

The Thunder God – By Shawn Nassabi

“Sixteenth VR Definition: Entertainment products that create illusions of another place, another body, or another logic for how the world works.” (133)

You awaken with a deep voice calling you “Thor Odinson”. You see the God of Thunder’s hammer, the Mjolnir, placed on an intricately designed platform ahead of you, with lights drawing you towards it. As soon as you grab the hammer, you experience a sense of worthiness of the title – you feel like Thor Odinson, the fictional Thunder God! The hammer gives you the limitless power to wreak havoc, destroy objects in your surroundings, and pave your pathways by breaking through any obstacles that might come in your way. Furthermore, you are also able to fly around in the space and explore the complex environment until eventually venturing off into deep space and beyond.

After choosing this definition of VR for my final project, I really aimed to focus on the aspect of creating “illusions of another place” and “another body”. In *Dawn of the New Everything*, Lanier defines this definition of VR while explaining the concept of gloves for VR interaction, enabling you to manipulate objects in virtual worlds by using simple hand gestures. Although my project uses the Oculus controllers, I seek to channel an idea similar to Lanier’s glove albeit by giving the user the capability to wield an object that is impossible to construct in real life. Instead of using real hands through gloves, the user is given the ability to enjoy the power and capabilities of a fictional artefact and test its limits in the ‘illusionary’ virtual world. Furthermore, the virtual characters present in the scene through anonymous voice inputs make the user feel a sense of royalty, which is further amplified by the fact that the user is given otherworldly capabilities such as the power to fly. All in all, my final project succeeds in creating an illusion of a sci-fi world in outer space, enables the user to experience living in “another body”, and also includes physics defying logic such as free flight.

A Potential New Definition: “A medium that utilizes modern technology to empower individuals, give them superpowers, and allow them to bend the laws of physics.”

Through experiences like my final project, users gain a boost in morale and feel empowered due to the special feeling of importance that they are made to feel in the first-person experience. The superpowers given to users in the virtual world could translate into empowerment and confidence for people in the real world – this could specially apply to people struggling with insecurities or extreme stress. More importantly, I want to highlight the point I make about bending the laws of physics. Through creating VR projects in this course, I was given the ability to define my own laws in my own worlds. VR gives me and other designers alike the power to create new worlds that don’t need to resemble our real world at all. VR acts as a gateway to another dimension – a dimension that you can choose to define however you want, and that is very special.

Link to video walkthrough:

<https://drive.google.com/file/d/1uGzkXGh6syPEa9jIGXmwNJDGLhkmC3r3/view?usp=sharing>

Documentation, implementation, and technical details:

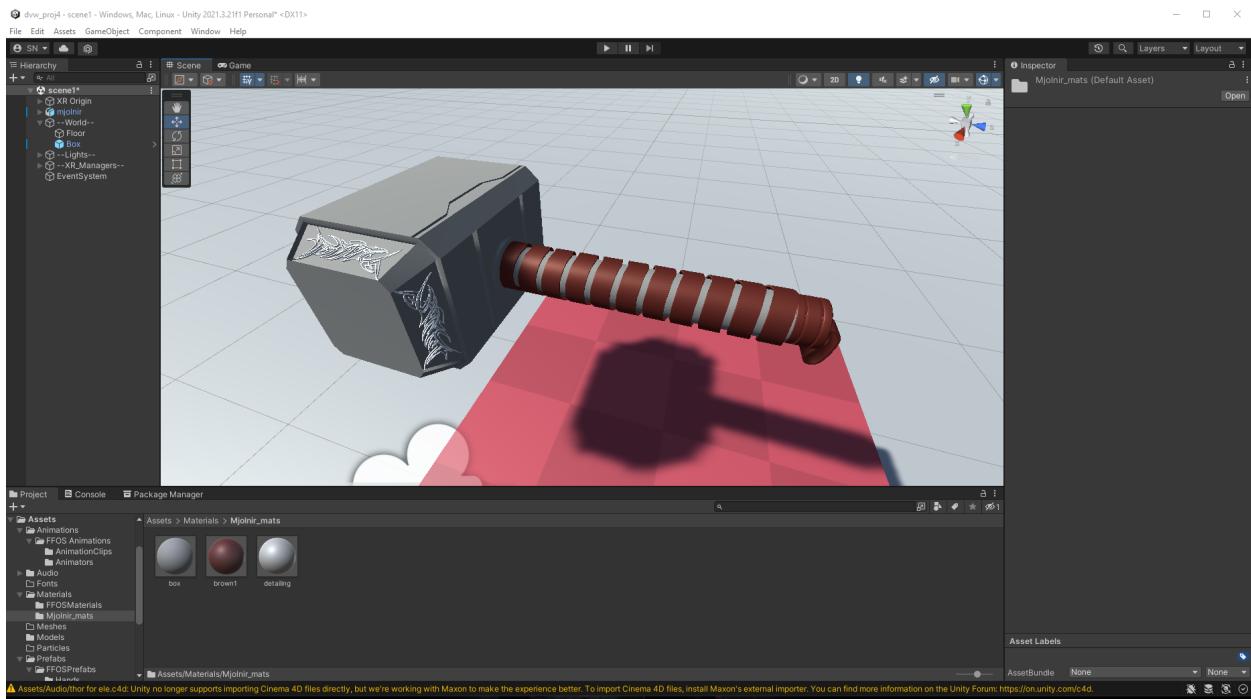
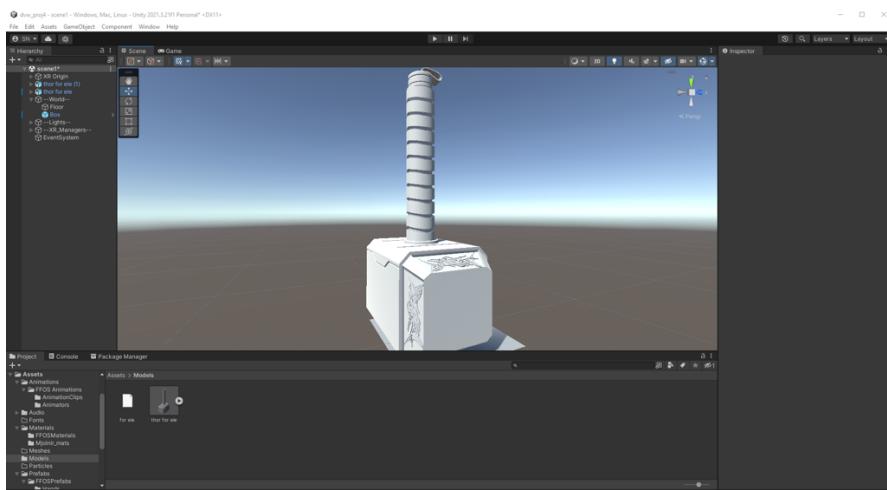
This is a first-person VR experience that involves grabbing tools and using them to navigate the environment, flying, while simultaneously exploring a storyline driven by sound and level design. The scene is handcrafted using primitive shapes and a variety of materials, in addition to a minimal set of prefabs. Lights are positioned strategically to first make the environment appealing and engage the user, and second for directing the user through the story. For example, I used an LED lighting system that adds to the scene aesthetically and also guides the user by flowing in a particular direction. The experience is brought to life through the use of audio triggers and action-based sound effects that aim to deepen user engagement and create an overall entertaining experience. The presence of additional characters is also felt through the audio voiceovers that speak to the user.

