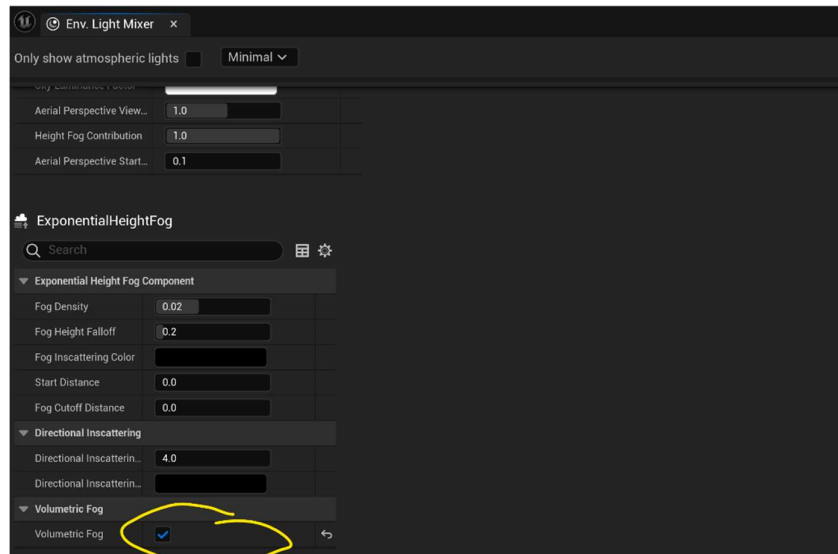


Experiment 6: Familiarizing with Unreal Engine

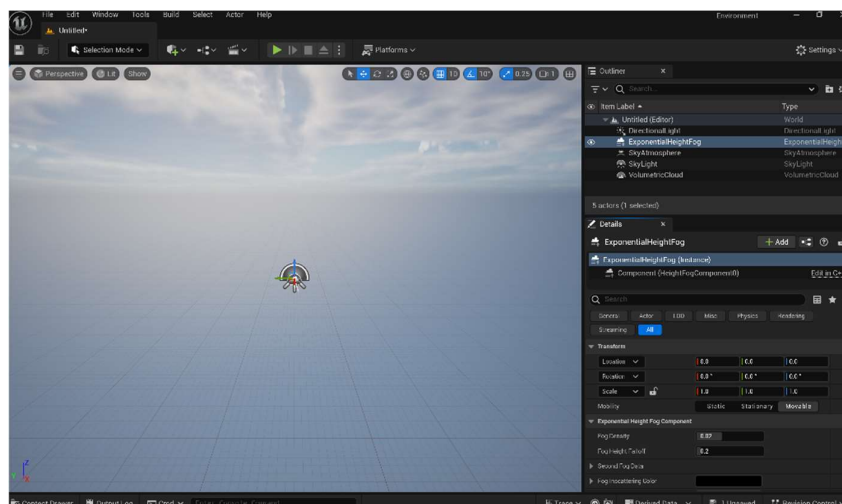
This project aims to explore the basics of Unreal Engine, focusing on navigating the Unreal Editor and its core functionalities. The experiment includes importing basic 3D models and creating a simple 3D environment using available assets, laying the foundation for further work in virtual environment design.

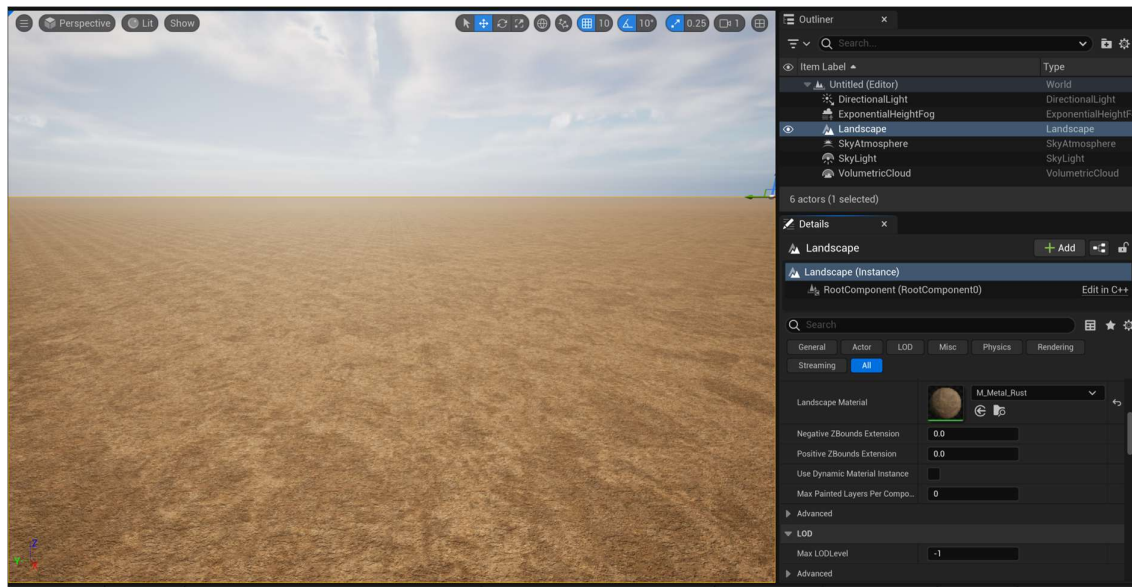
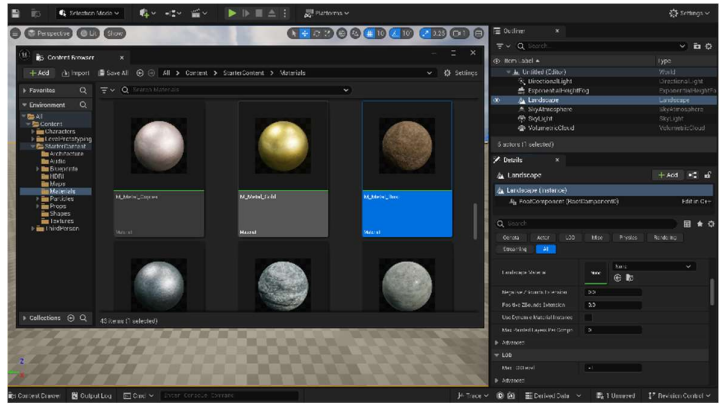
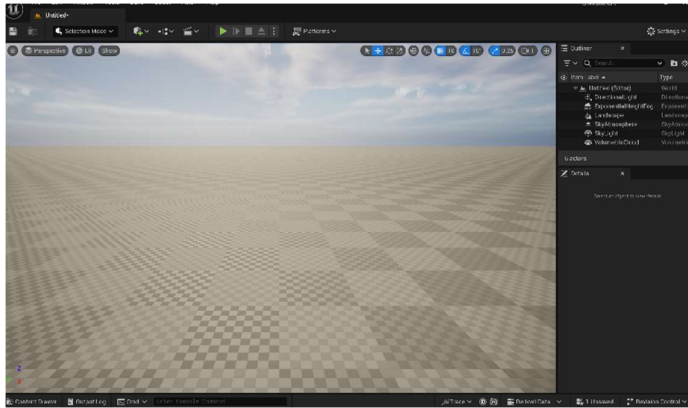
Below are the steps followed to create the same.

