

PORTFOLIO PIECE #8

PROCESS WORK

IMMERSIVE ARCHITECTURAL VISUALIZATION



Introduction

This was a semester project done as part of the coursework in my Bachelors of Science in Visual Communication. For this project, I decided to design and visualize an apartment interior in Unreal Engine, and create an immersive walkthrough of the living space in virtual reality.

Project Methodology

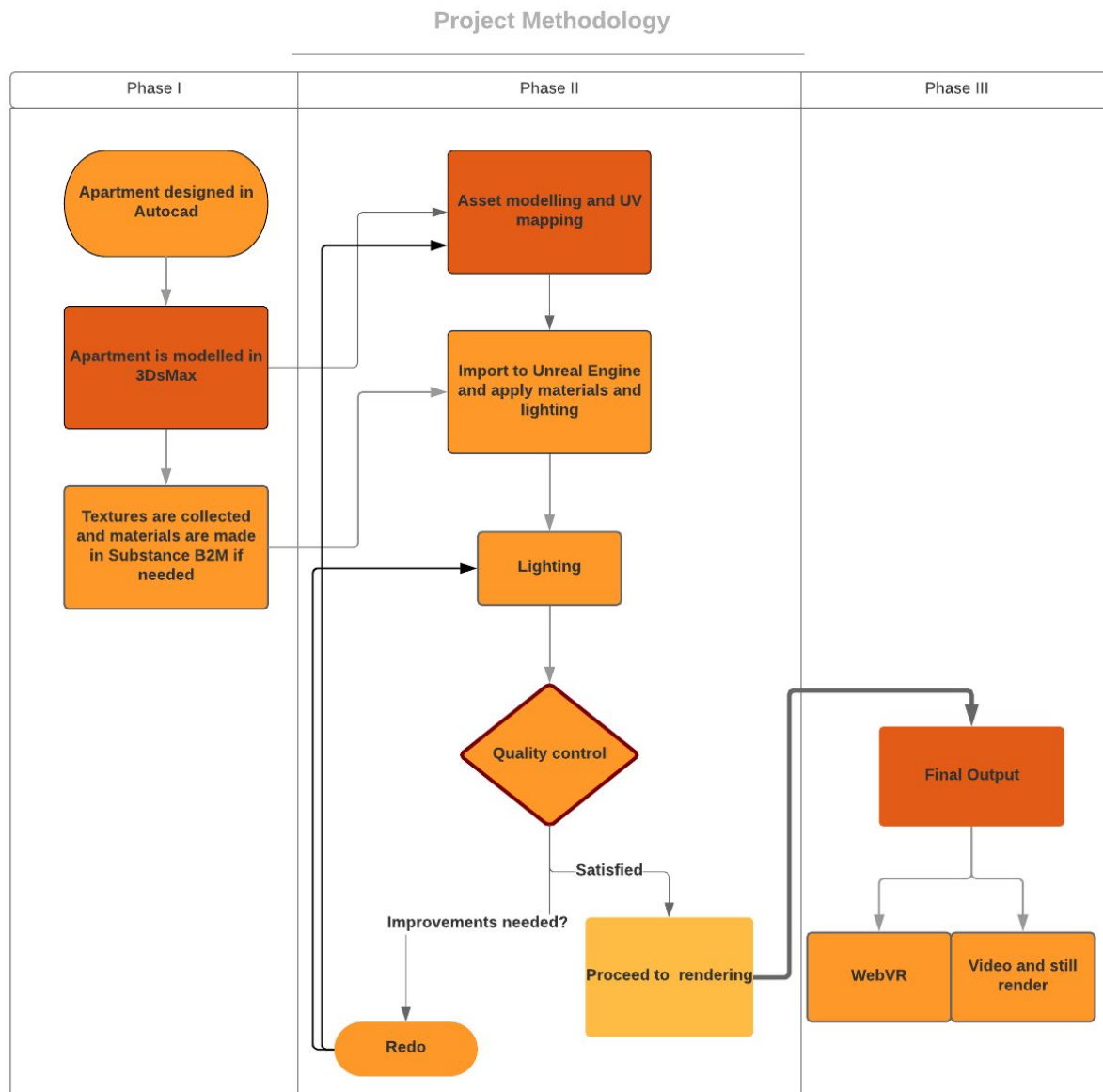


FIGURE 1: Project Methodology

Figure 1 is a Flow chart representation of how my team and I, methodically went from the Ideation process through the production.

