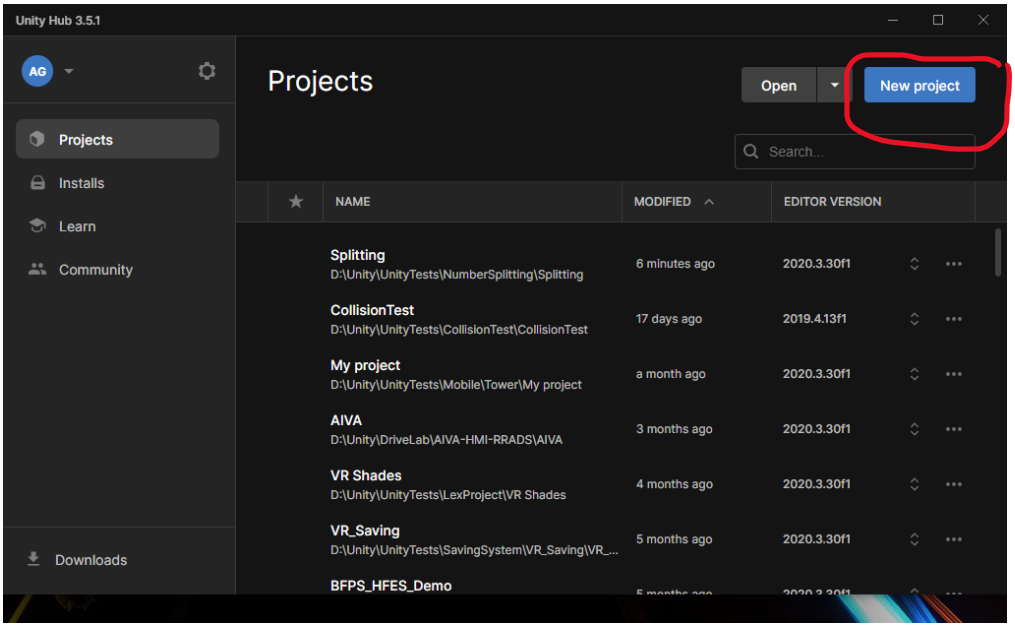
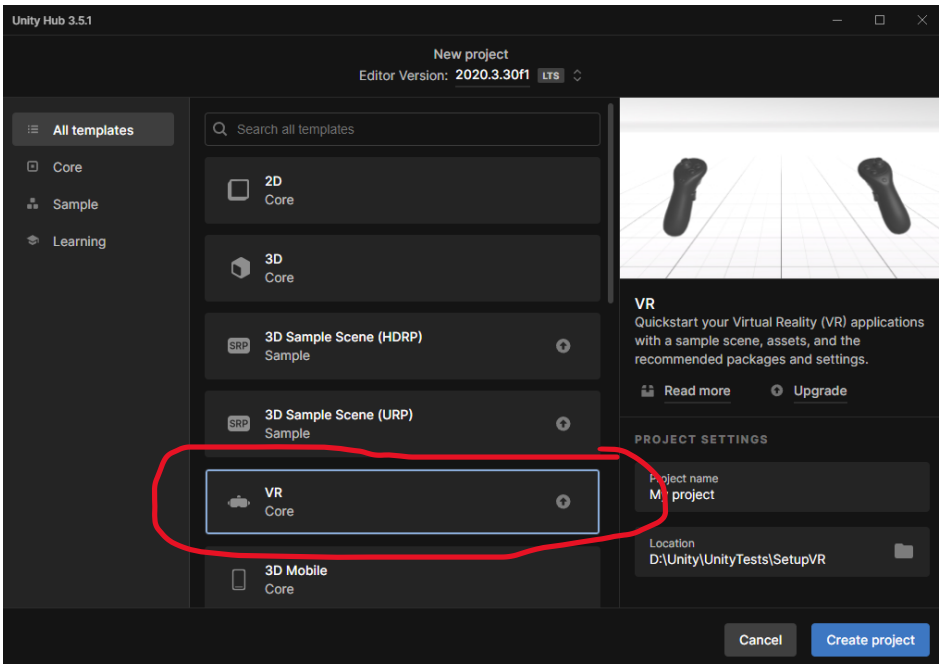
Setting Up Unity for VR Development

1. Open the Oculus Application (download and install if necessary, from meta.com) Minimize app

2. Open Unity Hub.
3. Click on New Project.



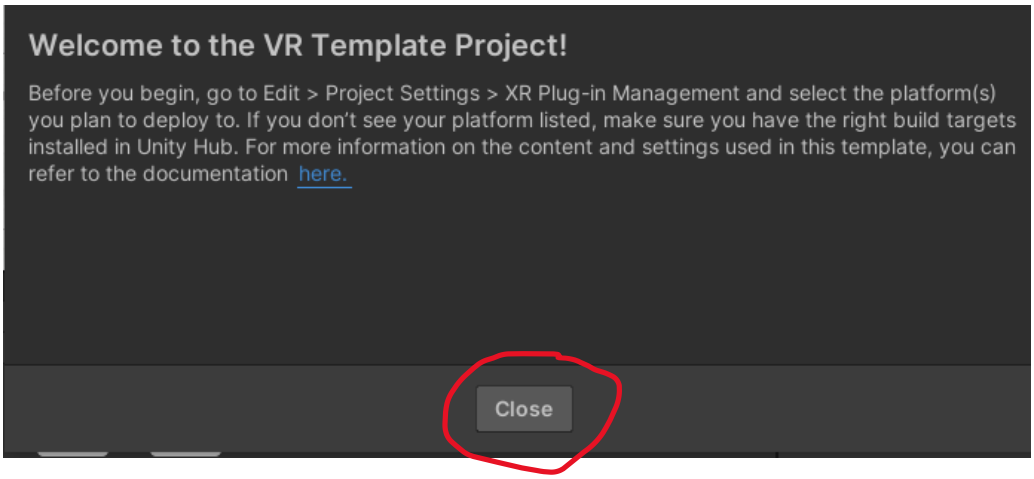
4. Select VR Core Template.



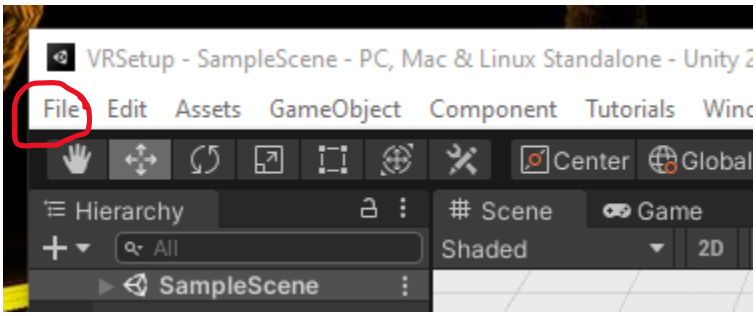
5. Name your project and set saving location.

6. Click Create Project.

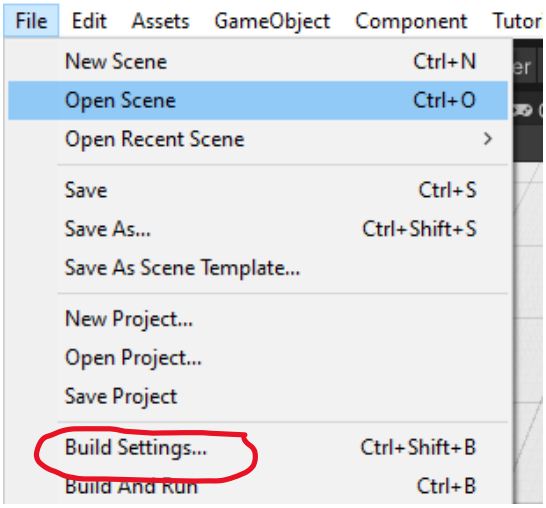
7. Close Template



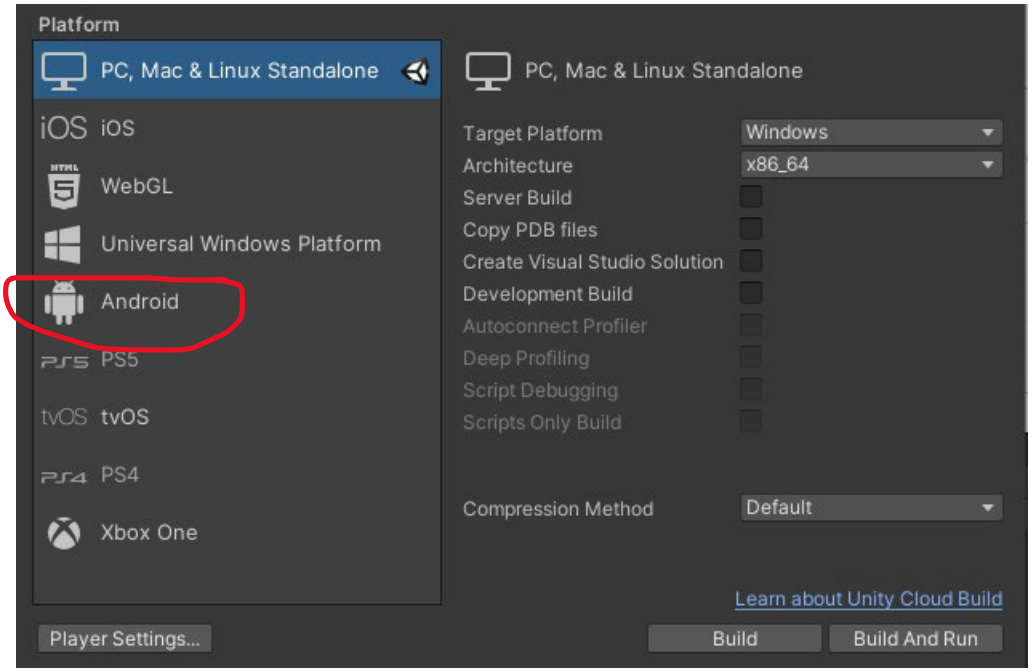
8. Set the Unity project build settings.
   Click on File