1. First we went to file and create a new level. After this, an environment mixer was used to create the environment and volumetric fog was included.

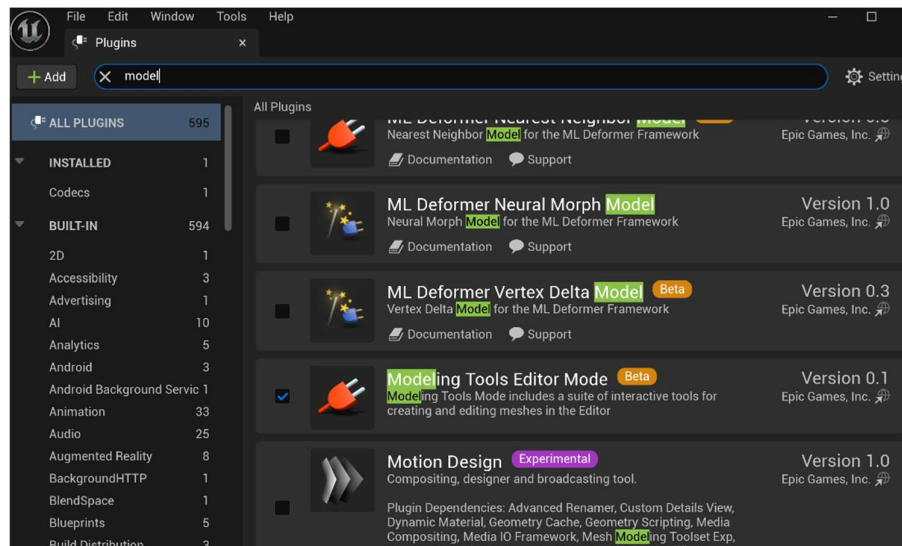


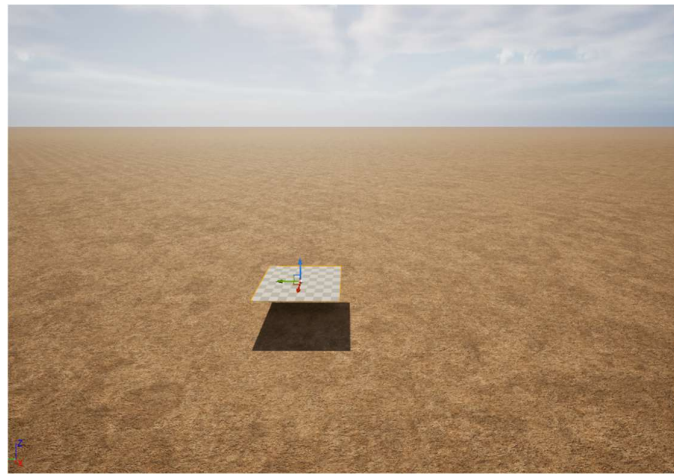
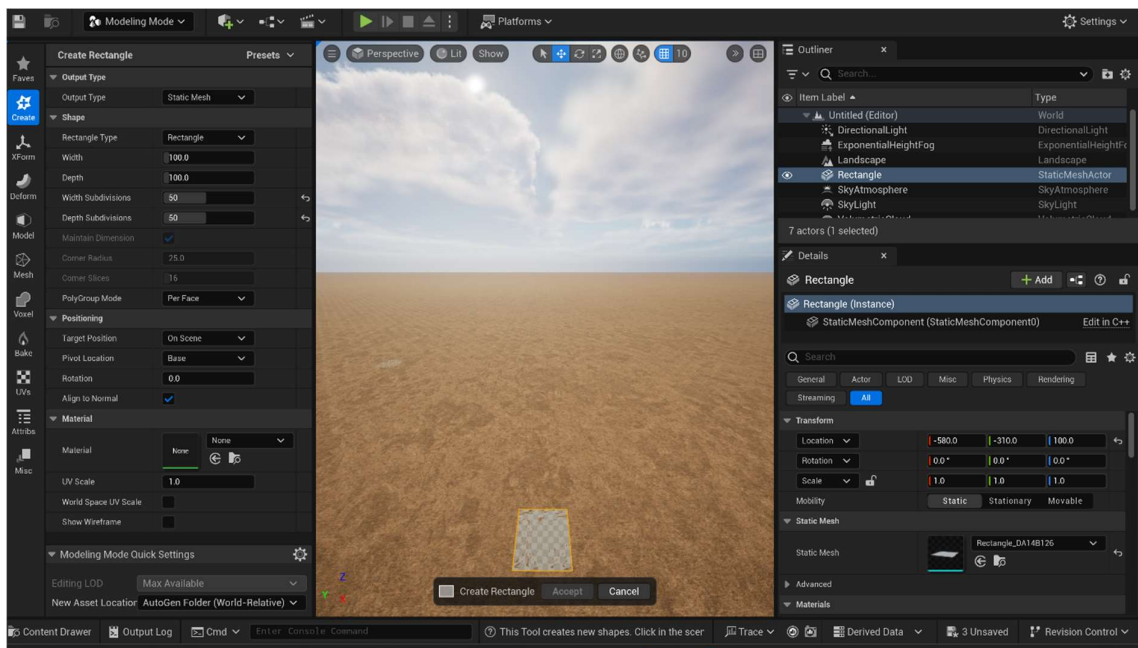
2. Next Step was to create the landscape. For this we went to = our selection mode and we going to put a landscape material over here so for this we go to we go to the starter content and then to materials. We selected the M_Metal_Rust material for our project.