1. Designing the apartment layout.

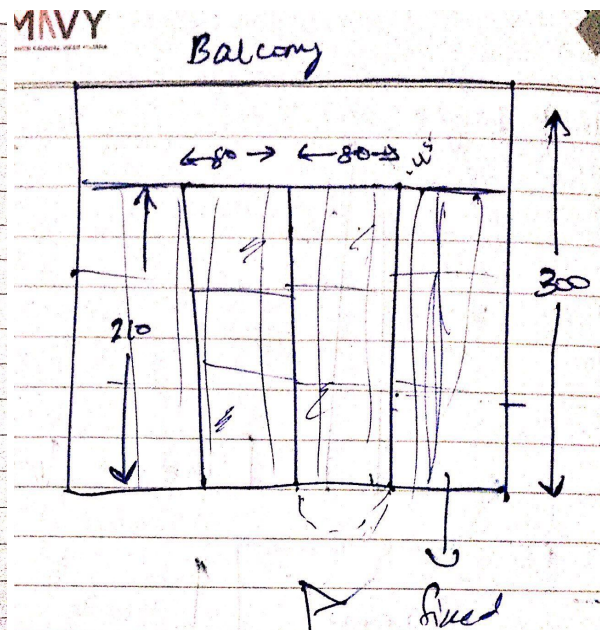
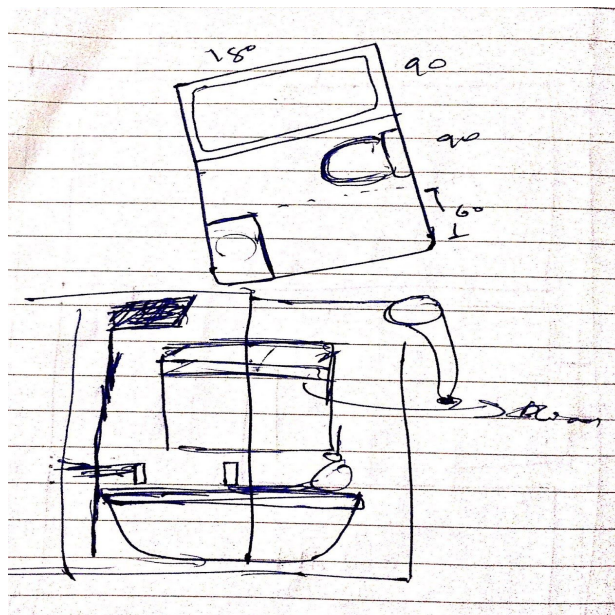
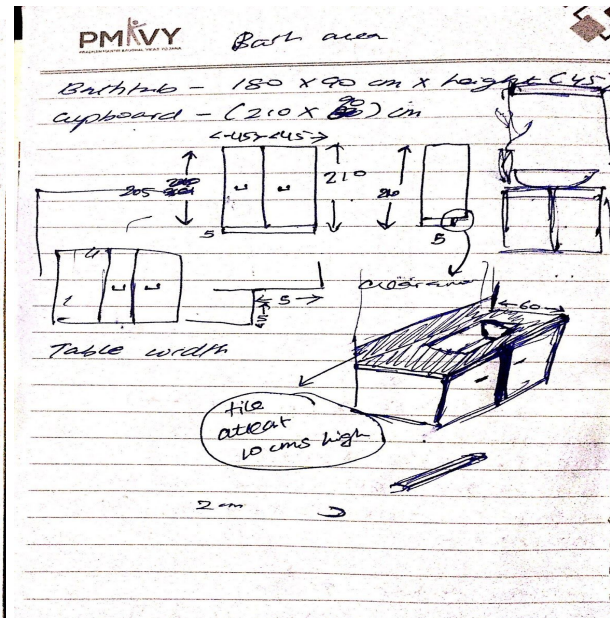
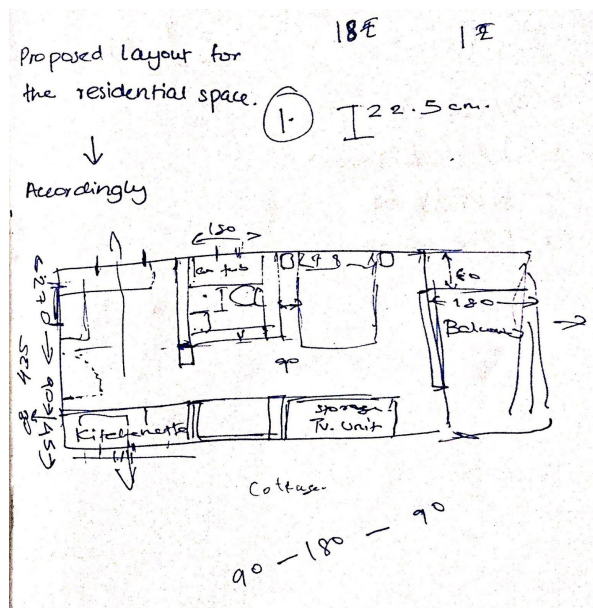
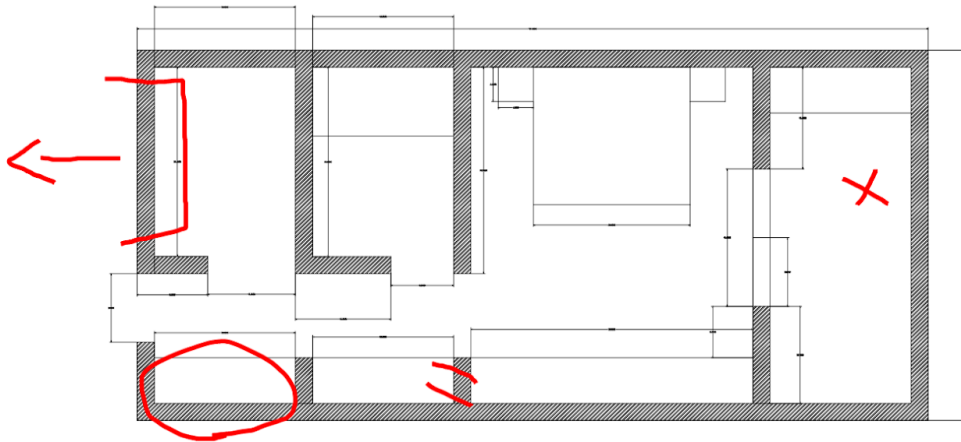