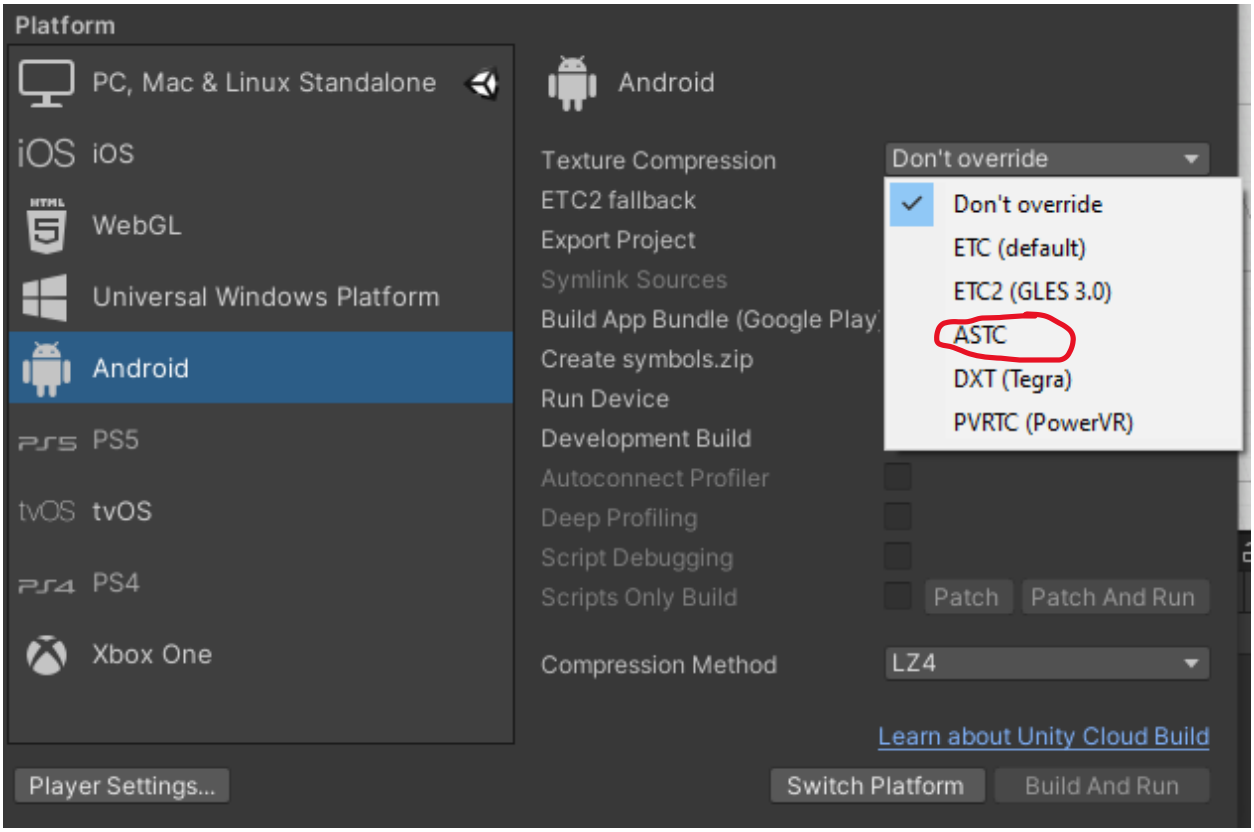
   Click on Build Settings…



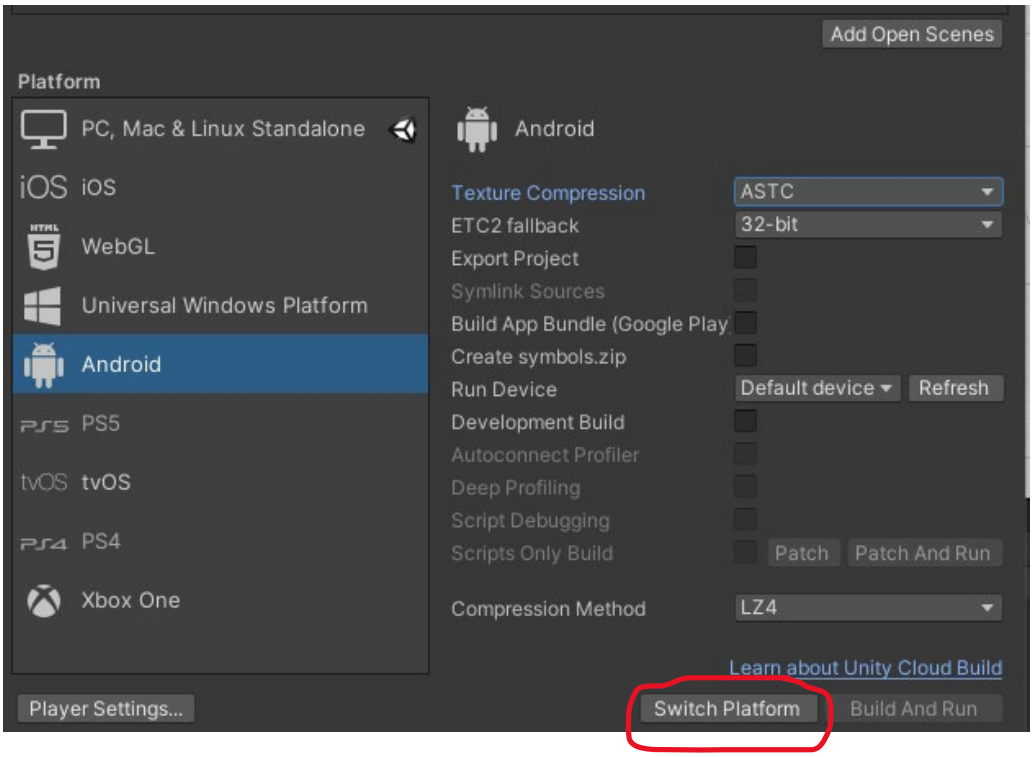
Click on Android under Platform



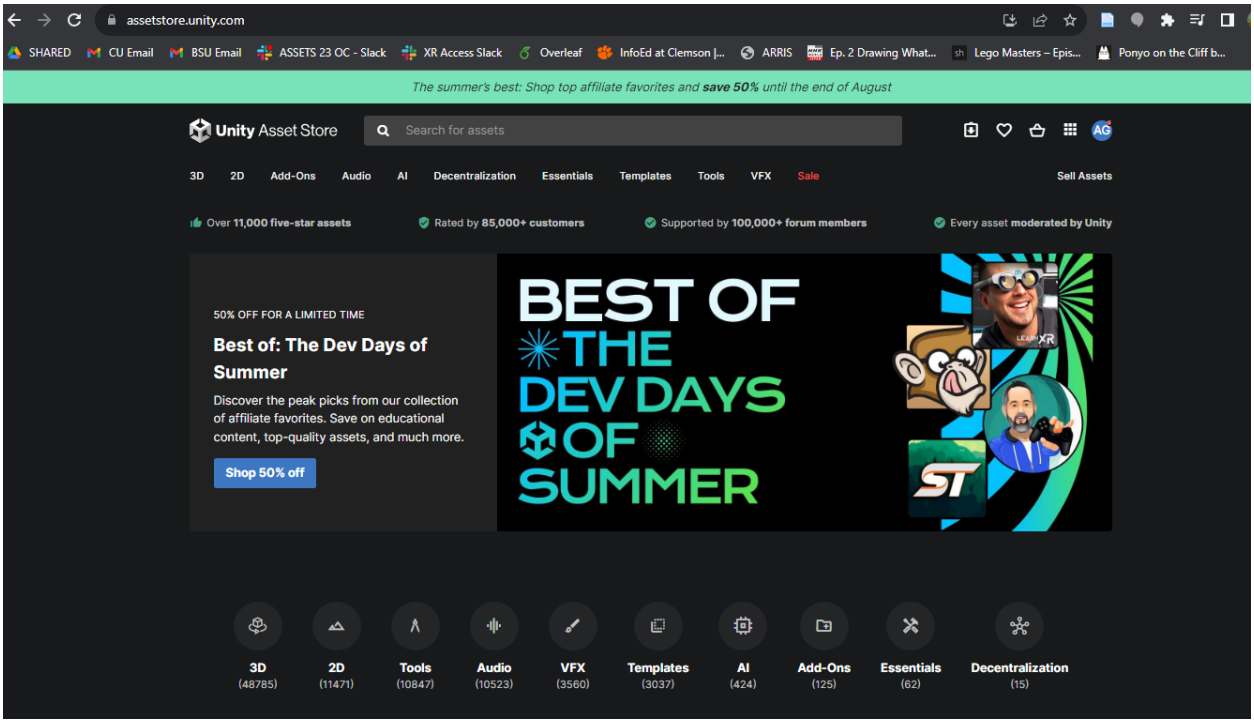
Set Texture Compression to ASTC



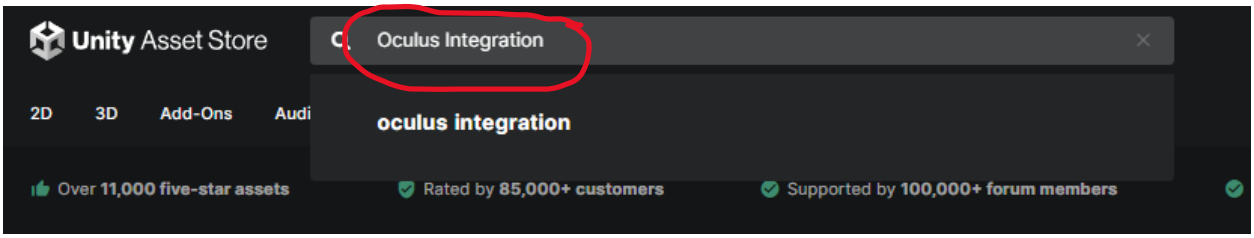
Click Switch Platform (this will take approximately a minute), then close the Build Settings



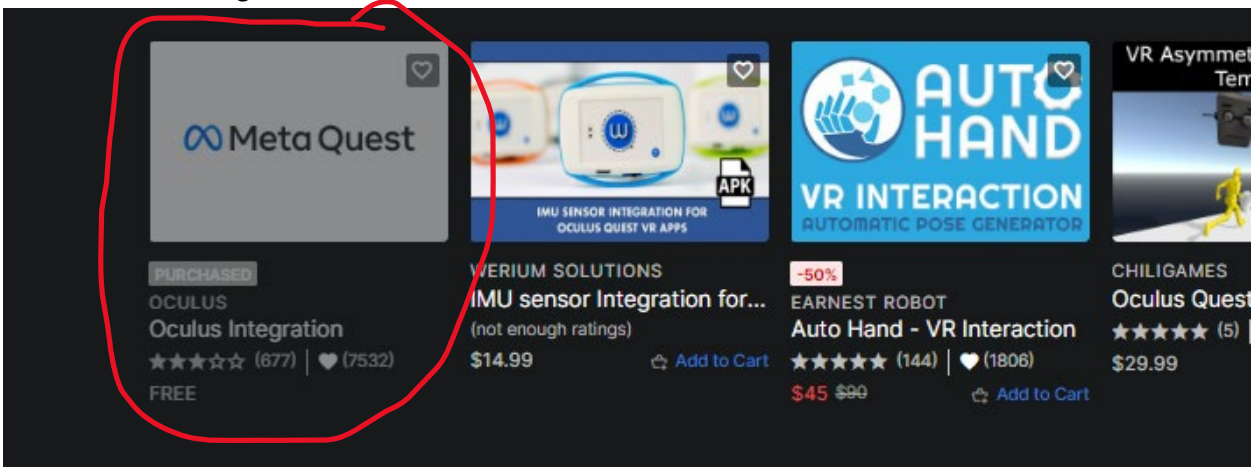
9. Install Oculus XR Plugin
   Goto Unity Asset Store (https://assetstore.unity.com/) and log into your account (same account and password as your Unity account).



