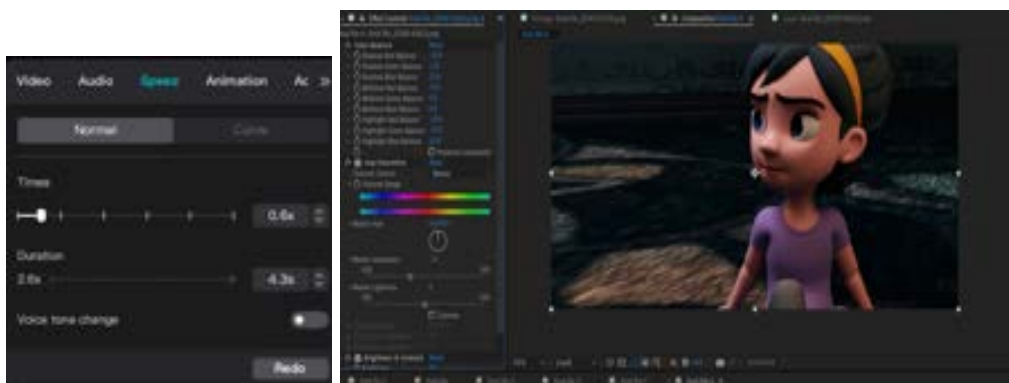
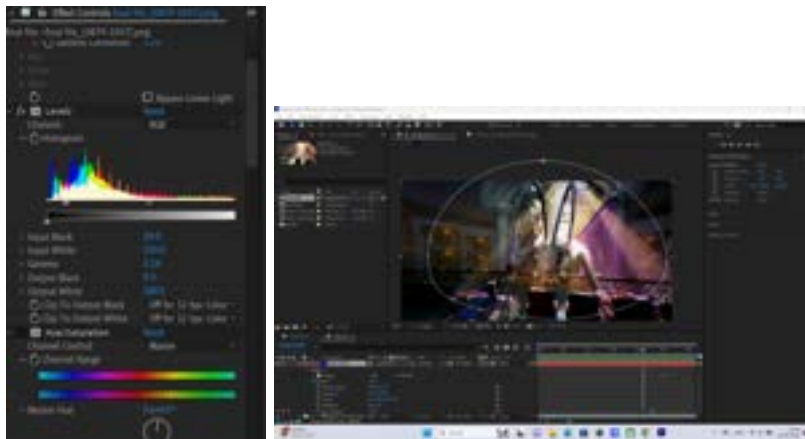
The second issue was with the character's hands. The numerous joints often made me forget to move them to make the character's movements more natural. While my character was walking, the arms did not swing naturally, making the overall animation look stiff. The third major problem was my lack of control over the timing in the animation. Sometimes the character's movements were too fast or too slow, making it look unnatural. These problems were discovered only after rendering, leaving me with no way to make changes. I had to rely on editing software to make corrections.

This experience taught me the importance of thoroughly checking and adjusting animations before rendering. I should allocate more time for this process. I also realized that I should spend less time on details in scenes that are not visible in the animation. Although I wanted to perfect the corners and edges of some scenes, they were not even visible in the final animation. Next time, I will plan the potential movements before animating and record references for those parts to increase animation efficiency.



Editing

This was the process I have done in the After Effect. I found this software super useful and convenient this time, because it really helped me to enhance the feeling I want for my scene. Because of the rendering result, I lose the blue lighting I have originally on my third scene. I really like that lighting because I think it shows the contrast between the orange and the bright pink. Therefore in order to have this color back, I first added a color balance layer which allowed me to adjust the blue, red and green of the scene, I slightly adjusted it and made the whole scene more contrast and saturated. Then I added a solid shape layer which I set into blue on which the side of the scene is blue , which led the audience's attention into the middle where the moth is.



Reference

As this is my first time creating animation with a 3D character, our teacher also required us to use reference videos. Although recording my own performance for the animation felt a bit awkward, I later realized that this method was indeed very helpful. I initially found creating the posture for the character's walking motion quite challenging. I tried several times and even considered abandoning the method of physically moving the character to simulate walking. However, in the second scene, I couldn't hide the character's feet, so I decided to earnestly study how to animate walking.

I recorded my own feet and meticulously created the animation frame by frame following each step. Despite initially damaging the rig, preventing the formation of a complete walk cycle, I eventually succeeded in making my character walk. I just hope to refine her walking speed and technique in the future to eliminate any stuttering.

I found the animation part to be the most difficult and challenging aspect of my entire project. Before starting the animation, I thought moving the character would not be too difficult. However, I encountered a lot of problems than I anticipated. The first major issue was when I moved the main control of my rig. In order to make my character lie down, instead of moving her waist and feet, I flipped the main control. This caused issue to the entire rig, and when I tried to make her stand up, she ended up making a jumping motion. Since I discovered this problem only after completing the entire scene, I didn't have the time to delete and redo the entire portion. Moreover, importing a new rig would make my file too large. So, I had to leave this erroneous part in the animation, and I believe it somewhat compromises the integrity of my work. I hope to fix this issue after the project is completed.

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Moths Animation

I created some small moths that fly out when a little girl opens a door. I used the MASH feature in Maya and added a locator to control the movement of these moths. Initially, I encountered a problem where all the moths were flying in the same direction, looking too monotonous. However, there are many adjustable parameters in this feature, and after several attempts, I achieved the desired effect.