I first began by creating a sample test scene where I spent quite a long time perfecting the functionality of the Mjolnir hammer. I had to develop its physics, fix problems with rotation, add audio triggers, particle effects, etc, to make it feel special and fun to use. After implementing technical aspects of the experience (flight, hammer, breaking objects), I proceeded to level design.

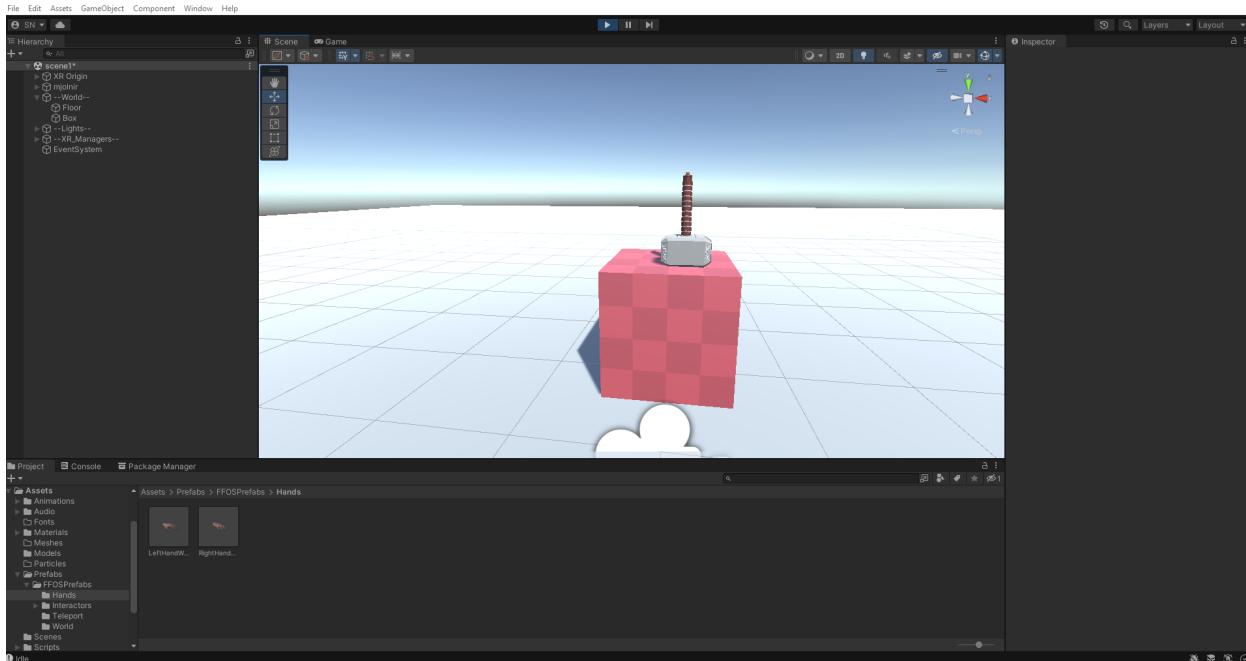
I used a set of different metal materials with various textures to design the scene, including a small set of prefabs. The synchronous LED lights really help bring my scene to life. To create that I had to link groups of sequential LED nodes and indicate a start node and an end node. In terms of sound design, I made sure the interactive elements of the experience are as tactile and responsive as possible, triggering sounds whenever expected. Furthermore, I use positional triggers for sounds as well, and incorporate spatial audio for certain parts of the scene. The level design is intended to guide the user, make them feel like they're central to the story, and also induce a sense of mystery to promote exploration. Setting the scene in outer space also adds to the illusionary element of the overall experience.

Screenshots:

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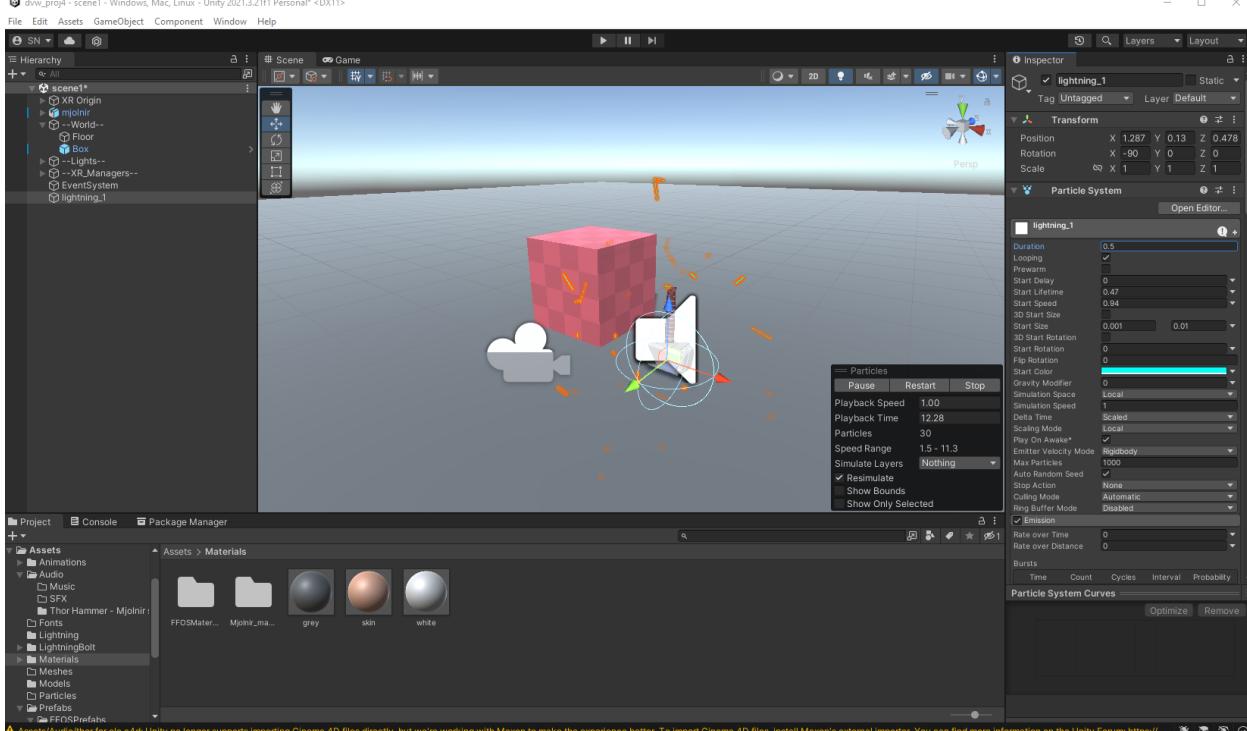
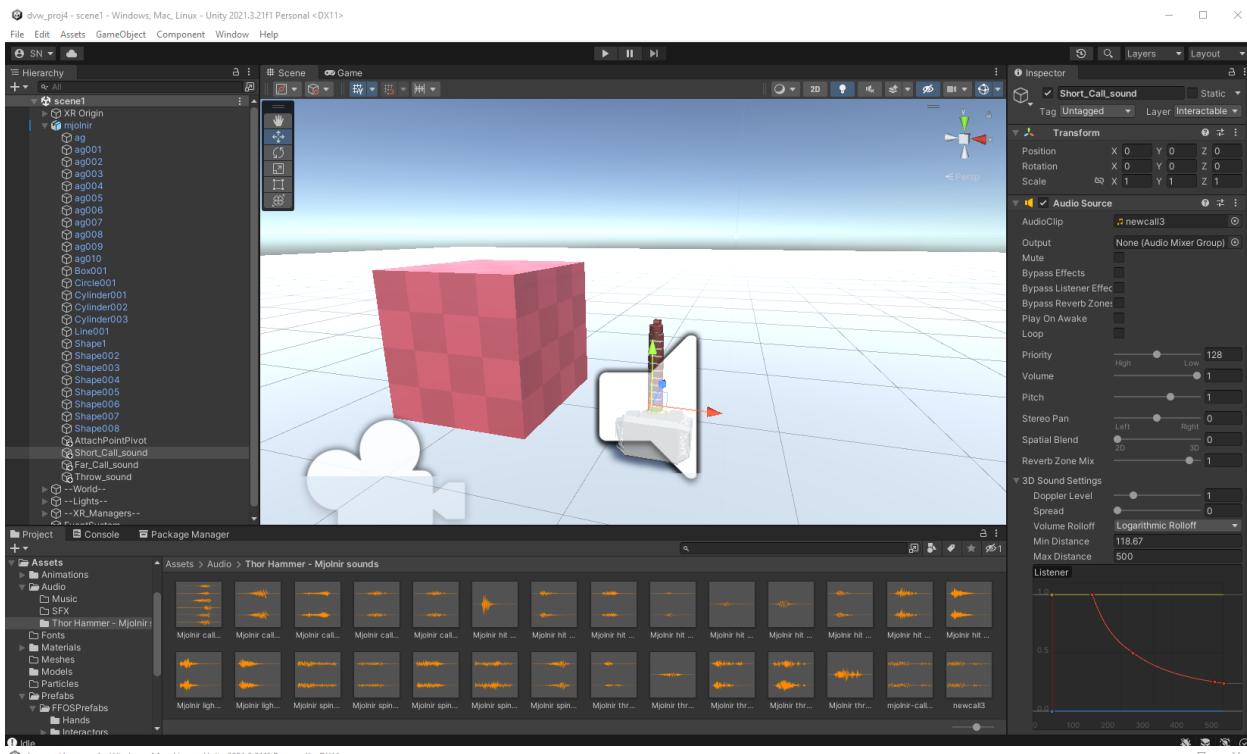
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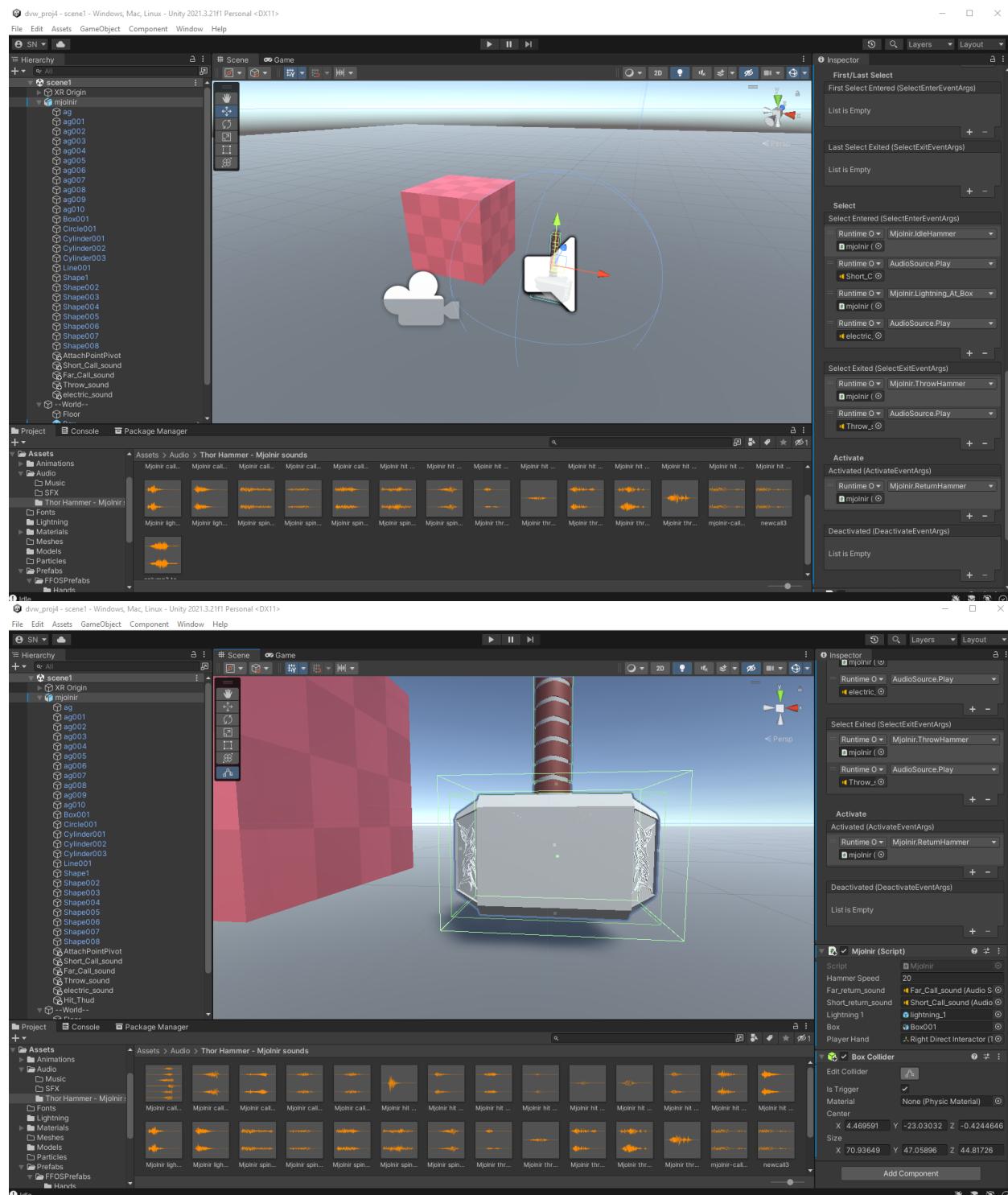
The screenshot shows the Unity Editor interface with the following details:

- Code Editor:** The top half of the screen displays a code editor for C# scripts. The script is named `Mjolnir.cs` and contains logic for a hammer's movement based on player hand position. It includes methods `Start()`, `Update()`, and a switch statement for different states like `Idle`, `Throw`, and `Return`. A break point is set at line 32.
- Error List:** Below the code editor is the Error List panel, which shows "No issues found".
- Unity Editor:** The bottom half of the screen shows the Unity Editor interface with the following components:
 - Hierarchy:** Shows the scene structure with objects like `XR Origin`, `Player`, `Floor`, and `Box`.
 - Scene View:** Displays a 3D scene with a red cube and a hammer model resting on it.
 - Inspector:** Shows the properties of selected objects in the scene.
 - Project:** Shows the project structure, including assets like `Animations`, `Materials`, and `FFOSPrefabs`.
 - Console:** Shows the console output.
 - Package Manager:** Shows the package manager interface.

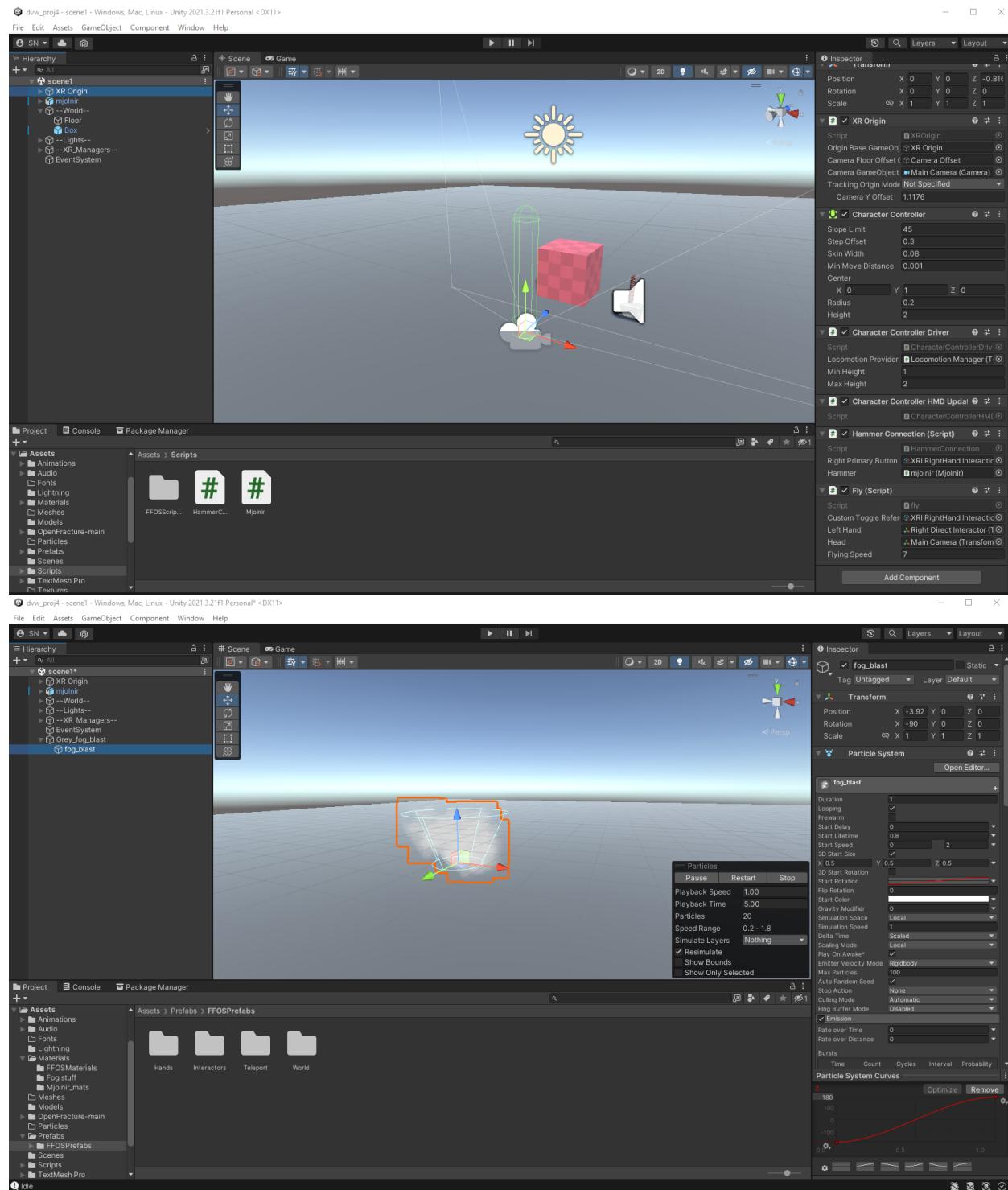
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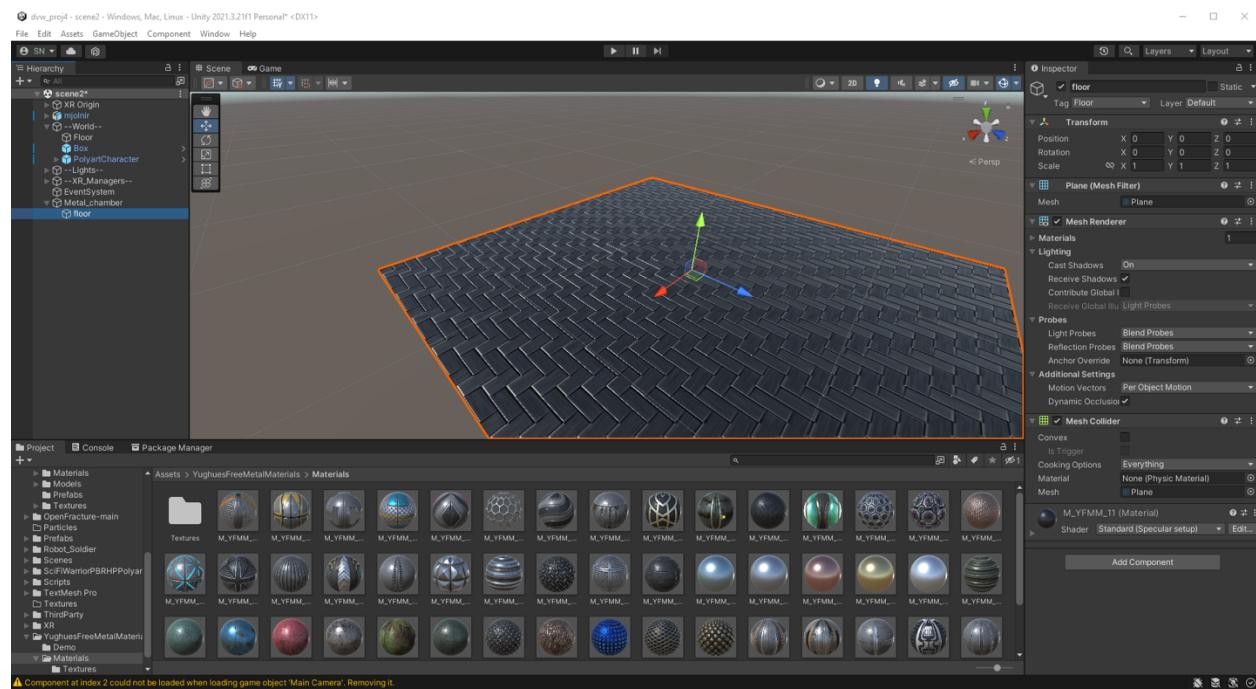