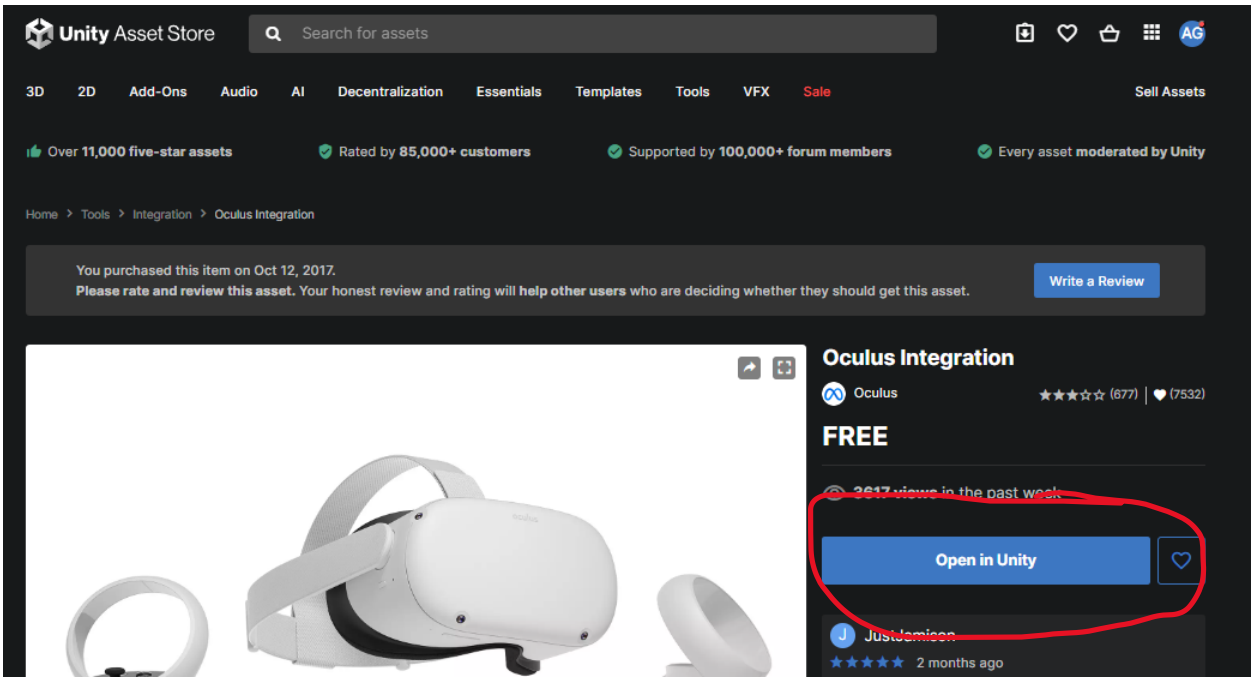
Search for Oculus Integration



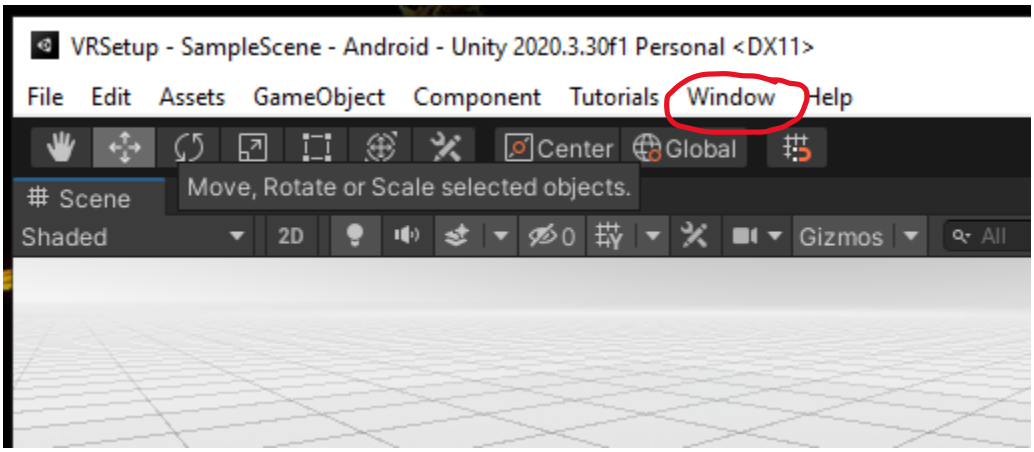
Click on Oculus Integration asset link



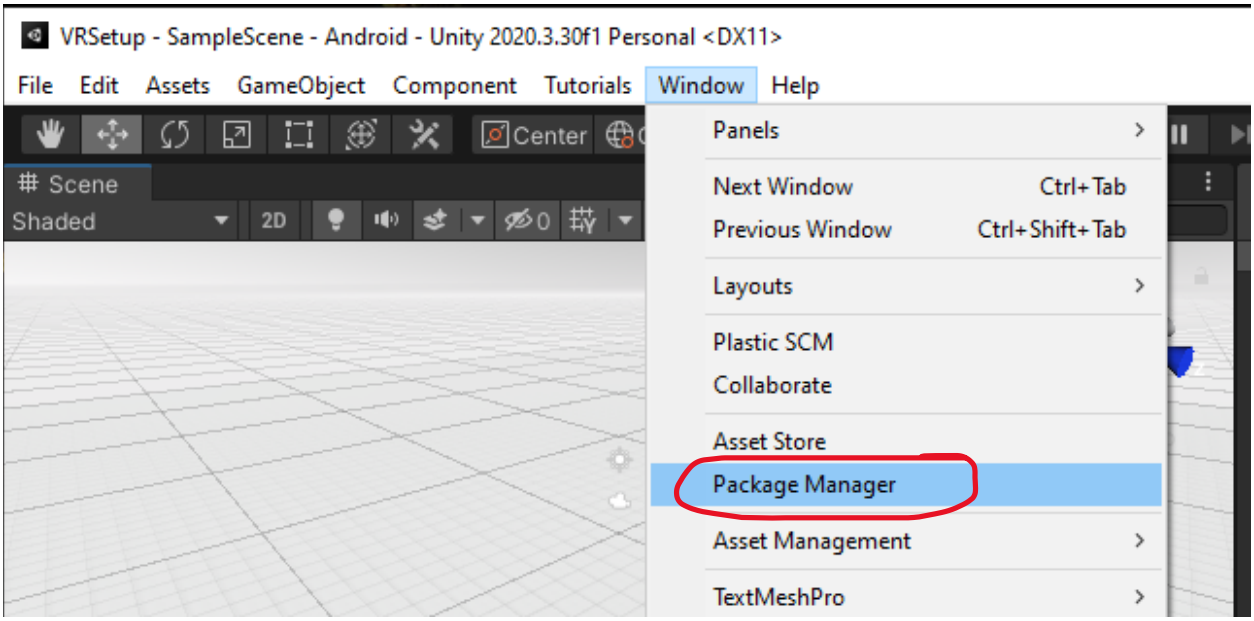
“Purchase” the Oculus Integration free asset.



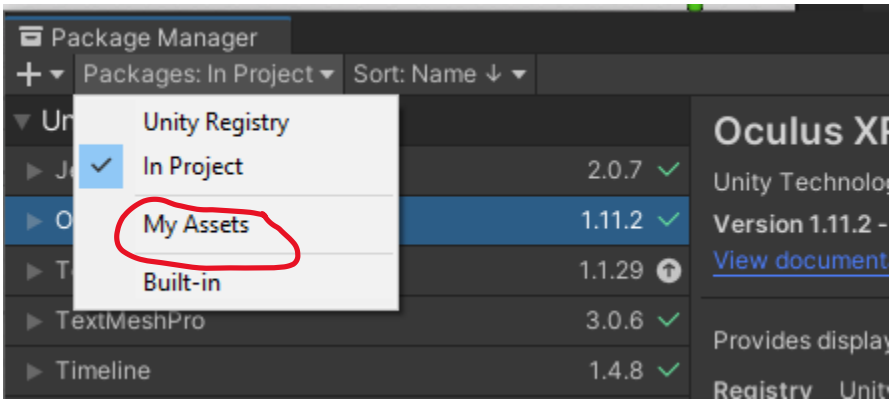
Return to Unity and click on Window



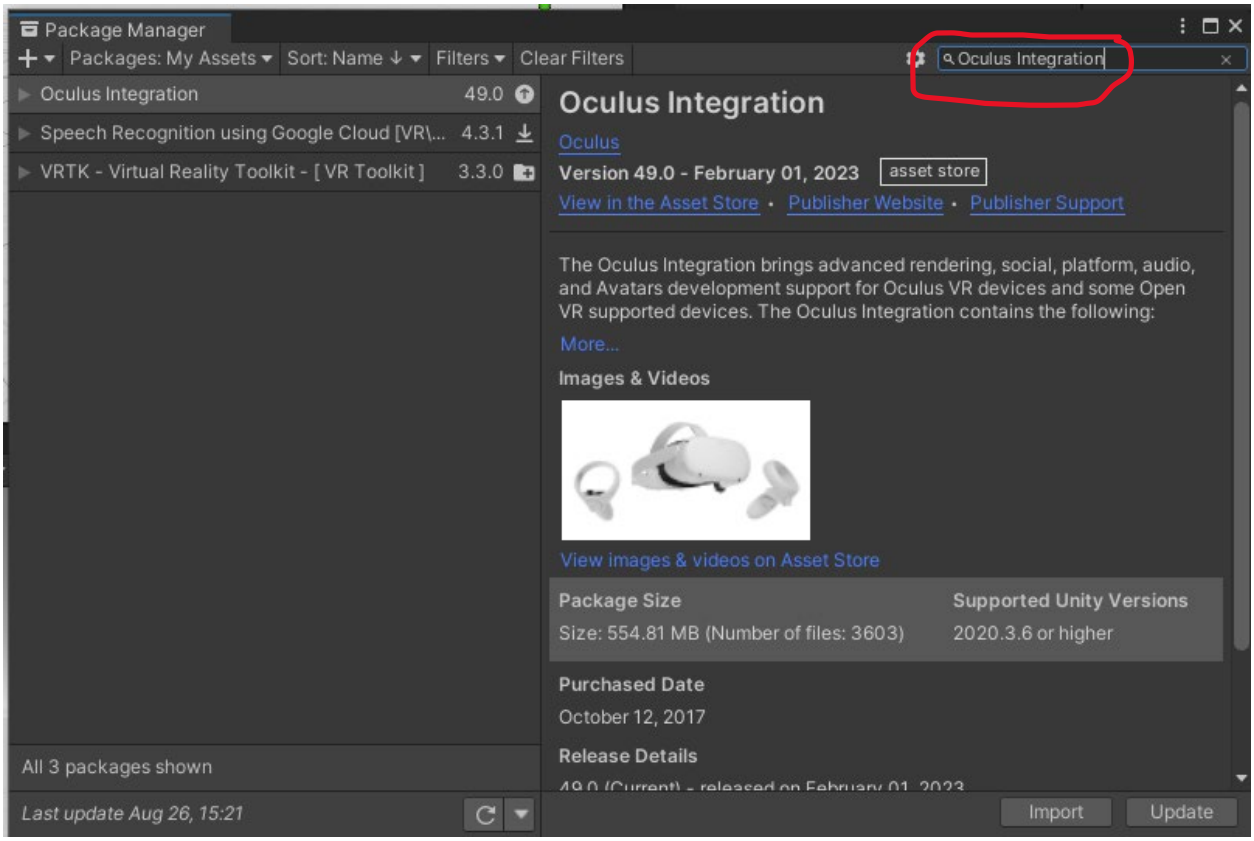
Click on Package Manager



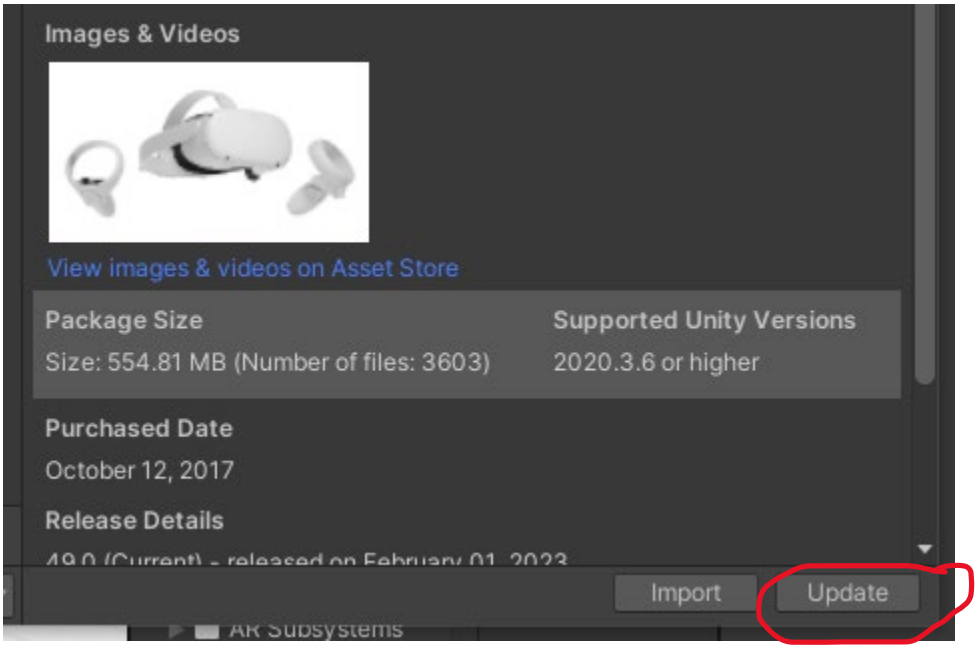
In the Package Manager, click on the Packages: In Project drop down menu and select My Assets