For the color of the moths, I initially wanted to paint a texture myself, but I found it challenging to adjust the material after creating it with the MASH feature. Therefore, I chose to create a material with a Lambert effect that emits light and has a gradient. I used blue, pink, and orange colors that match my scene. I also increased their saturation so that they would stand out in the dimly lit room.



Rendering

Rendering didn't encounter any major problems. The first issue I had during the initial rendering of the first scene when the camera samples were set to only 6, resulting in a very blurry and noisy outcome. I adjusted the value to 8 and re-rendered, significantly reducing the noise. The second issue occurred during the rendering of my third scene, where the intended blue light effect turned somewhat brownish. I wasn't sure if it was due to my settings or the inherent color variation in the system. However, due to the already lengthy rendering time, I couldn't afford to readjust and re-render. Hence, I decided to color correct the scene in After Effects to achieve the desired effect.

For rendering, I used a Render Farm, which proved to be very convenient. However, when there were many users, my rendering time increased significantly. The first scene, with over 500 frames, took a day and a half to complete rendering. This taught me the importance of early planning. If I procrastinate until the last day to render, it would be impossible to finish within the allotted time, wasting all the effort put into the project. After my initial rendering, I discovered numerous animation issues, prompting me to re-render. To save time, I simultaneously conducted single-frame renders in Maya, ensuring progress on both devices.

Editing

3 Final Shots

Reflection

I feel that this project is both interesting and valuable, and I'm delighted to have brought my thought to life. In comparison to the project I worked on last year, this is the first time I've successfully included character animation into a scene. I thoroughly enjoyed the process of creating the environment, transforming the world I imagined into a tangible reality.

During the planning process, I wasn't entirely certain about my scene. Since it's based on a dream, I needed more inspiration to make the dream scene more complete. Traveling during the holidays was really helpful. I visited Vienna and New York, two cities with vast art treasures, and gained inspiration. The elegant and magnificent architecture of Vienna, with stories from the history inspired me to add more drama and contrast to my scene. Although I didn't have the opportunity to visit the Vienna State Opera, but exploring museums and the architecture on the streets provided me with a lot of ideas. New York, being a large city, offered fascinating museums. The Insectarium at the Natural History Museum allowed me to observe insects up close, understanding their movements and appearances. The butterfly exhibit provided significant inspiration, not only in collecting patterns and material references but also in gaining more insights into them.

Although coming up with the story and creating the storyboard took me some time, and the final result wasn't perfect, the iterative process of seeking feedback helped me gain a deeper understanding of the animation production process. Engaging with my work for an extended period made me realize that I could lose some fair aesthetic judgment. Having the opinions of others became crucial.

I'm satisfied with many aspects of this project. The final result successfully translated the scenes, capturing the contrast in lighting, characters, and sizes. My favorite part is the moth – the Xgen effects exceeded my expectations, realistically portraying the texture of its fur without appearing out of place in the my scene which is more in a cartoonish style. Although I aimed for some details to be better, such as the texture of the fur, but considering the distant view, I am satisfied with the outcome. Another aspect that I the most most is the lighting. Initially I was worried about the lighting design, but achieving the stained glass effect boosted my confidence, giving life to the scene.

However, I recognize several areas where improvement is needed. This was my first time working with rig animation, and it taught me a lot. To enhance my work, I realize I need to acquire more animation skills. My foundational knowledge in animation is insufficient, which makes me difficult to create a smooth animation. I also acknowledge the need to avoid unimportant details. As this project involved animation, not all scenes would be included in the final work. I spent a considerable amount of time adjusting details in corners of scenes. This led to a lack of time when I realized my animation needed improvement.

The second aspect I'd like to change is my approach to materials. Most of the materials were drawn using Procreate, and while functional, the detailed effects were not as good as those produced using Substance Painter. To address this, I believe that if I choose to draw using Procreate in the future, I should spend more time accurately depicting details and ensuring these details are visible in the scene.

The last issue, and perhaps the most troubling one before submitting the assignment, was the discovery of animation errors. I attempted an improved version but it took a long time to render due to the high usage of the render farm. In the first scene, when the character stood up from the ground, moving the main control caused the entire character to perform a jumping motion. Initially, I considered not correcting it, but during the editing process, I realized it left my work appeared abrupt. Seeking opinions, I contemplated removing it, but doing so would also deleting the earlier part of waking up, disrupting the clarity of my story. To address this, I added an overhead shot before the first scene to convey her vulnerability. While this addition was somewhat impromptu and the effect wasn't optimal, I believe it sufficiently addressed the aspects I found unsatisfactory. After completing the project, I plan to revisit and improve this part to make it a part of my portfolio.

Through this project, I've learned a multitude of new things and gained a clearer understanding of the steps required to create a 3D animated short film. It has also deepened my interest in the field of art. Despite not collaborating with team members this time, communication with the teacher and classmates has improved my communication skills, and I'm better equipped to understand and digest the feedback they provide. Even though I couldn't make changes to this project, I've noted down the feedback and intend to avoid such issues in future projects. Through this work, I hope the audience can experiencing the emotional flow of the two characters. The vibrant lights in contrast to the pitch-dark room represent that individuals who may seem cold on the outside but have a different side within. The little girl entering the door is

like stepping into her own mind. The moth might be a representation of creativity and imagination, could also symbolise the innocence and creativity hidden within us. I hope to convey my thoughts and images to the audience through this work. After this project, I feel that my 3D skills have progressed, and I hope my future path is closely related to this. Therefore, I plan to practice in various aspects to become more professional.