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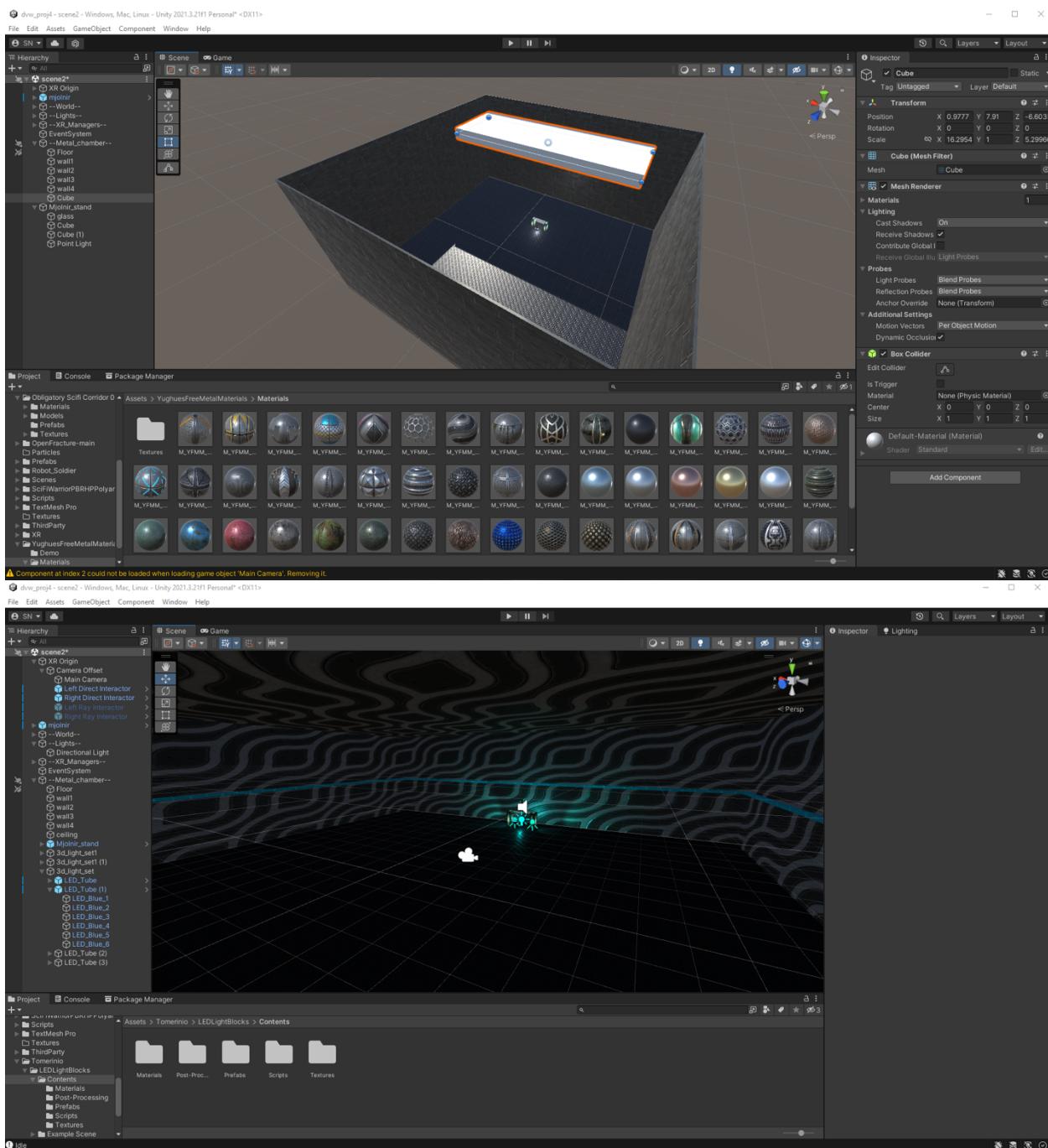
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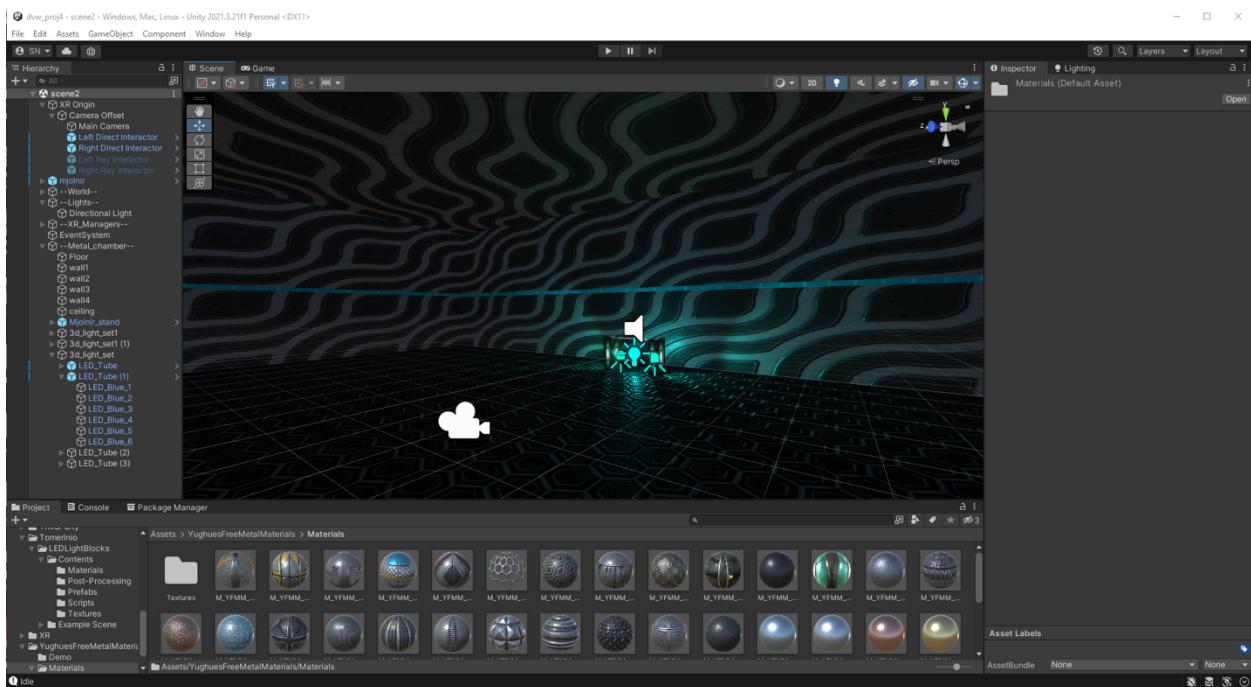
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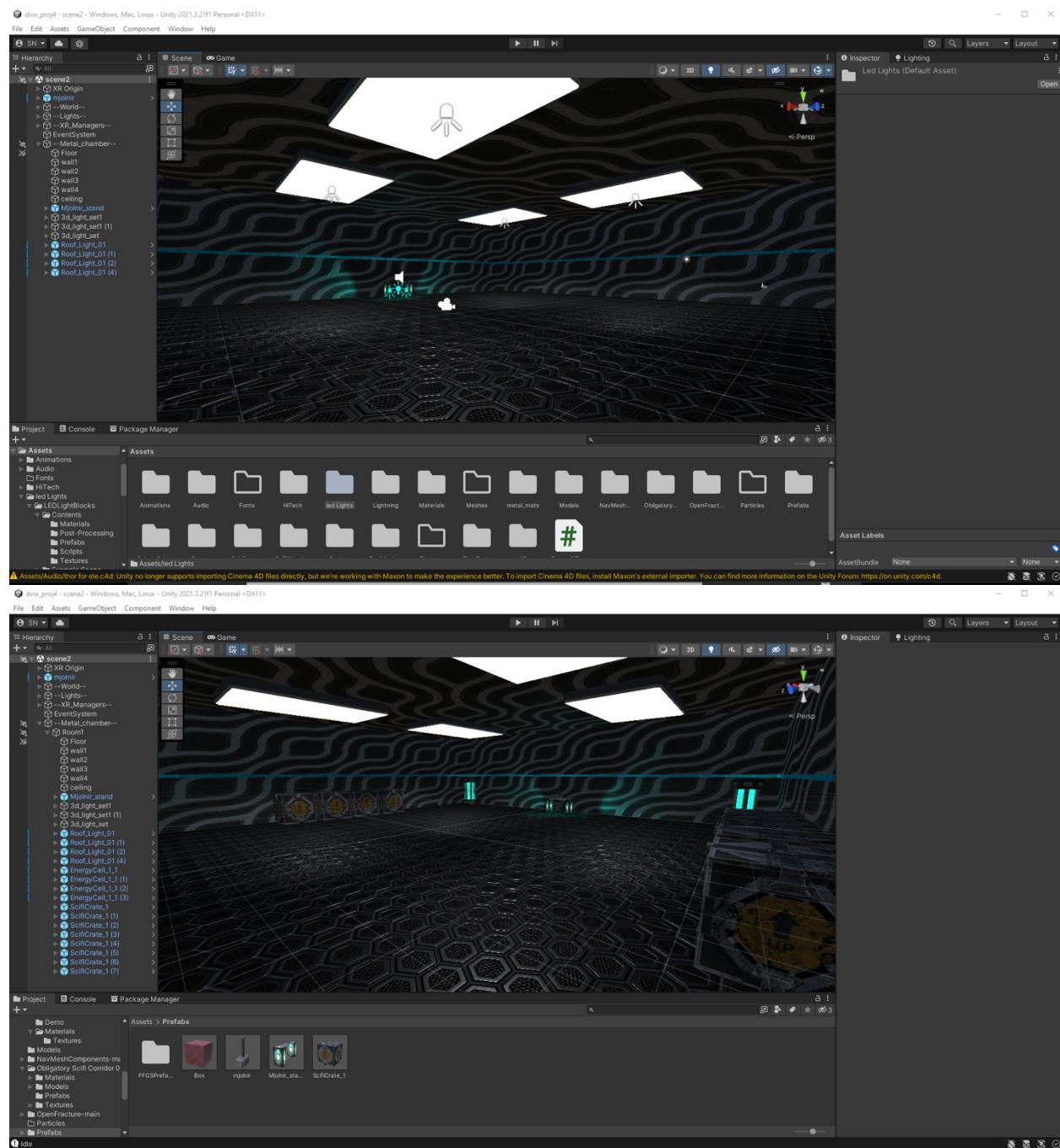
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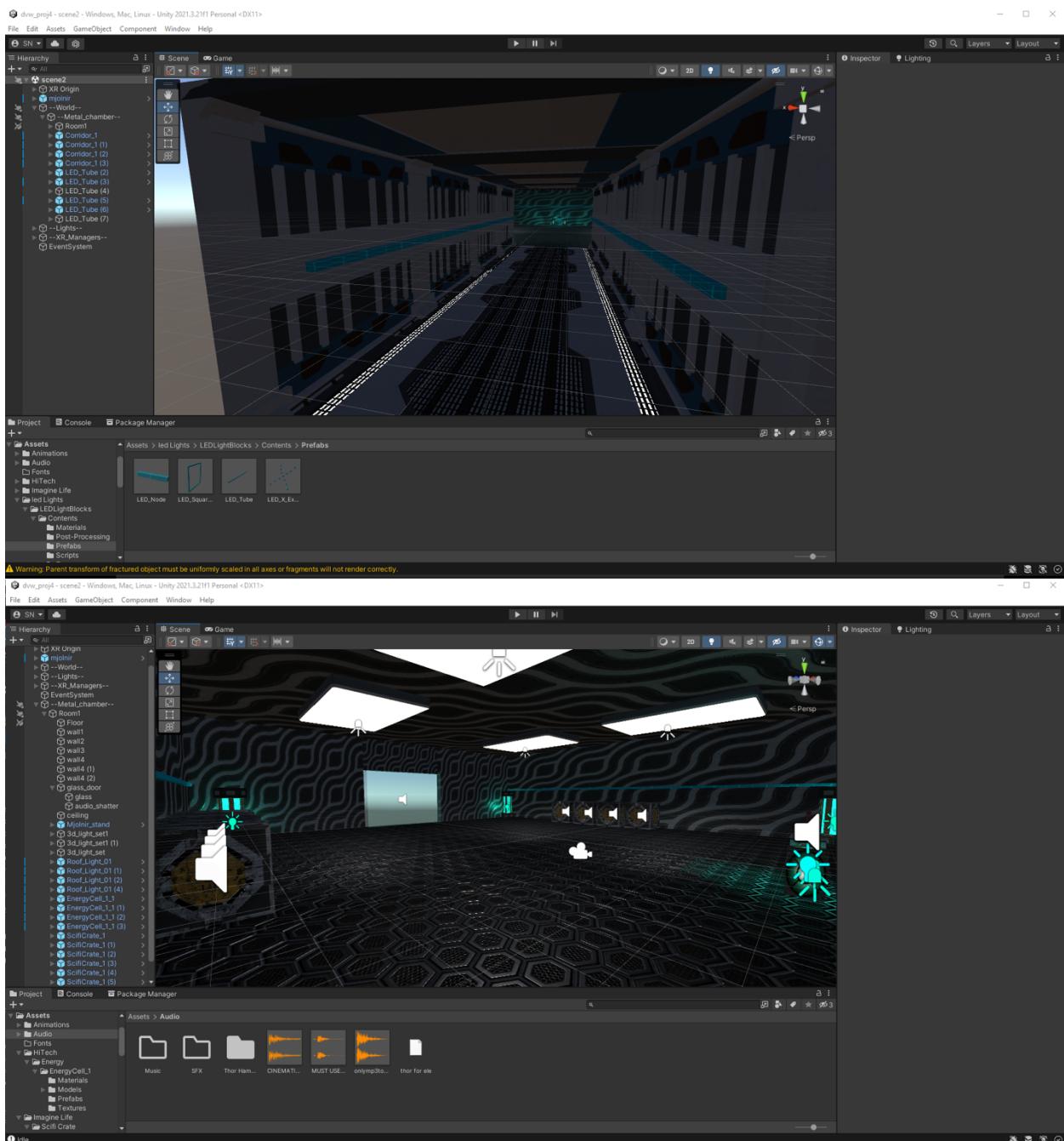