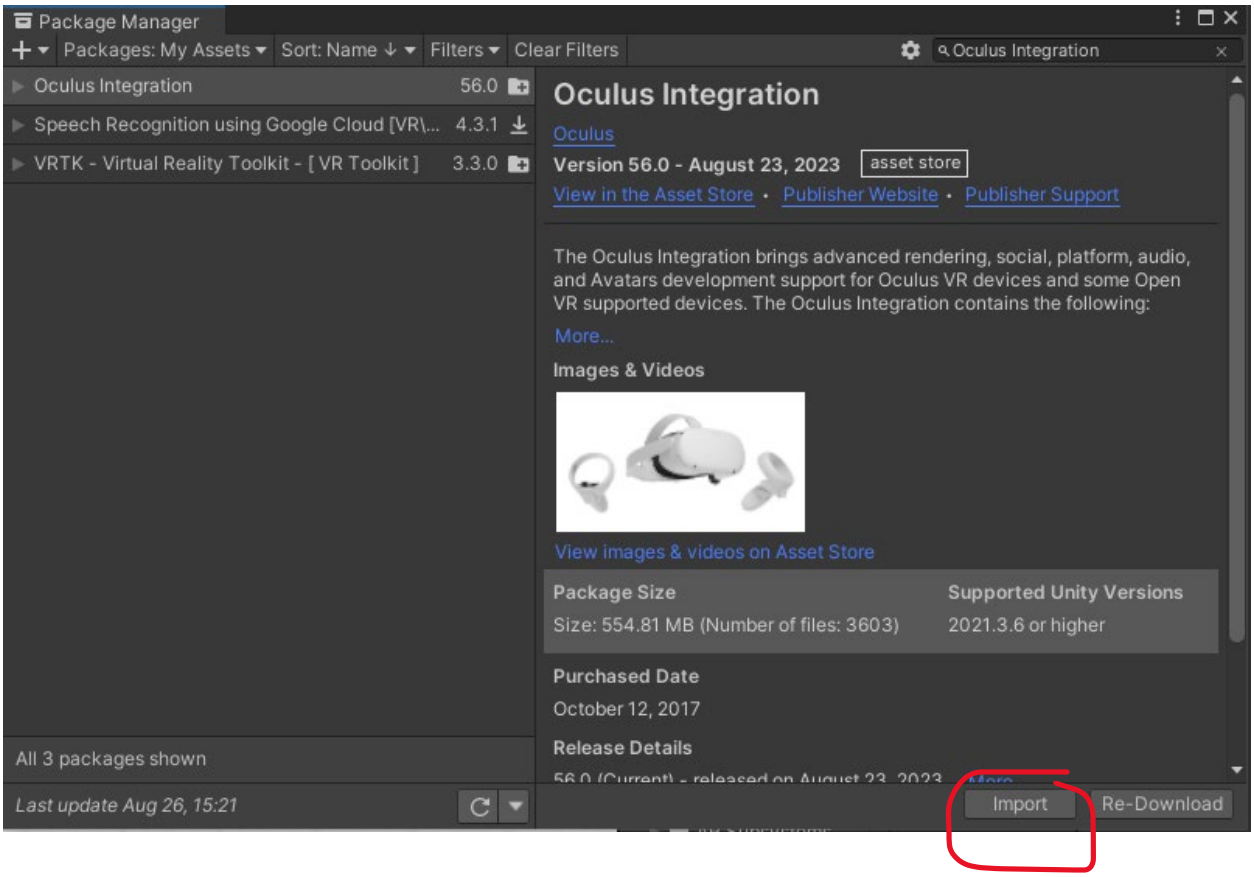
In the search box, type in Oculus Integration



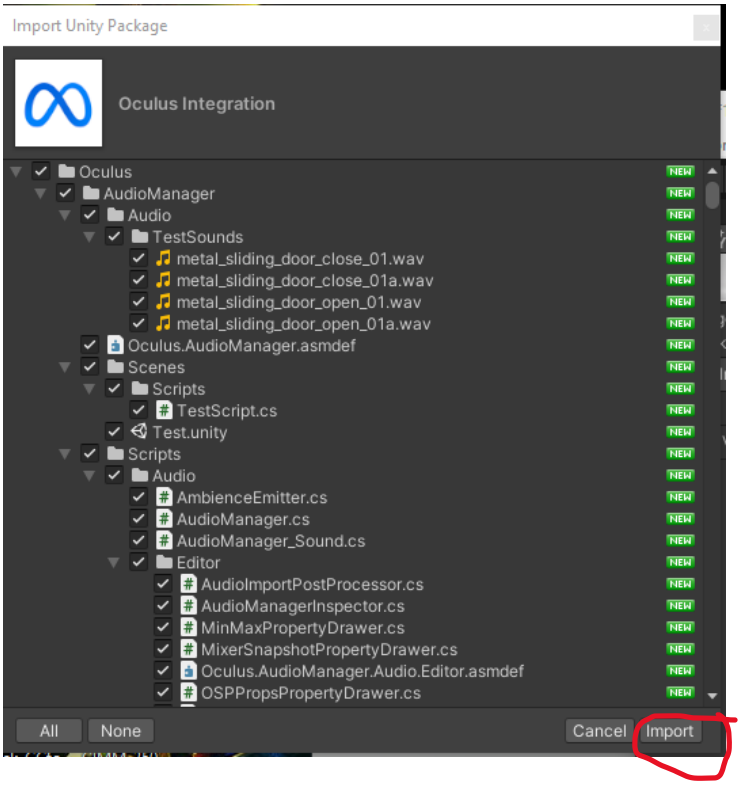
Click on Update and wait for the update to complete (if needed).



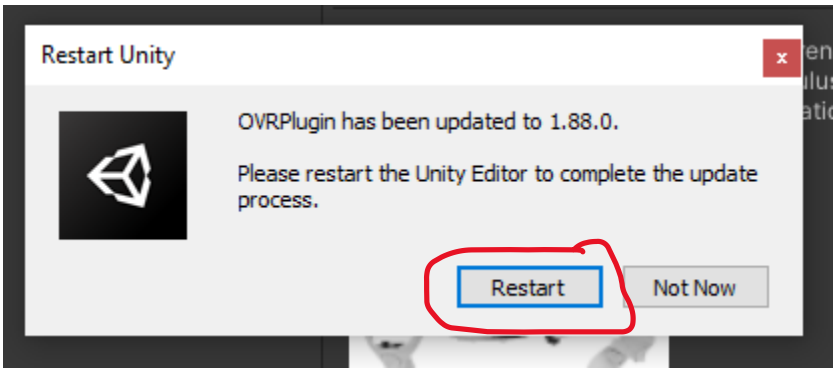
Click on Import



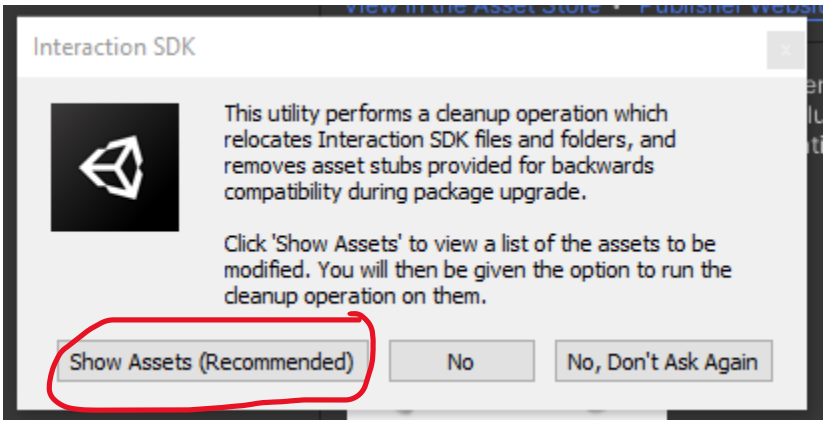
Then click on Import (this import can take multiple minutes)



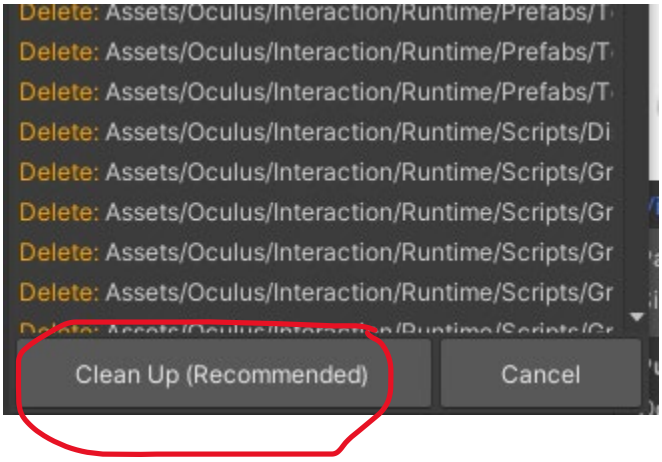
If it asks you to update the OVRPlugin, do so. Then it will ask you to Restart Unity to complete the update process. Do this now.



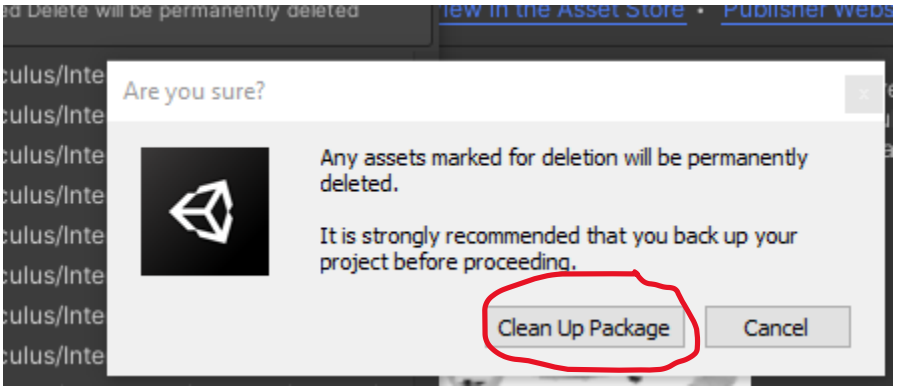
If asked, click on Show Assets



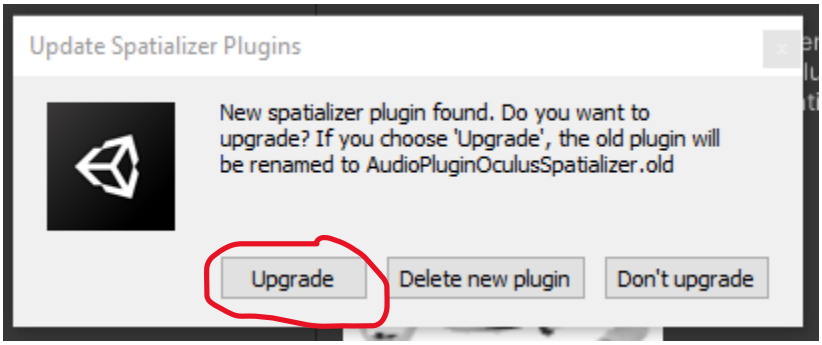
If asked, click on Clean Up (Recommended)