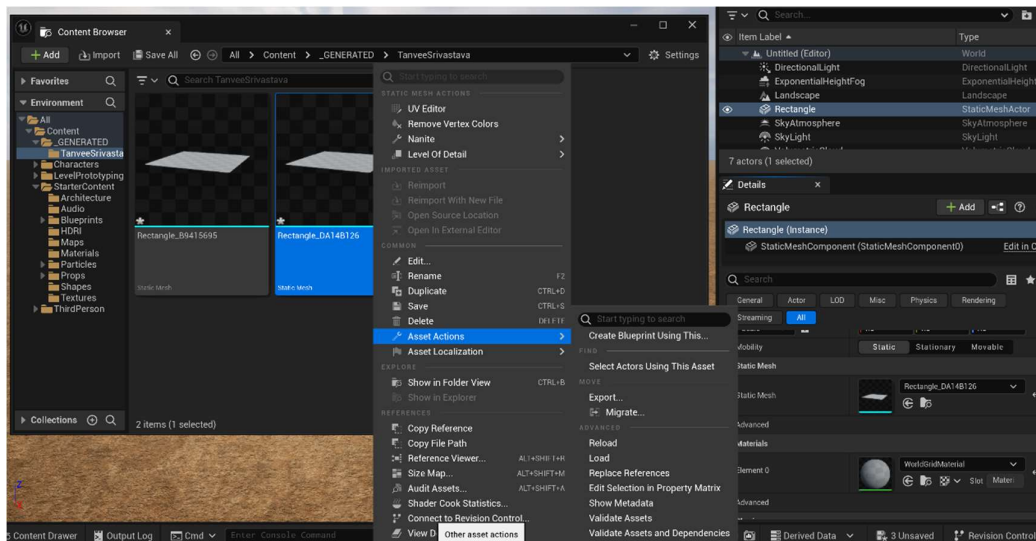


- Now we want to create a road on this. So for this, we're going to create a road model and we used unreal engine to create a model for the road. We used 'Rectangle' from Modelling Mode and sub-divided it.

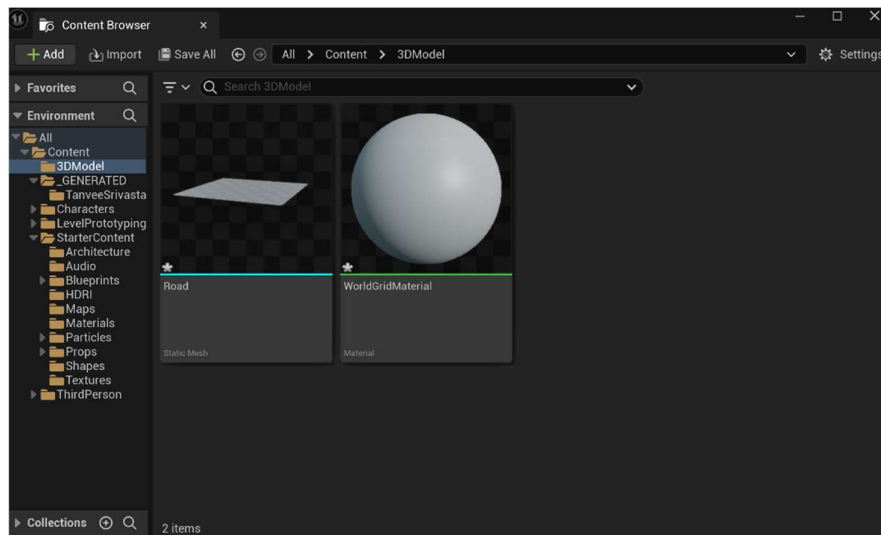




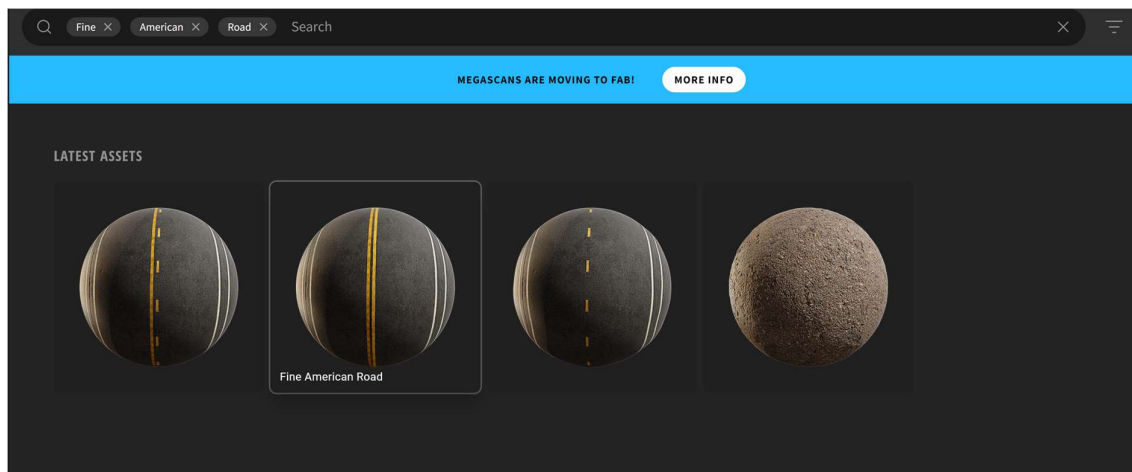
4. Next step was to export our asset (Rectangle Model)



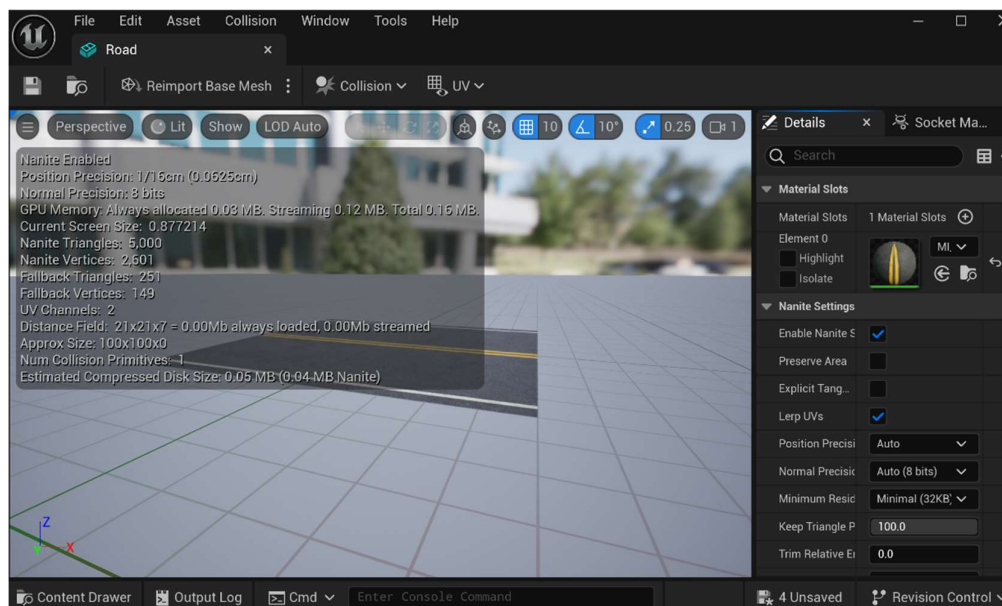
5. Then we created a new folder as 3D_Model and imported our saved asset there.



