**Game Platforms Report**

To start this project, I decided what the theme of my experience would end up being. I went through several iterations of ideas, but eventually landed on a walk-through environment, with a few interactables, such as a UI and some grabbable objects. I also wanted to implement a grabbable gun, which potentially would fire bullets. This would later change, and I would make the walk-through environment shorter, and added a firing gun, and a target range, to compensate.

I then used Autodesk Maya to model out the basic scene, keeping poly count as low as possible, so that it would run smoothly on a Quest 2 headset. I also created the shaders/materials within Maya, however Unity had an issue with this and didn’t keep them when I took them into the engine, so I had to recreate all of the materials form scratch, simply within Unity. This was made much easier by the fact that all of it is just flat colours across it.

A video game screen of a building on a dock

Description automatically generated

Next, I used the VR template to create the project, as this comes with the simple systems required for a VR game. This process took a very long time, however, as I had a vast array of issues with Unity Hub, and no project would open or create, as there were issues with the package manager. To solve this, I reinstalled Unity as a whole, and downloaded any required packages again, with some file management to make sure that Unity could recognise these things. Once in Unity, I recreated the movement system from the labs, to get movement working.

For the UI, I created a simple UI, using the XR Canvas instead of the basic Unity one. This meant that it was able to be interacted with in VR. I added a board with the UI, big enough, so that it was visible from a distance. It is a simple page with a button, and when the button is clicked, it goes to the next page, where there is a button to go back to the first page. I also made a small UI for the target range to reset the targets.

I then added in some grabbable objects. I made a low poly gun and a mug within Autodesk Maya and imported them into Unity. I then added in the XR Grab Interactable component to these prefabs and set attach points so, for example, when you pick up the mug, it will automatically reorient itself so that you are holding it by the handle. The same with the gun, so that it points forwards.

A black object on a blue background

Description automatically generated

I then added in some c# script to enable the gun to fire out a bullet prefab at a specified speed, at the targets, to practise your aim. Pressing the button next to the table will reset the targets.

I have also considered player comfort by adding in a small vignette when the player moves around to reduce motion sickness.