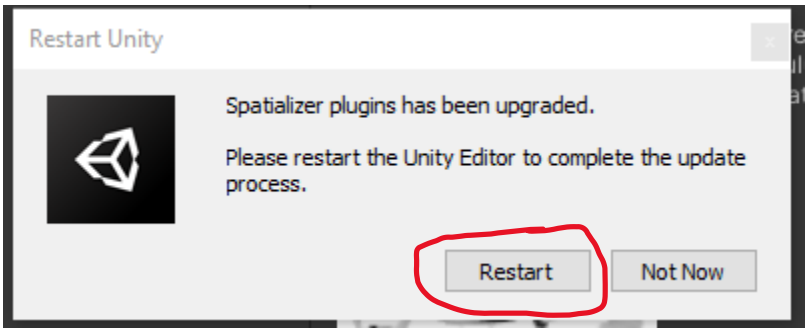
If asked, click on Clean Up Package



Click on Upgrade to Update Spatializer Plugins

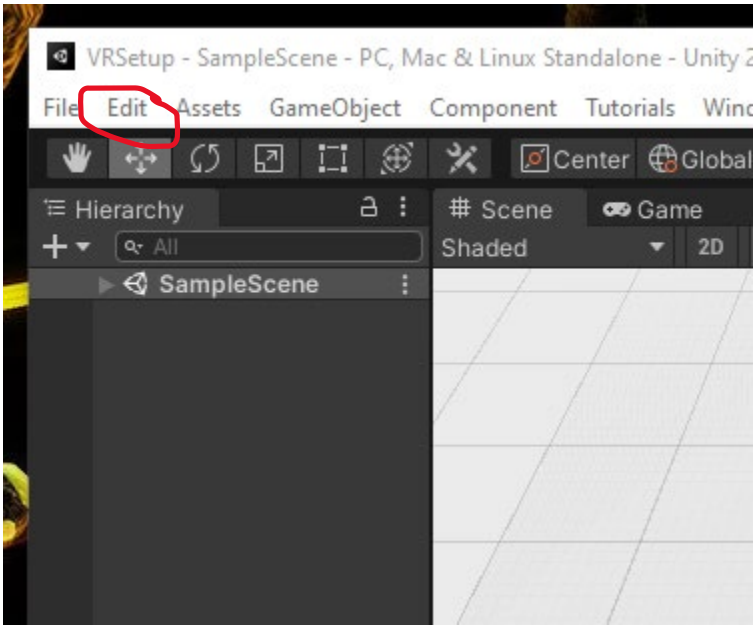


Click on Restart to Restart Unity

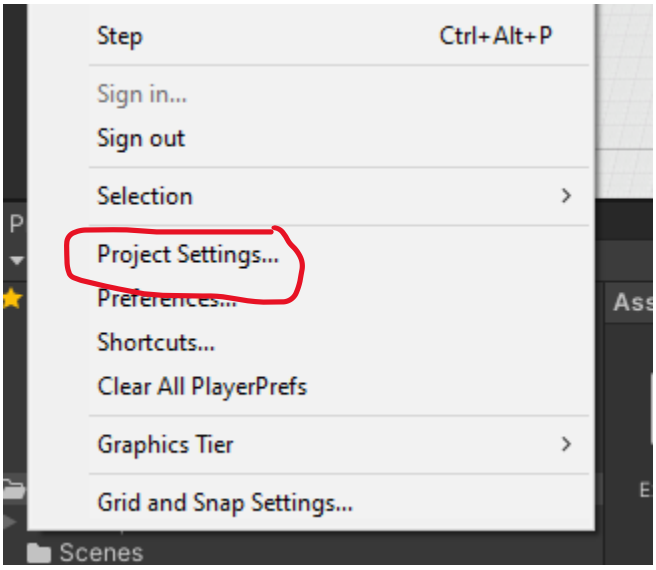


10. Update Player Settings

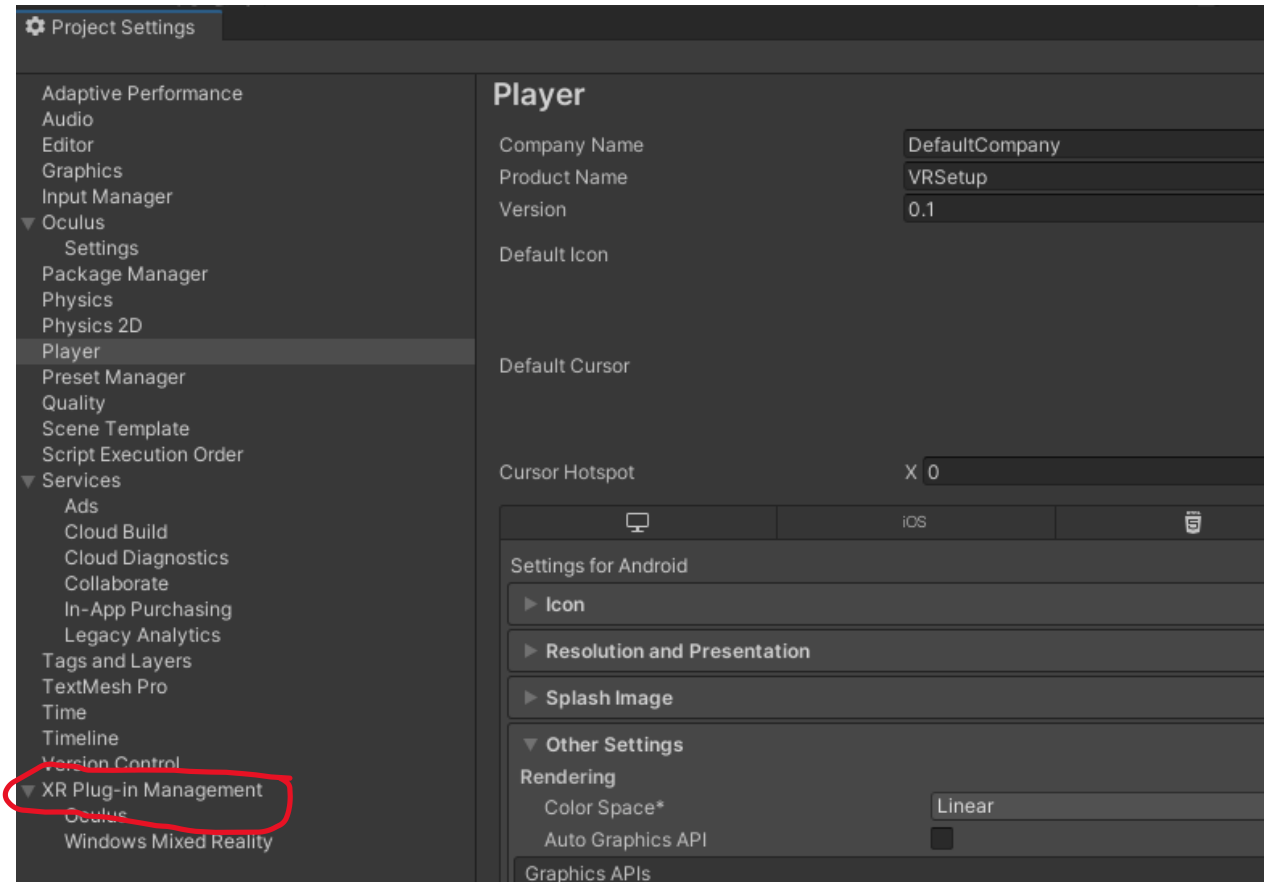
Click on Edit



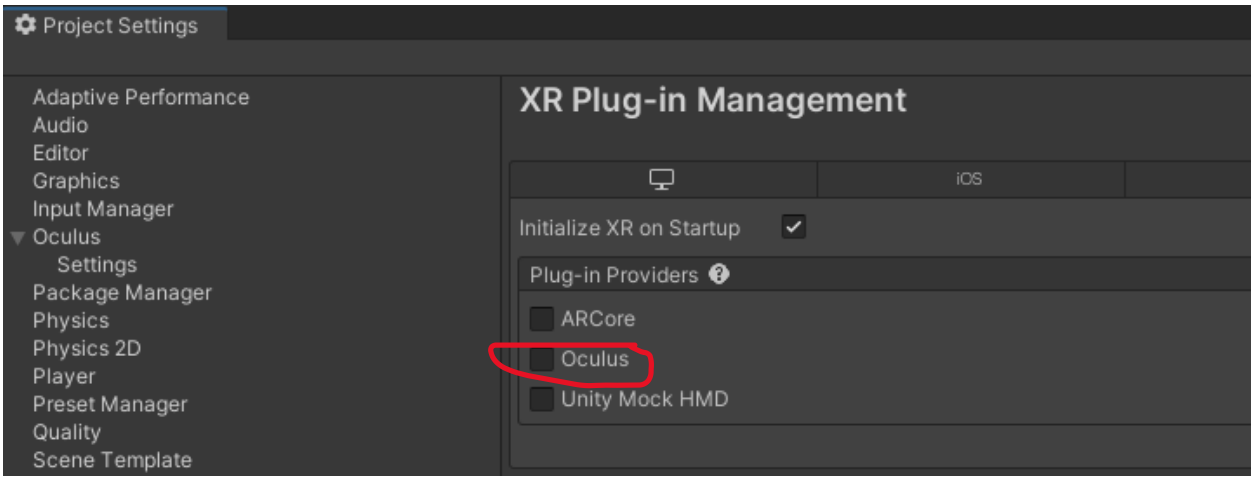
Click on Project Settings



Click on XR Plug-in Management

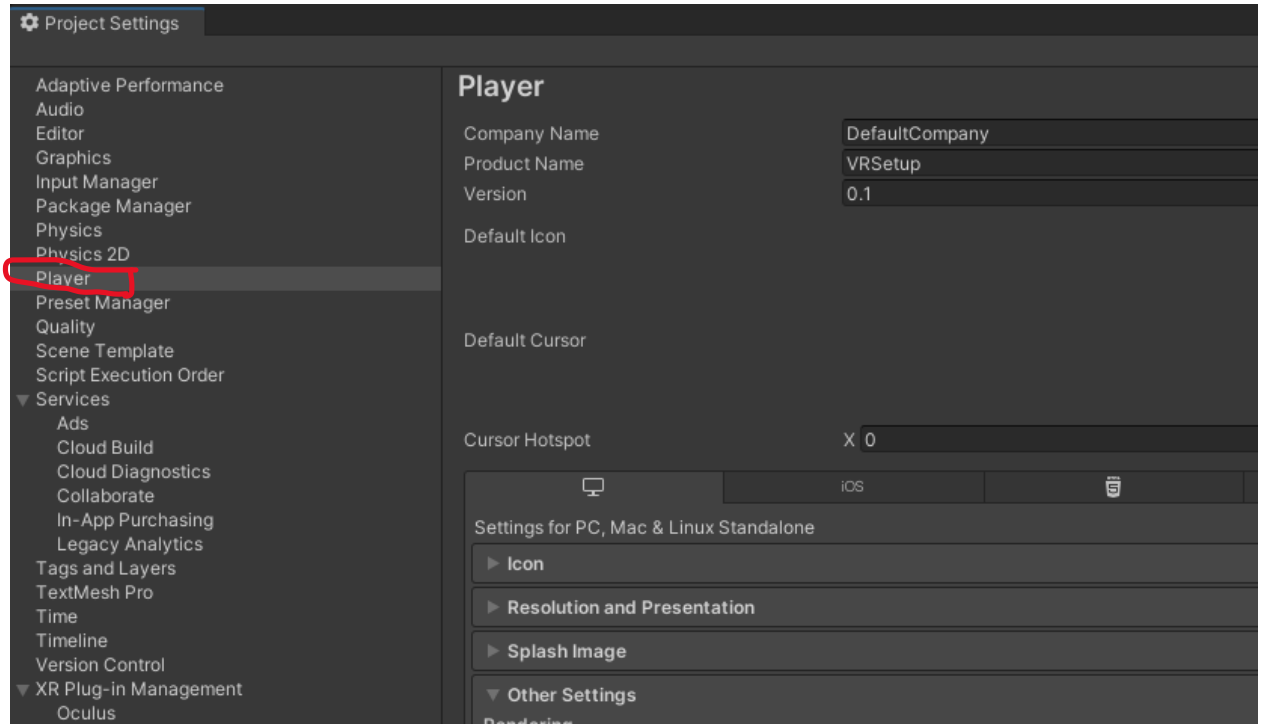


Click on Oculus (This can take a couple minutes)

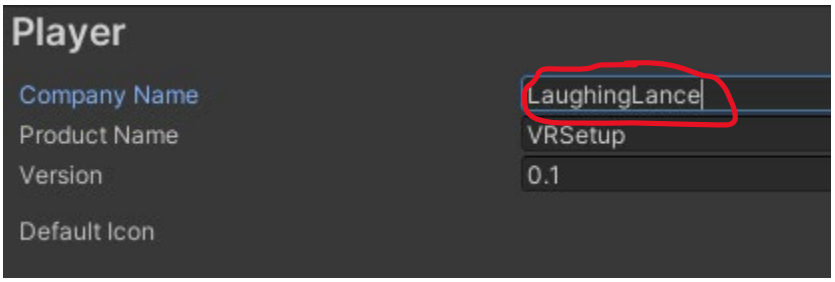


11. Player Settings

Click on Player



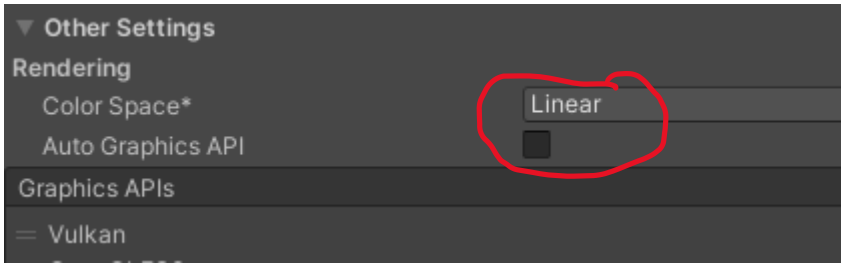
Set Company Name, Product Name, and Version (as needed)



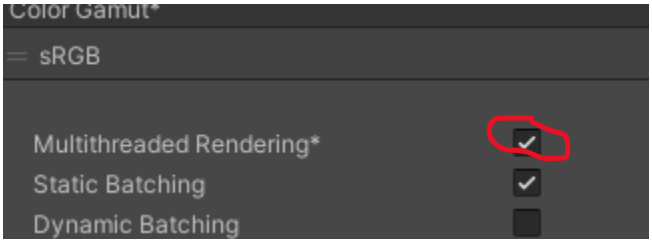
Click on Other Settings (if not already open)

Under Rendering

Verify that Color Space is set to Linear and Auto Graphics API is unchecked.