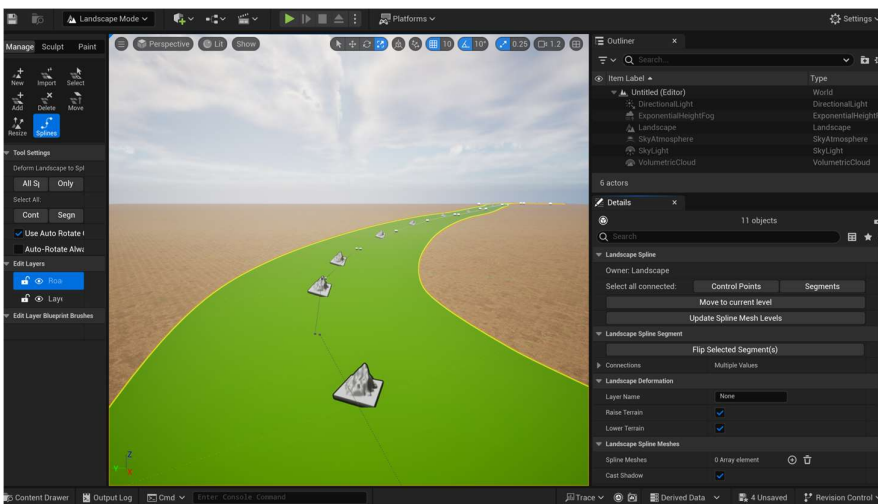
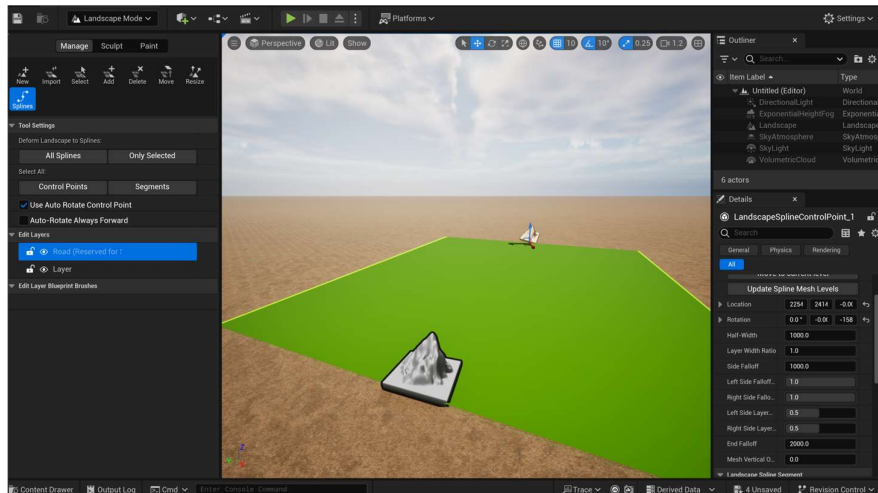
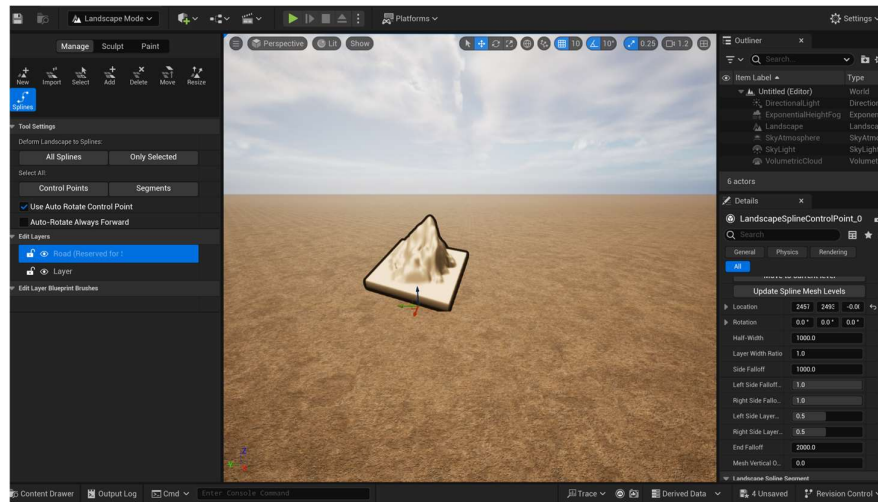
6. Then we added Quixel Content and downloaded the material for our road.



