VR Assignment Report

The Project

This game is a collection based game in order to rebuild a village. The player must go and collect either rocks or wood in order to complete mini fetch quests for each site. Once all the resources are gathered the player can then press the button to build the house.

Controller Based Interaction

My controlled based interactions are centred around picking up objects and moving them to where they need to go. The controllers' ray cast will highlight blue when there is a valid item to pick up. All the items can be thrown using Unity's physics features and there is a collider to catch all items that might get flung off the world and will replace them back into the scene.

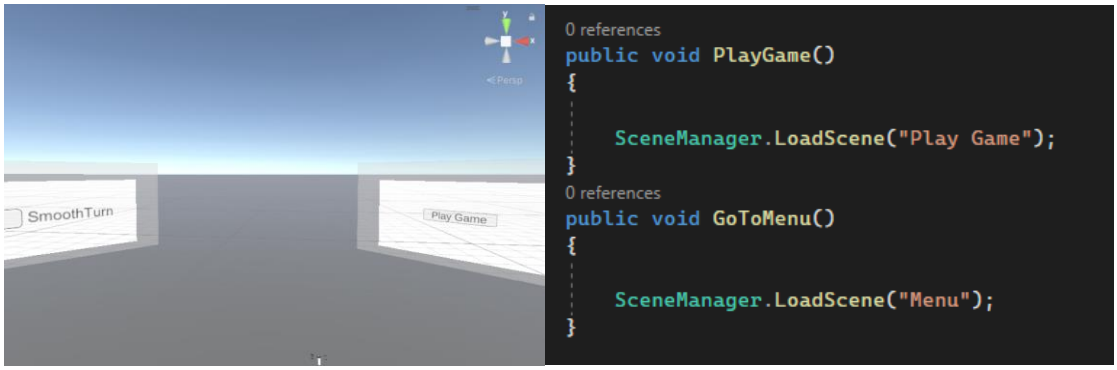
UI Interaction

The UI within the game is made up of buttons placed with in a World Space Canvas. This means that they are placed directly into the world instead of being stuck with the players view or on a 2d plane. The buttons will make the player ray cast turn blue as well when in range and activate with a trigger pull from the player.


```
0 references
public void ButtonPush()
{
    Building.gameObject.SetActive(true);

    gameObjectCount = myGameObjects.Count;

    for(int i = 0; i < gameObjectCount; i++)
    {
        Destroy(myGameObjects[i]);
    }

    changer.addScore();

    hasBuilt = true;

    Button.SetActive(false);
}
```

Scene Management

Within this project, I have 3 scenes that the player with visit. The first is a simple main menu scene which will have the play button. Once clicked, the game scene will load and once the objective is cleared the victory scene will load up as well. This is all done through load scene functions within a scene manager.



Character/Avatar Movement

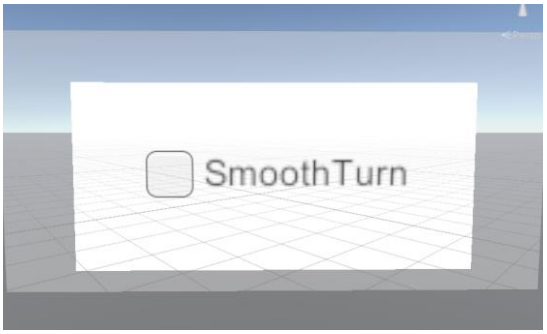
This game includes 2 ways for the player to move around the level. The first of these is joystick movement. This means the play can easily navigate the world by using only the joystick on the left to move, the joystick on the right to turn, and still look around with the headset. The other method of movement is teleportation which can be achieved by pushing the right joystick forward and releasing it, the reticule will change slightly and the player will be teleported on release.

Physics/Lighting/Effects

Using Unity's physics engine, everything is made to be throwable using a XR Grab Interactable which allows for the player to interact. This component also comes with the option of having objects stop moving when it leaves the players hand but I decided real time would be better allowing for players to throw the objects.

Player Comfort

There are 2 main comforts added for the players in the project. The first of these would be a toggleable smooth turn option. This is accessible from the main menu area and will give the player the choice between a snap turn or smooth turn. The second comfort is a vignette that helps with motion sickness in the VR and can be toggled on and off with the remote.



References

Gigel. (n.d.). *rpg-poly-pack-lite*. Retrieved from Unity Asset Store: https://assetstore.unity.com/packages/3d/environments/landscapes/rpg-poly-pack-lite-148410