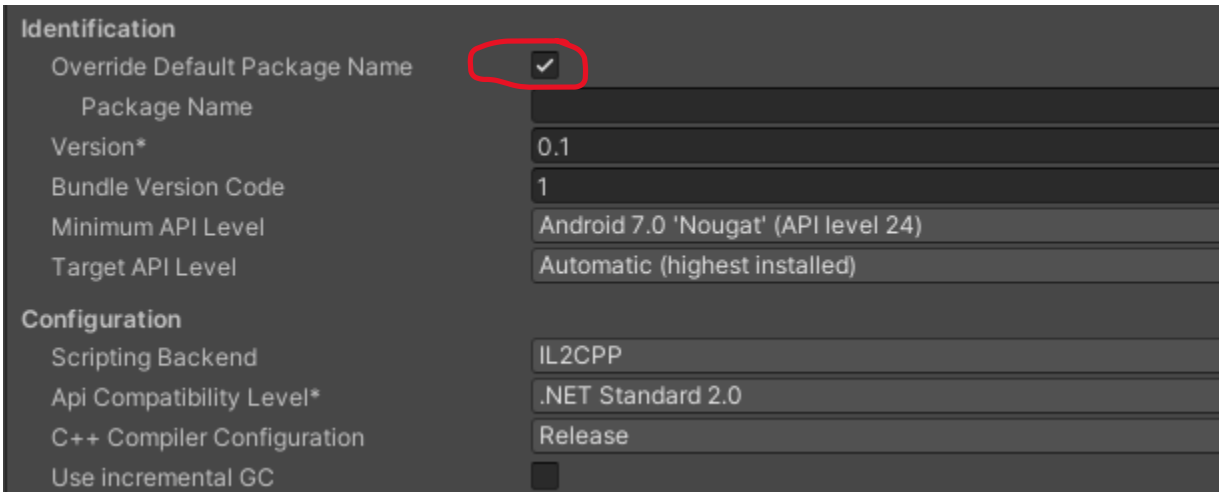


Verify that Multithreaded Rendering is checked

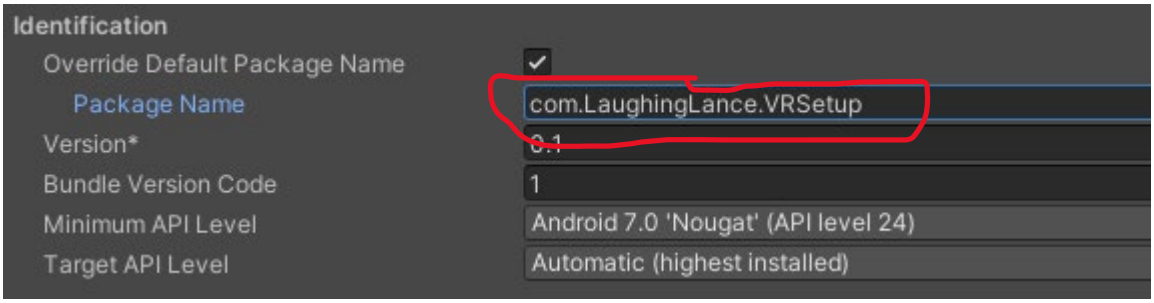


Under Identification

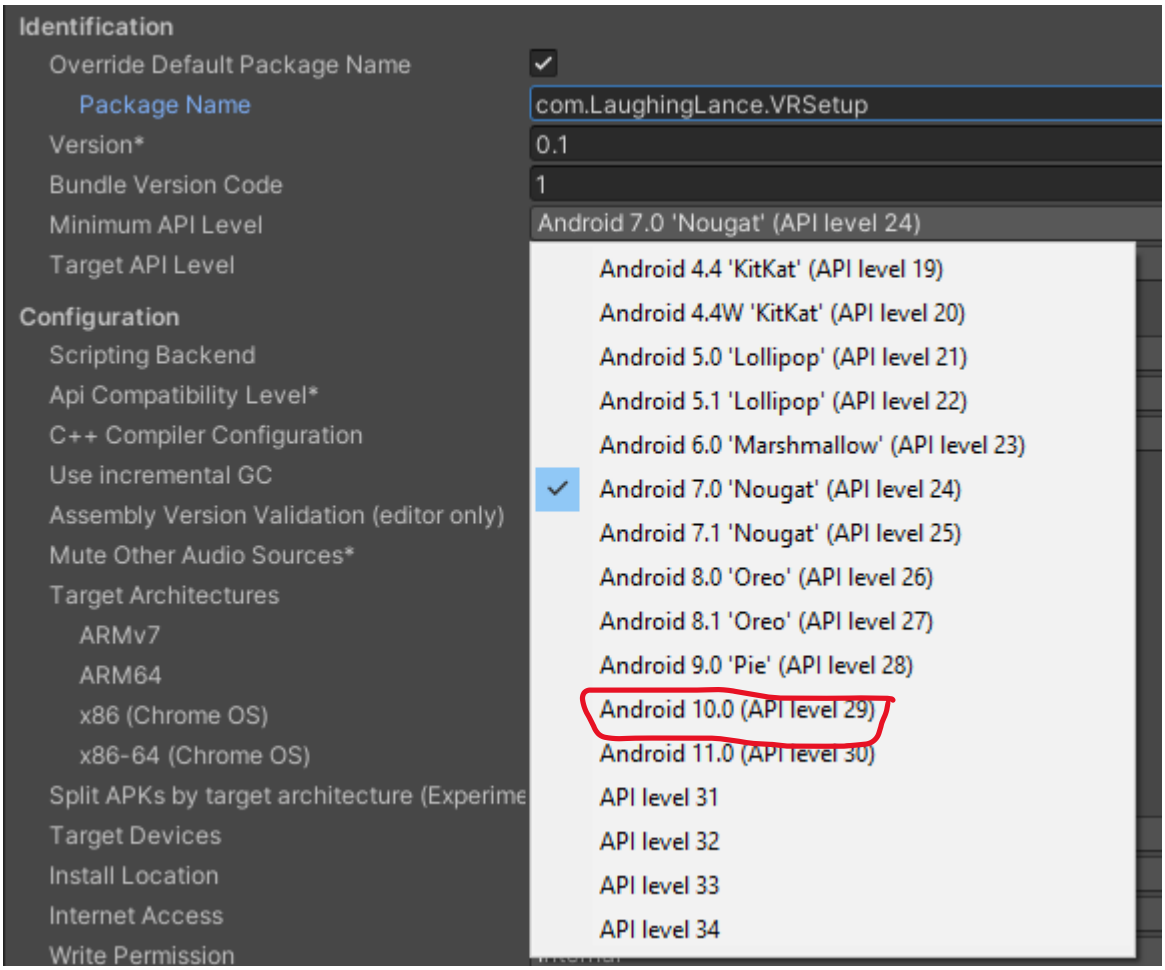
Check Override Default Package Name, if not already checked



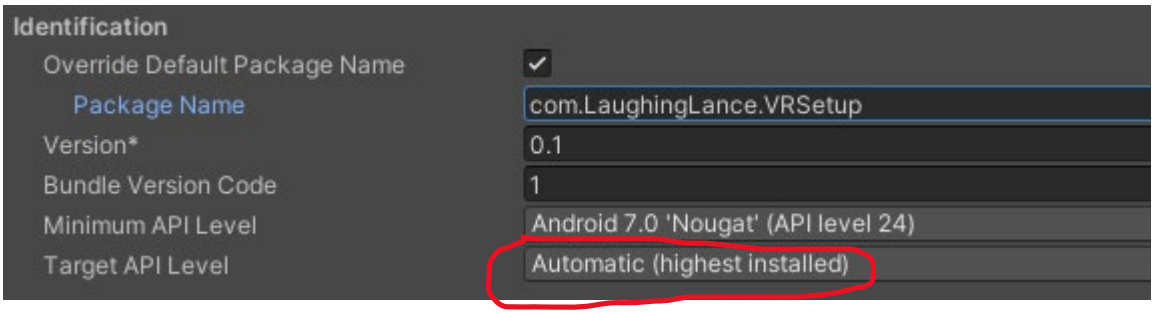
Set Package name using the following structure -> com.CompanyName.AppName



Set Minimum API Level to Android 10 (API level 29) for Oculus Quest and Quest 2

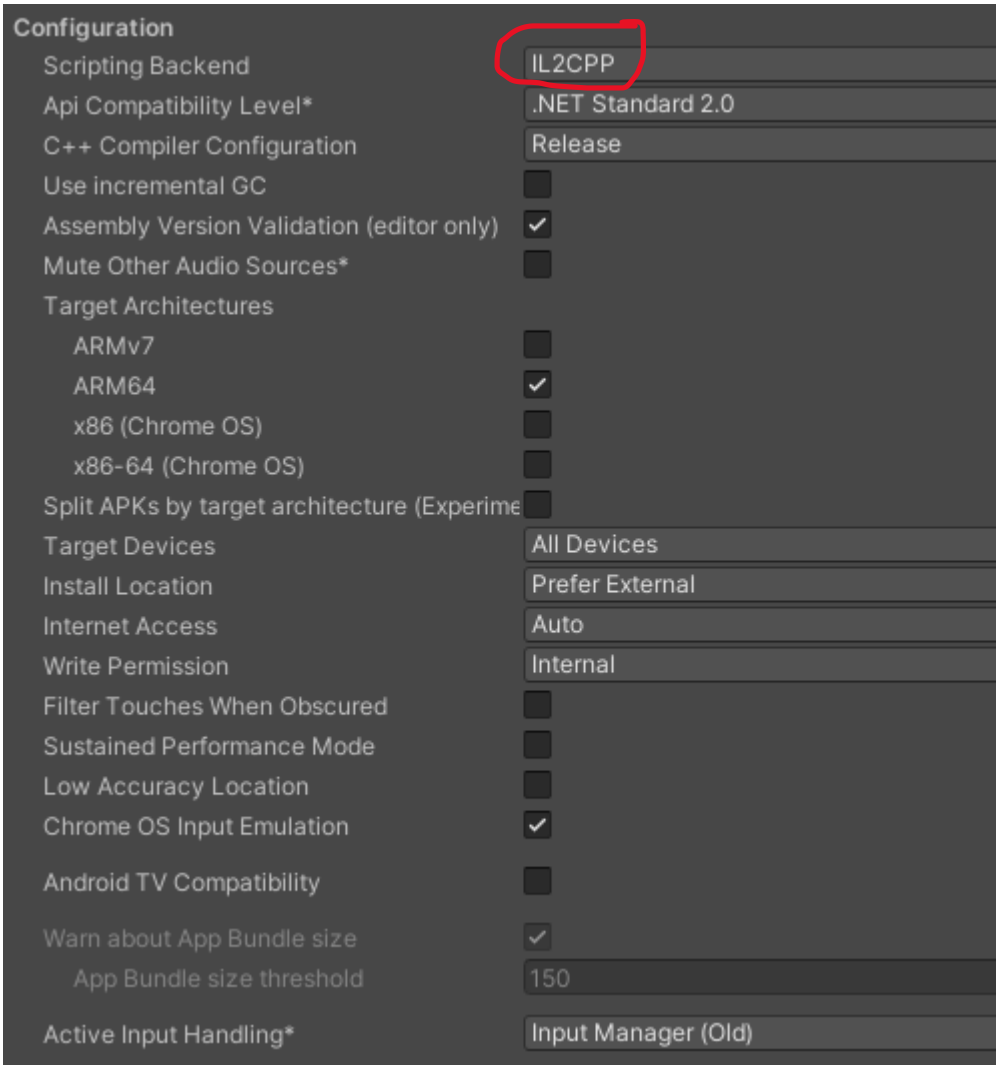


Verify that Target API Level is already set to Automatic (highest installed), if not change to Automatic.