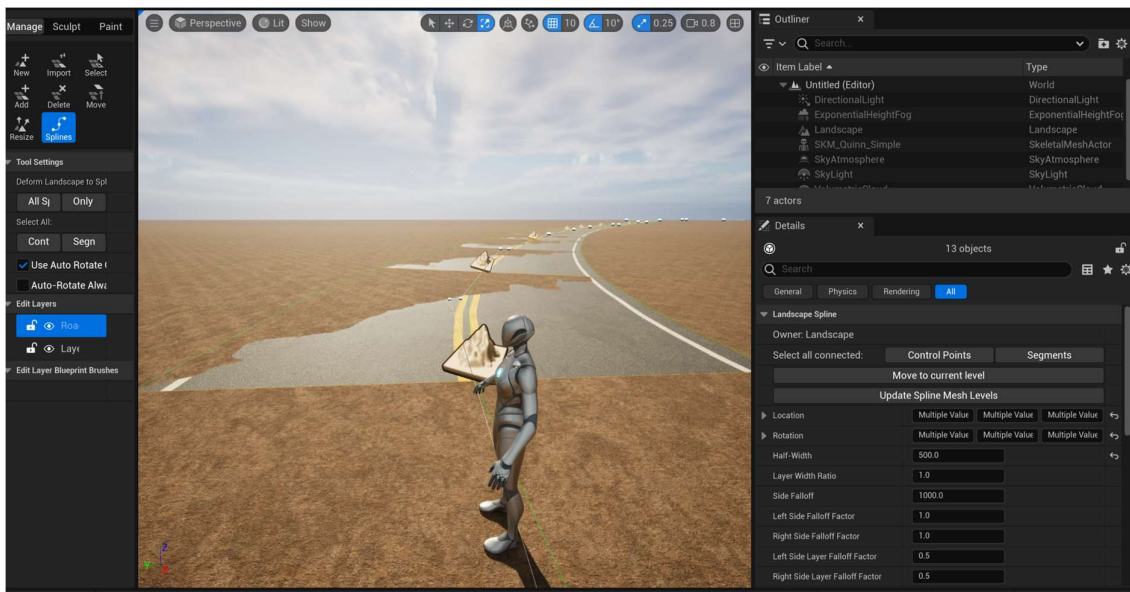
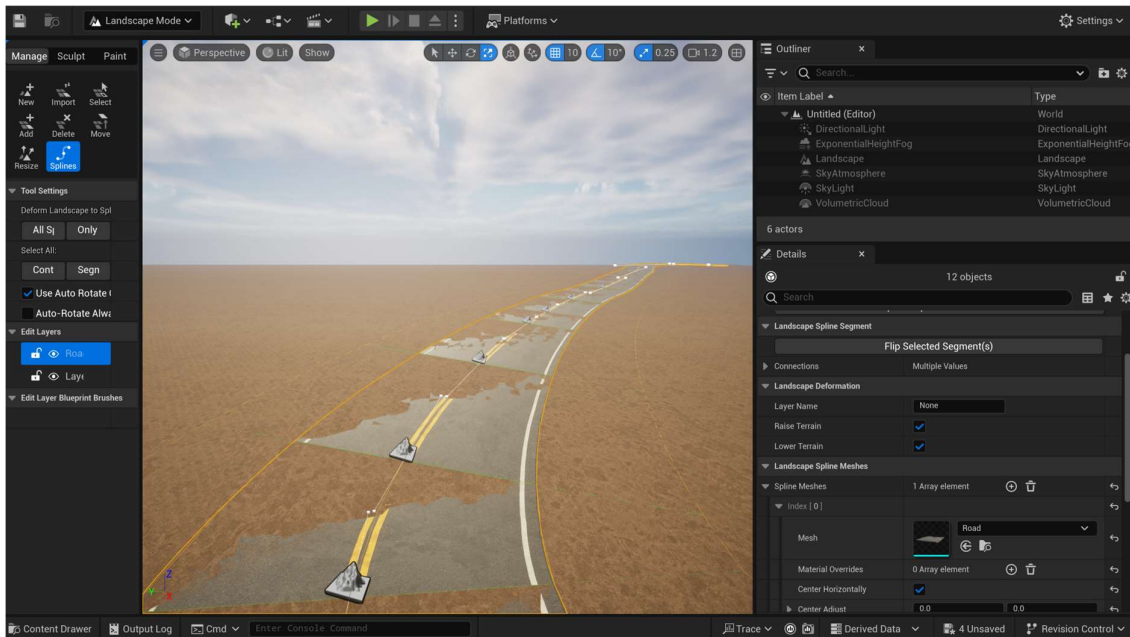
7. Then we applied the material over our road



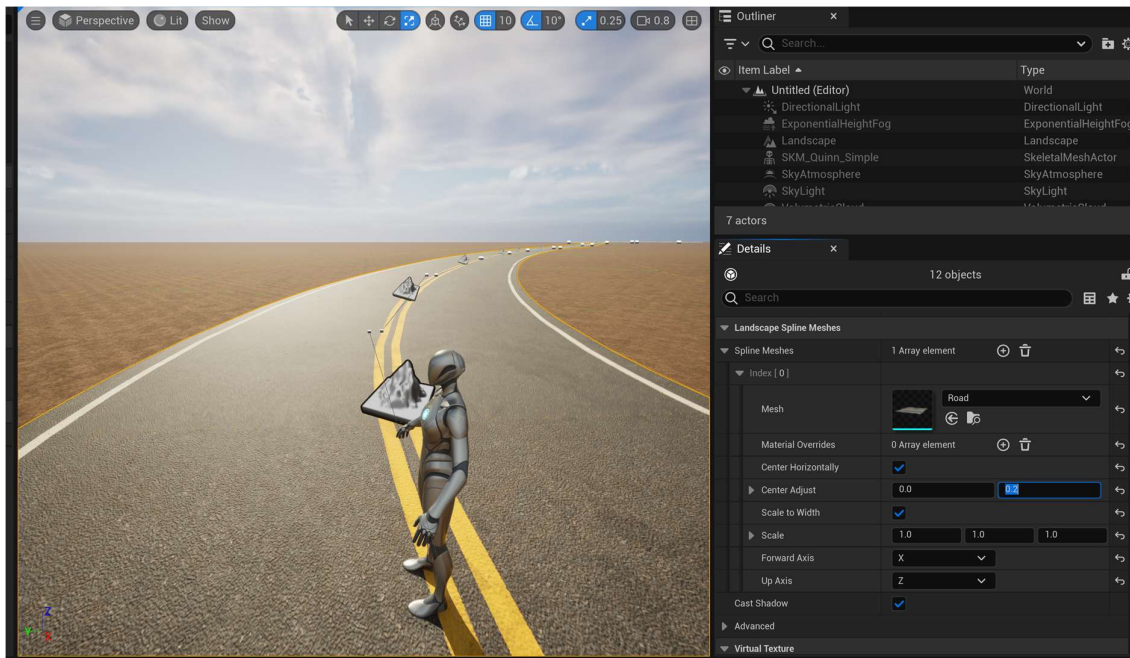
8. Next step was to add the spline point to create the road and then we added more points to create road