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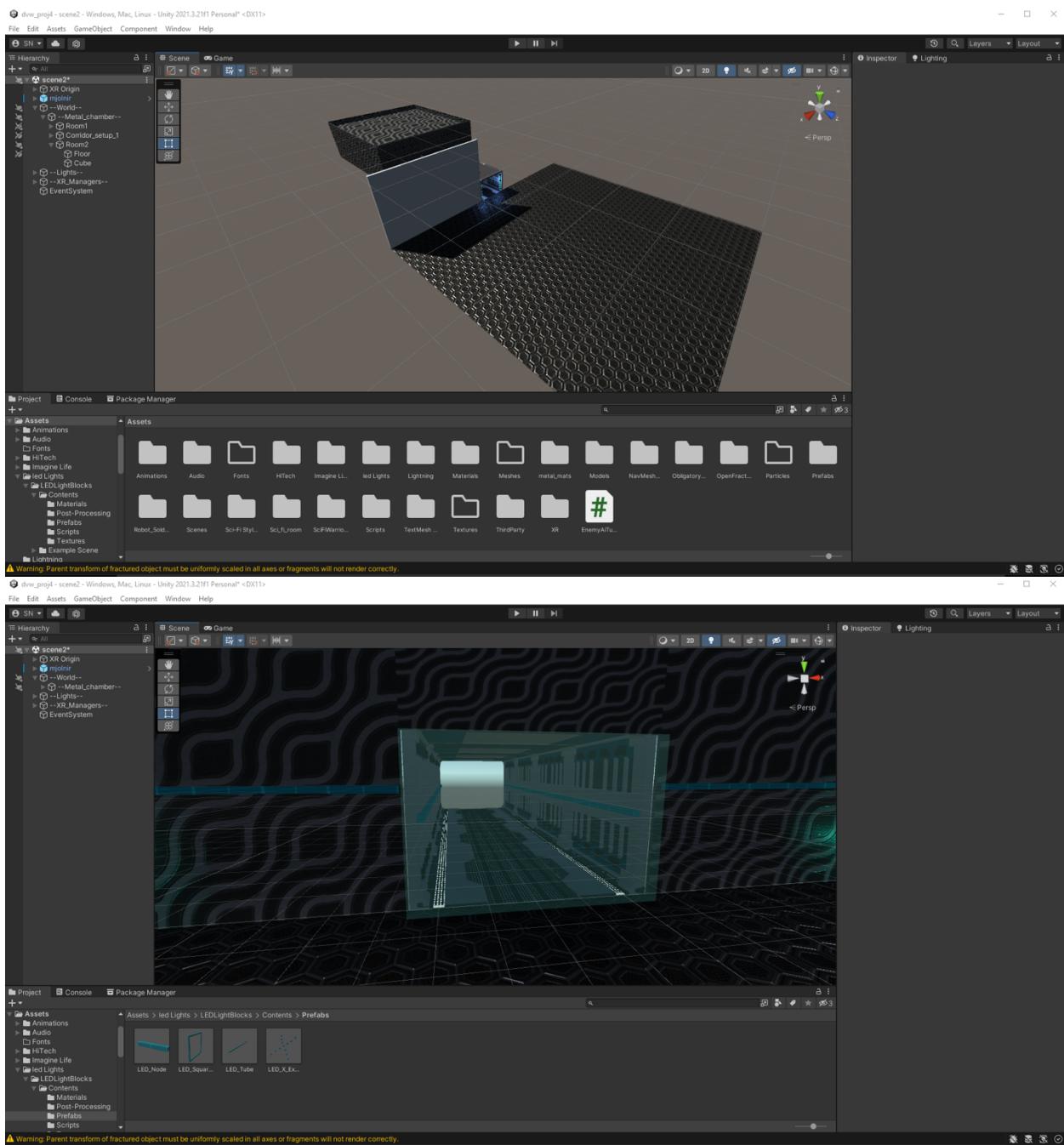
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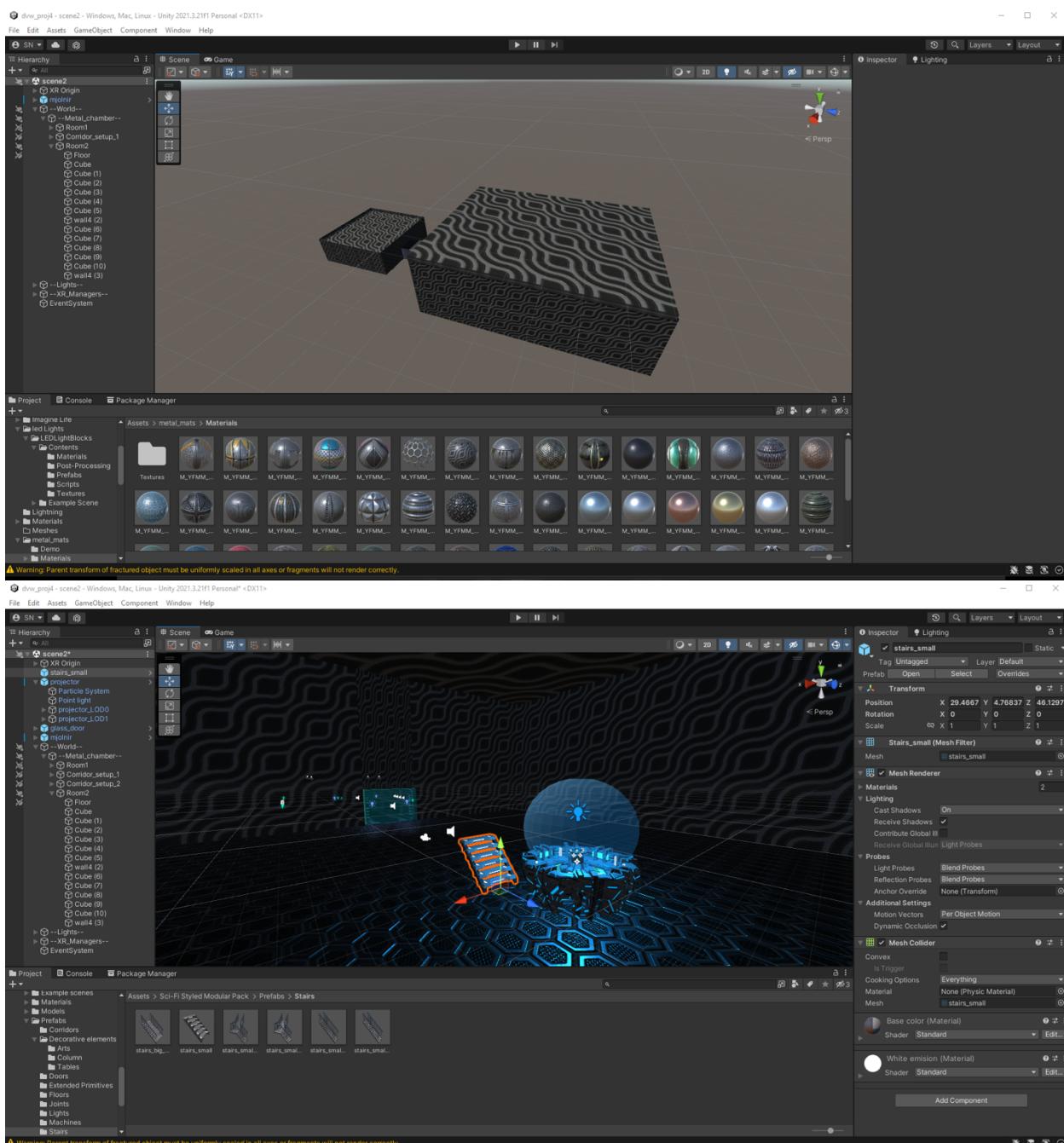
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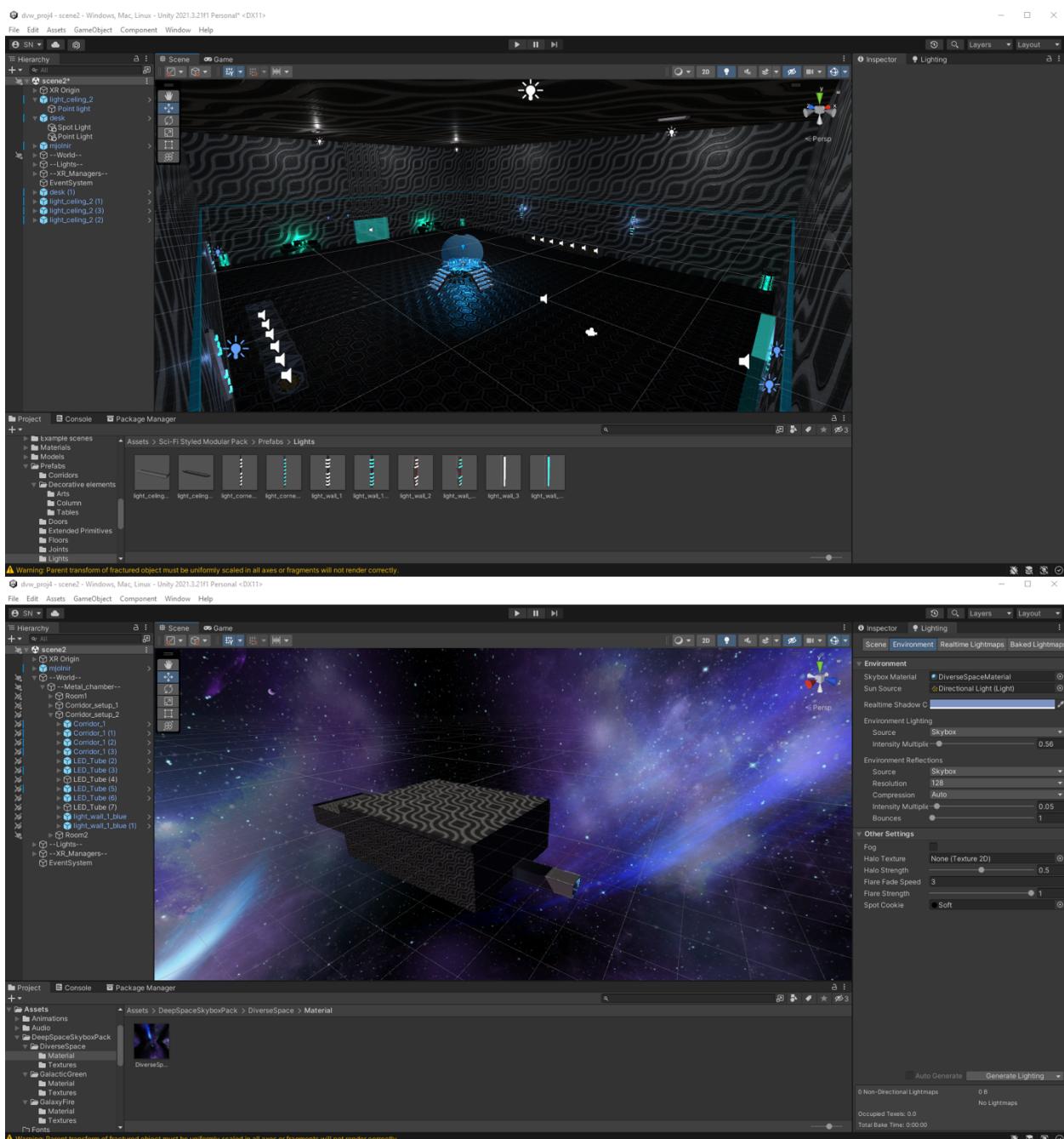
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