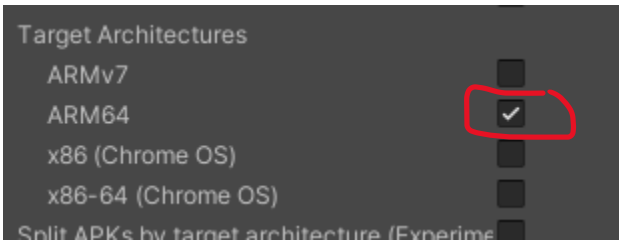


Under Configuration

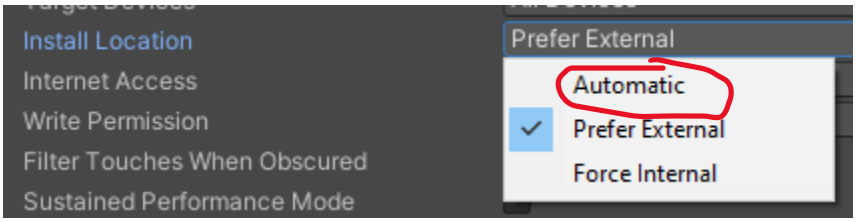
Verify that Scripting Backend is IL2CPP, if not change to IL2CPP



Under Target Architectures, verify that only ARM64 is checked, if not make this change

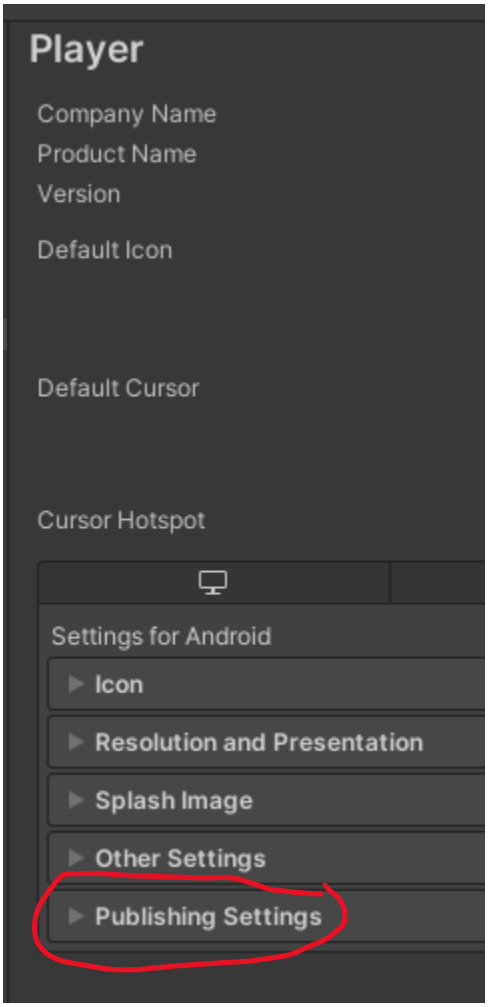


Under Install Location, verify it is set to Automatic, if not make this change

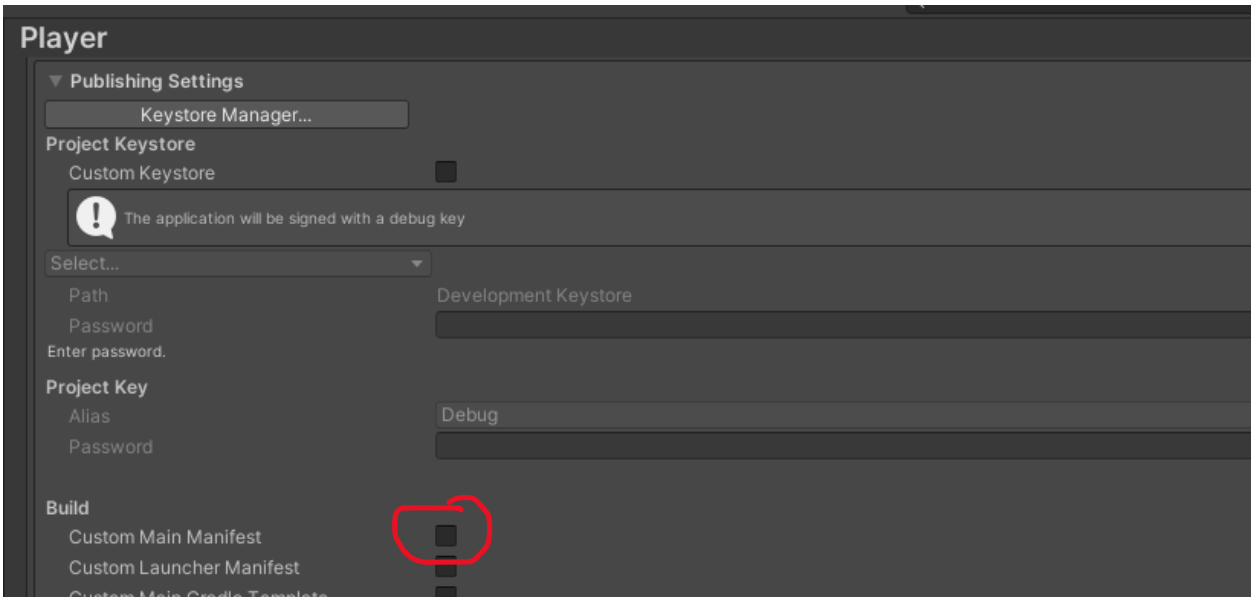


12. Android Manifest

Open Publishing Settings

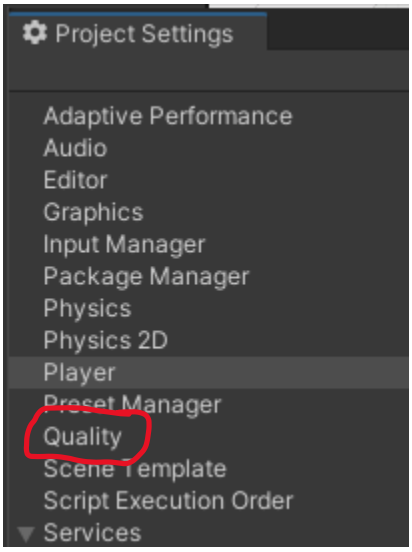


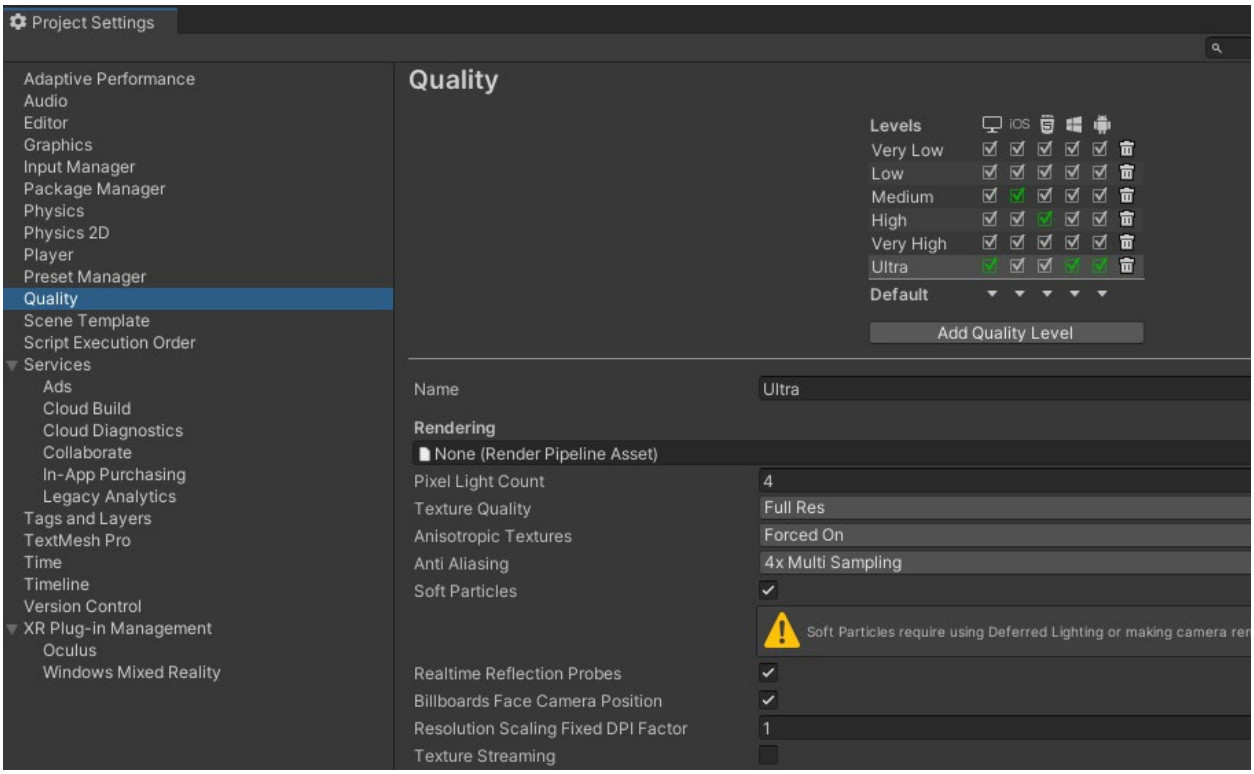
Under Build, check Custom Main Manifest if it is not already checked



13. Quality Settings

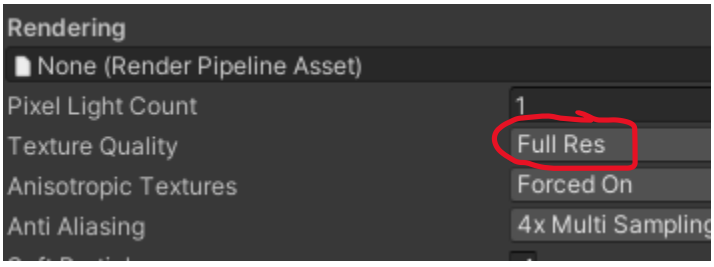
Click on Quality in the Project Settings menu