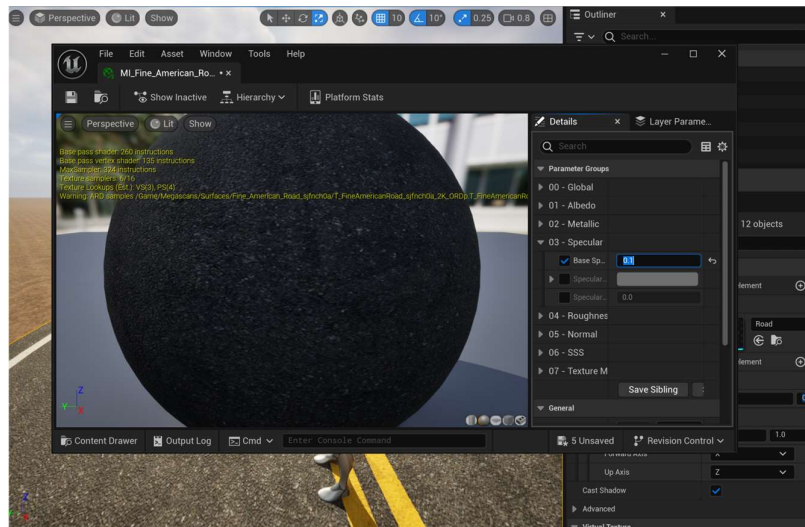
9. Then we dragged and dropped our road model in the spline mesh and added a Mannequin to get the actual size of the road



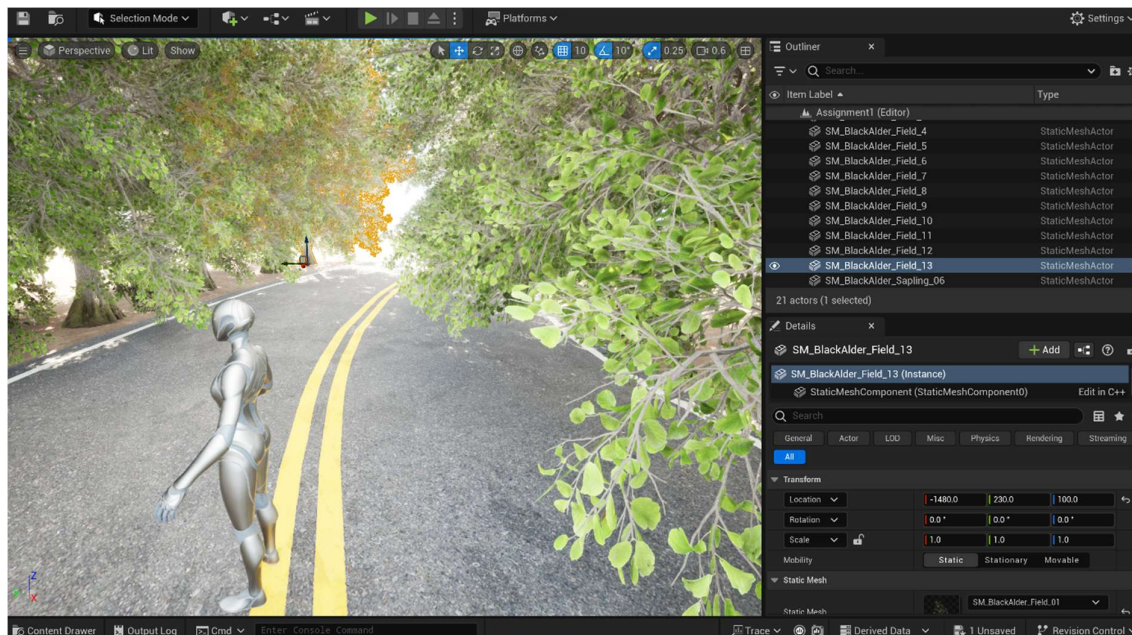
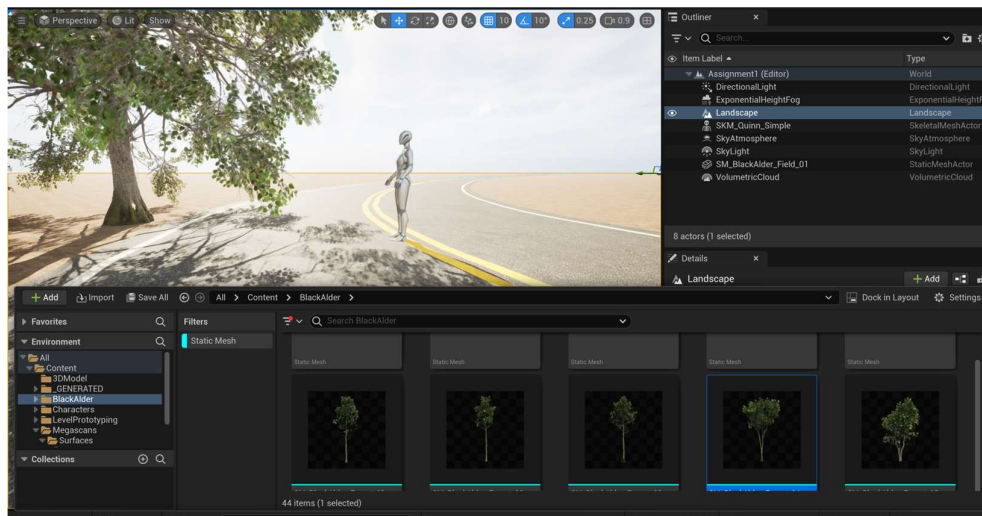
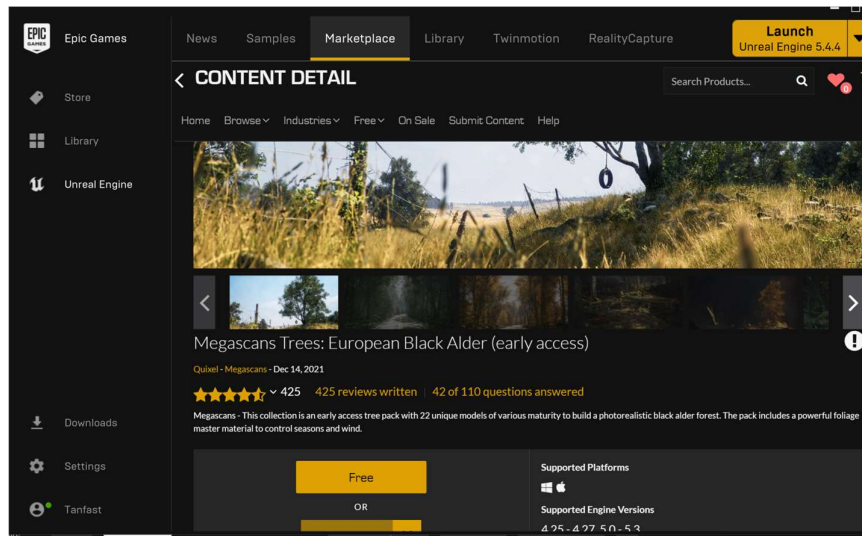
10. To adjust the road, we went to segment and added a value of 0.2 to the field Centre Adjust.