Figure 2: Pre Production sketches.

residence.dwg



AUTODESK VIEWER

AUTODESK

Figure 3: Floor Plan in AutoCAD

Our team went through visual and floor plans of various apartment designs and we decided to visualize a single bedroom apartment with a living room, kitchen, and bathroom.

A couple of sketches of the floor plan was made and comparisons were done between them. The final floor plan in AutoCAD was made with the help of an Architect to guide us in implementing our design while adhering to real-world measurements.

2. Modeling the layout in 3Ds Max.

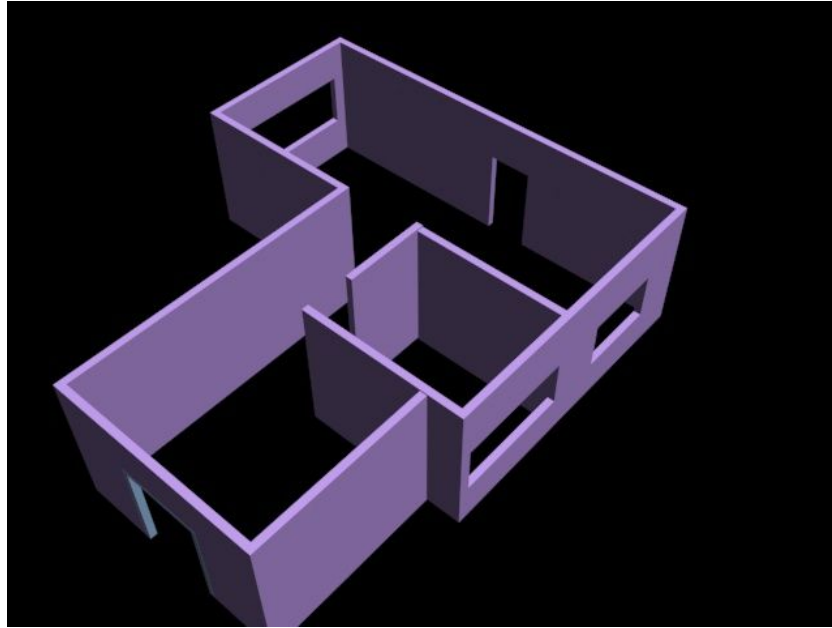


Figure 4: Apartment model in 3Ds Max

The walls of the apartment are modeled in Max by importing the floor plan from AutoCAD. Spaces for door frames and windows were also created.

3. The inclusion of Perforce Helix Core for Version Control

Helix Core was used to manage version control for assets in our team. We deployed Helix Core in the Google Cloud Platform.

4. List of 3D assets is decided and assigned to individual members of the team.

Asset modeling was divided and assigned to all team members. Simultaneously, I did UVW mapping and textured models submitted by the team

5. Textures and Assets were imported into Unreal Engine.

Assets and textures were imported into Unreal Engine using the datasmith plugin included with Unreal Studio beta.

The building of the level in Unreal started.

Basic lighting for the apartment was also done.

Version control was not used in unreal as I was the only one working with the engine.

6. The level is built and Rendering is done.



Figure 5: A 360 panorama captured with Ansel inside Unreal Engine

The apartment level was complete and I started capturing videos and photos of the level. Using the Nvidia Ansel plugin, 360 stereoscopic panoramas inside each room were captured.

A VR Virtual Tour was created using the captured 360 panoramas, through services offered by roundme.com.