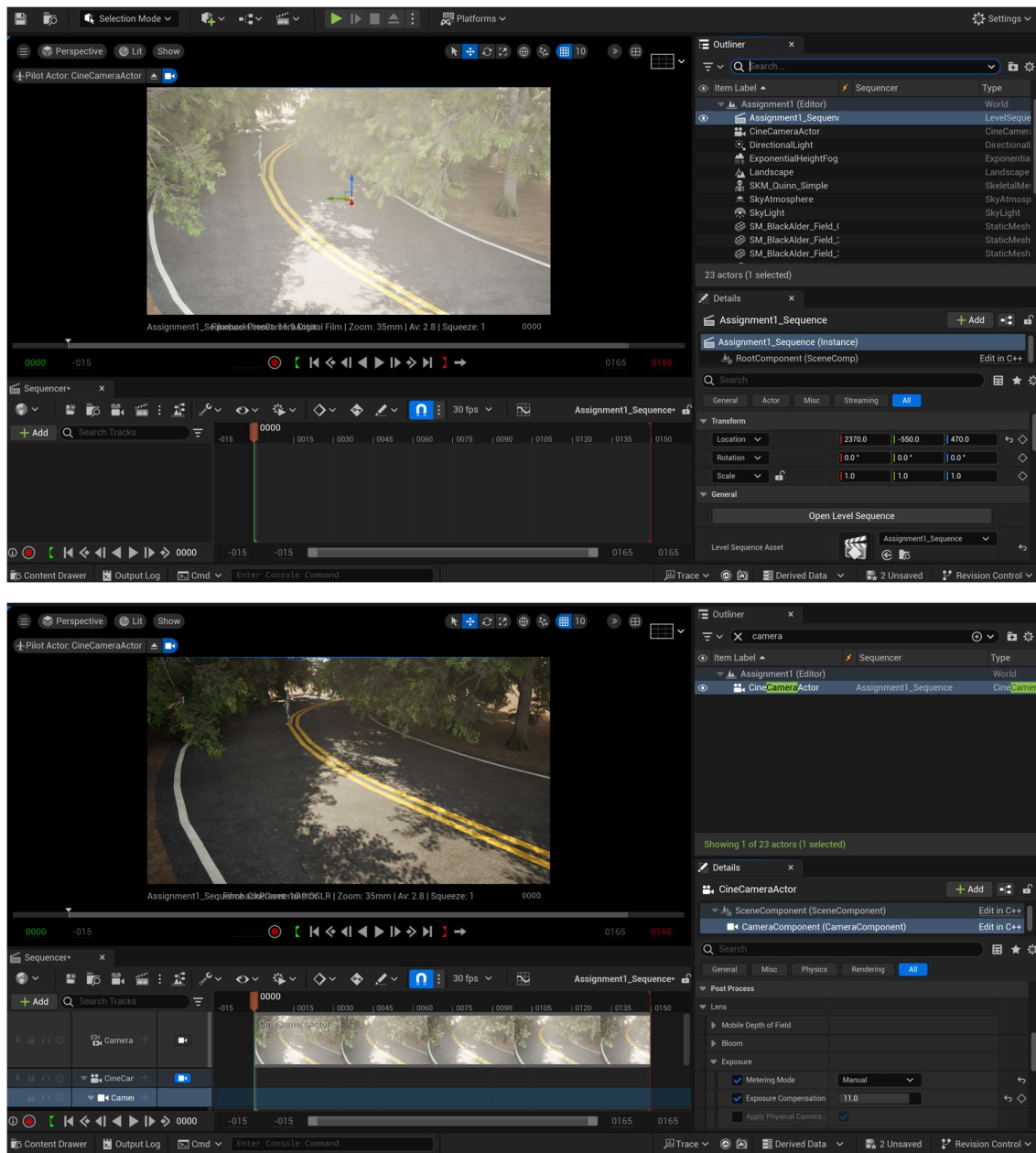
11. To give a more realistic view to the road we modified our asset by adding a value of 0.1 to 'base specular' field.



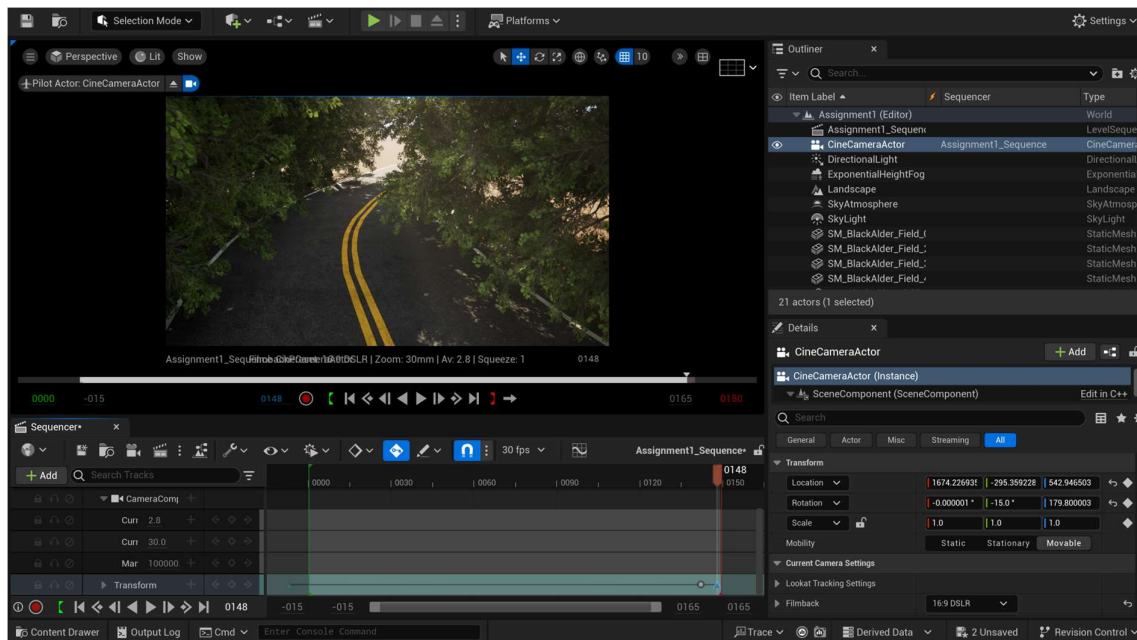
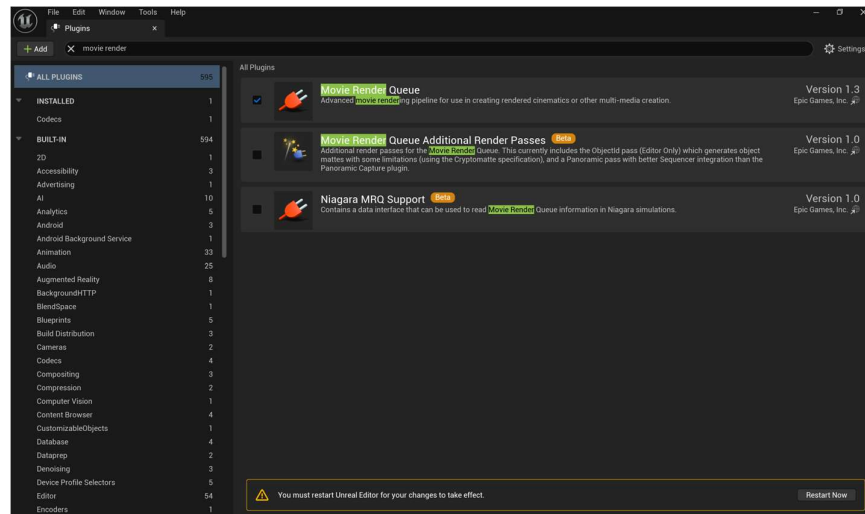
12. After this we went to Epic Games marketplace to download trees asset and then added it to our project.



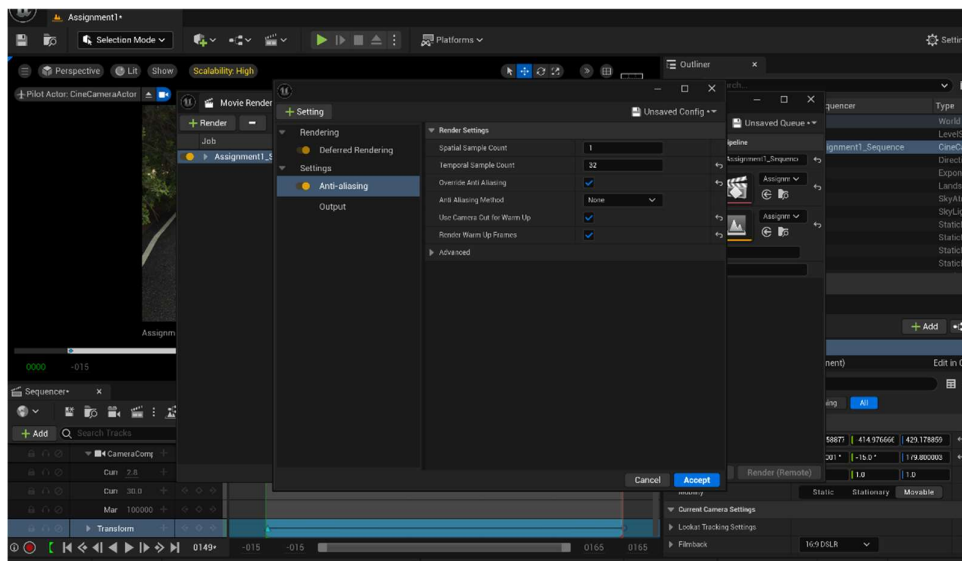
13. Then we created camera for our scene and adjusted the light settings.

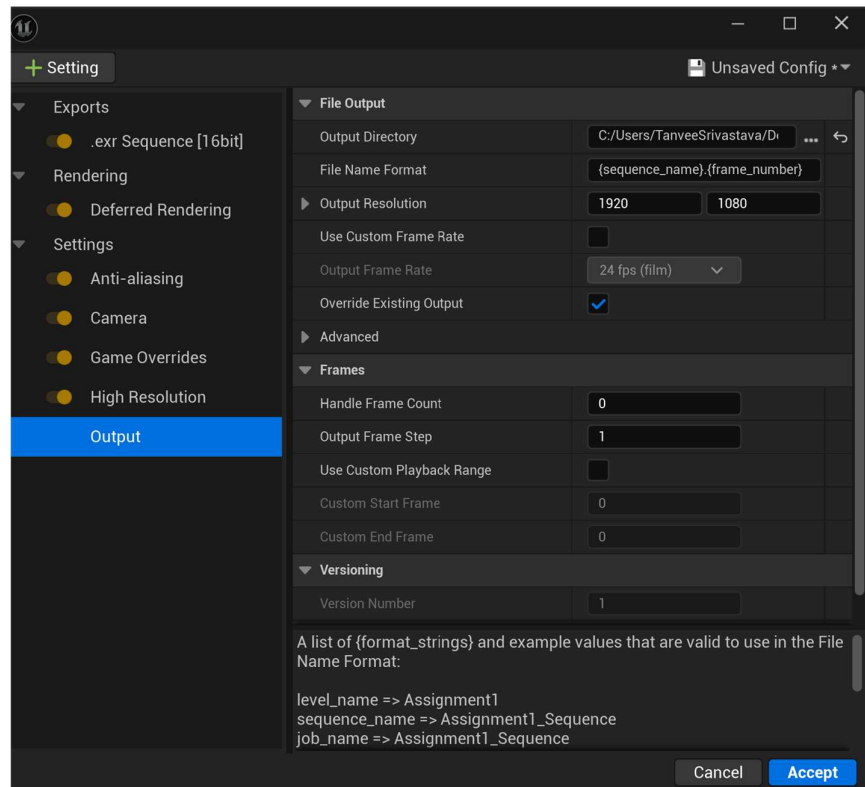


14. To render our movie, we enabled 'Movie Render Queue' plugin and added keyframes to make animation.



15. Then we adjusted the Settings of our movie and selected the .exr sequence as the output of our movie.





16. Next step was to render the movie and generate image sequences. We then clubbed the sequences using Blender and added a sound in the background to give more realistic effect.

Conclusion: In conclusion, this experiment provided valuable hands-on experience with Unreal Engine, allowing me to grasp the essential tools and commands for navigating the Unreal Editor. By successfully importing 3D models and creating a simple environment, I have built a strong foundation to further explore Unreal Engine's capabilities for more complex virtual environments.