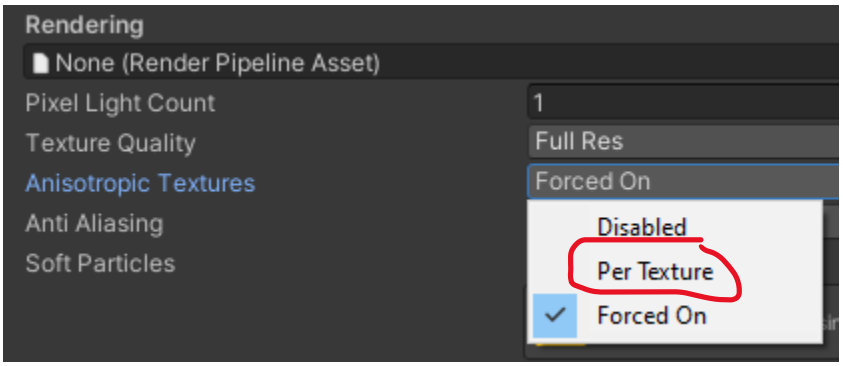


Change Pixel Light Count to 1

In Texture Quality, verify that Full Res is selected

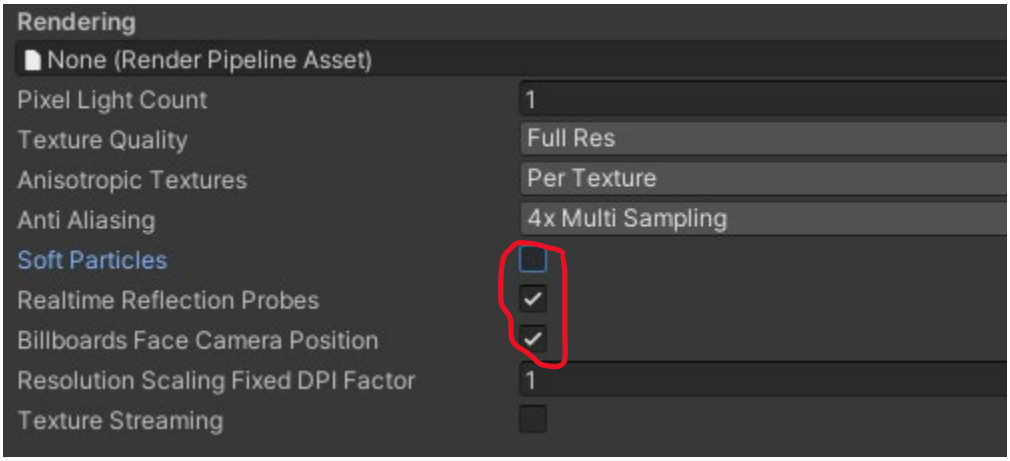


Set Anisotropic Textures to Per Texture



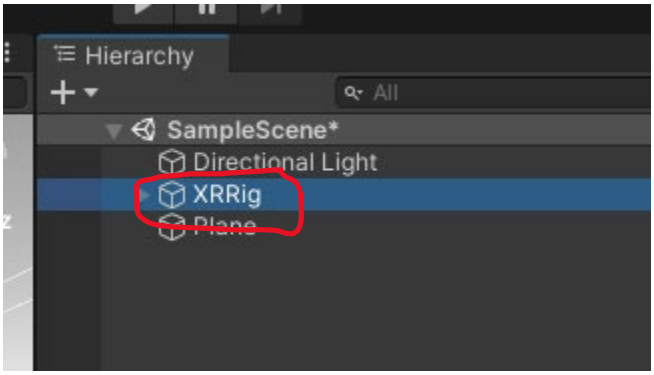
Verify that Anti Aliasing to 4x Multi Sampling, if not change it to 4x Multi Sampling

Clear the Soft Particles check box, check the Realtime Reflection Probes and Billboards Face Camera Positions.

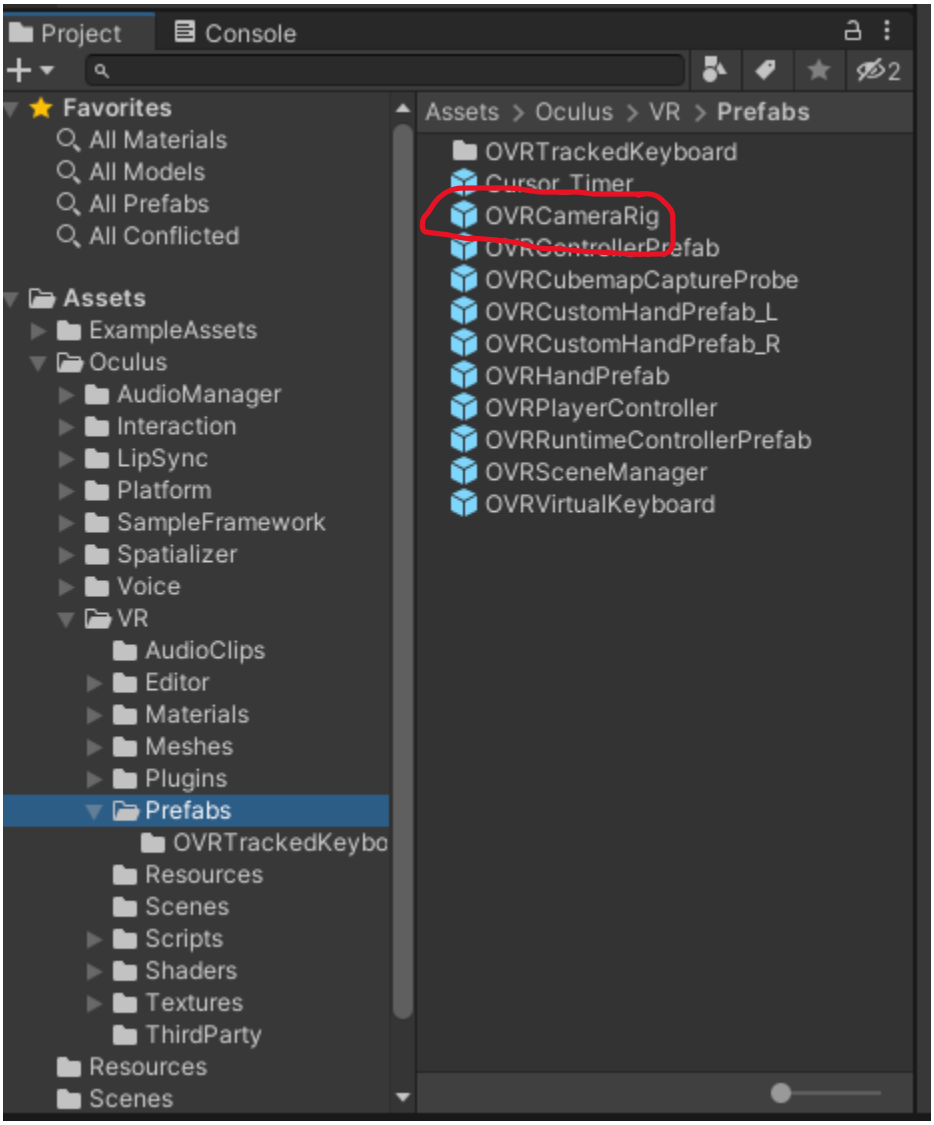


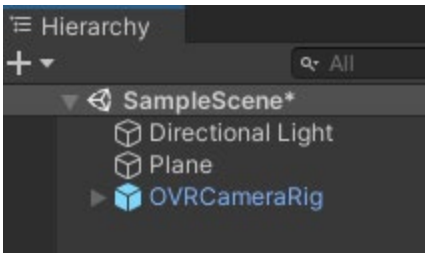
Close Project Settings.

14. Setting up VR in your current scene.
    Delete the current XRRig in the Hierarchy. Click on XRRig and press delete.



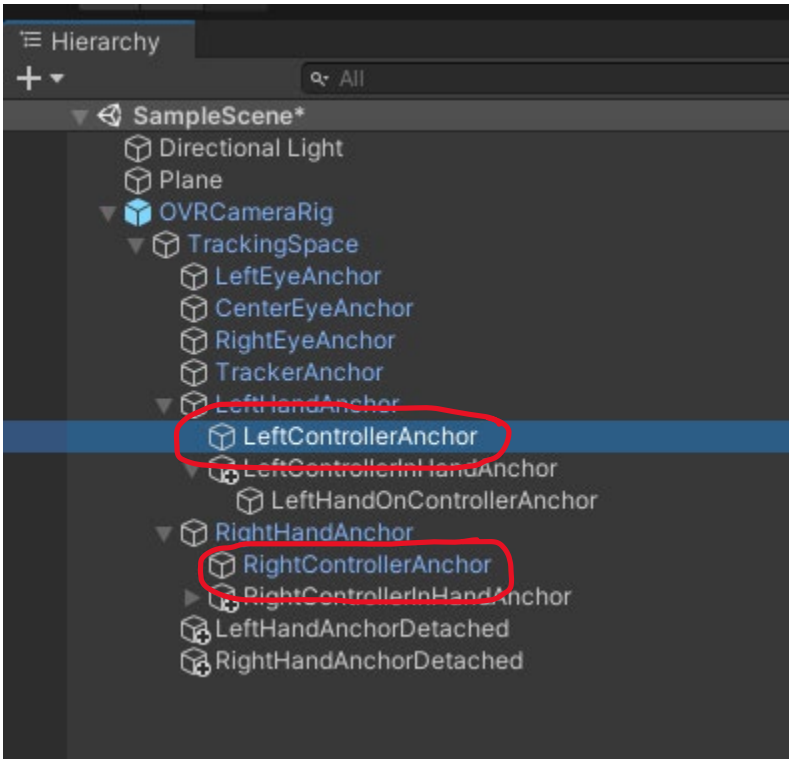
Add the OVRCameraRig to the Hierarchy (found in Oculus -> VR -> Prefabs)



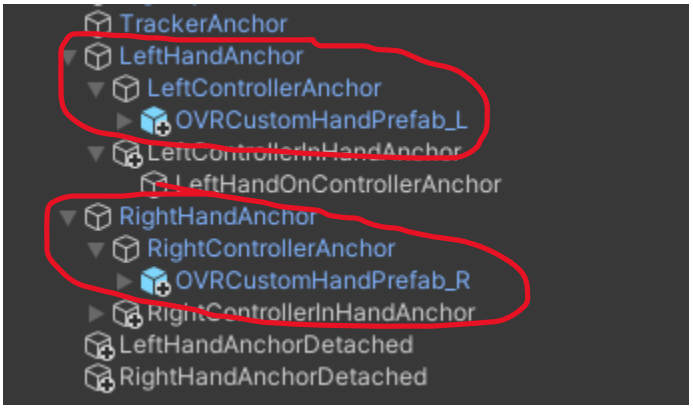


15. Add Hands

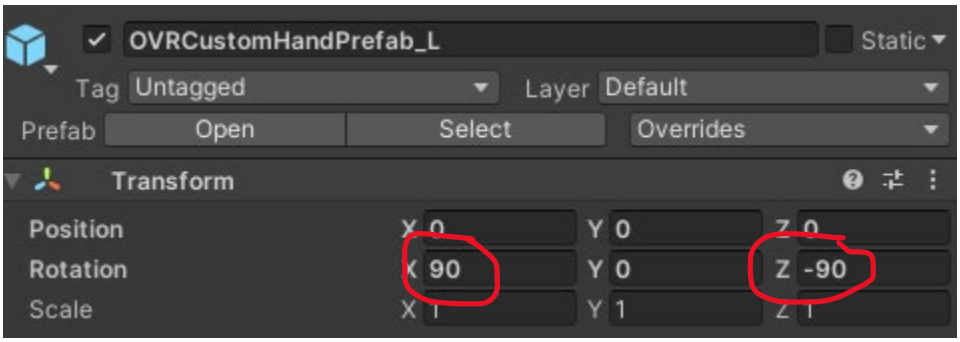
    Open the OVRCameraRig in the Hierarchy to reveal the LeftControllerAnchor and RightControllerAnchor



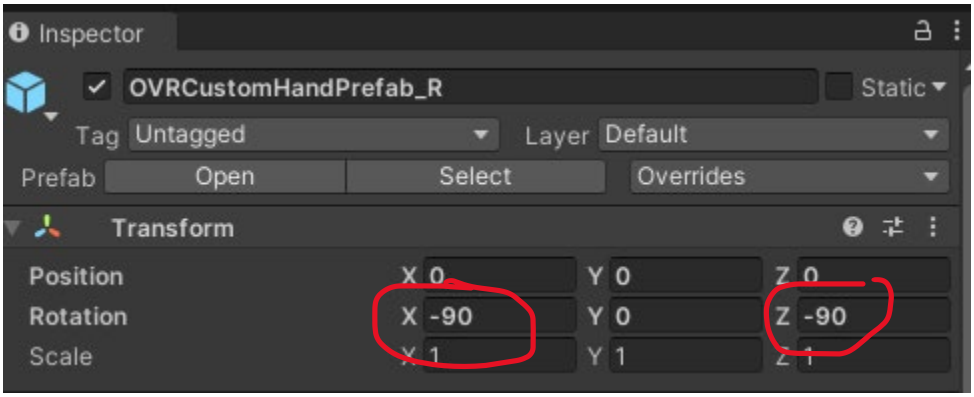
    Drag OVRCustomHandPrefab_L (in Oculus -> VR -> Prefabs) to LeftControllerAnchor and OVRCustomHandPrefab_R to RightControllerAnchors



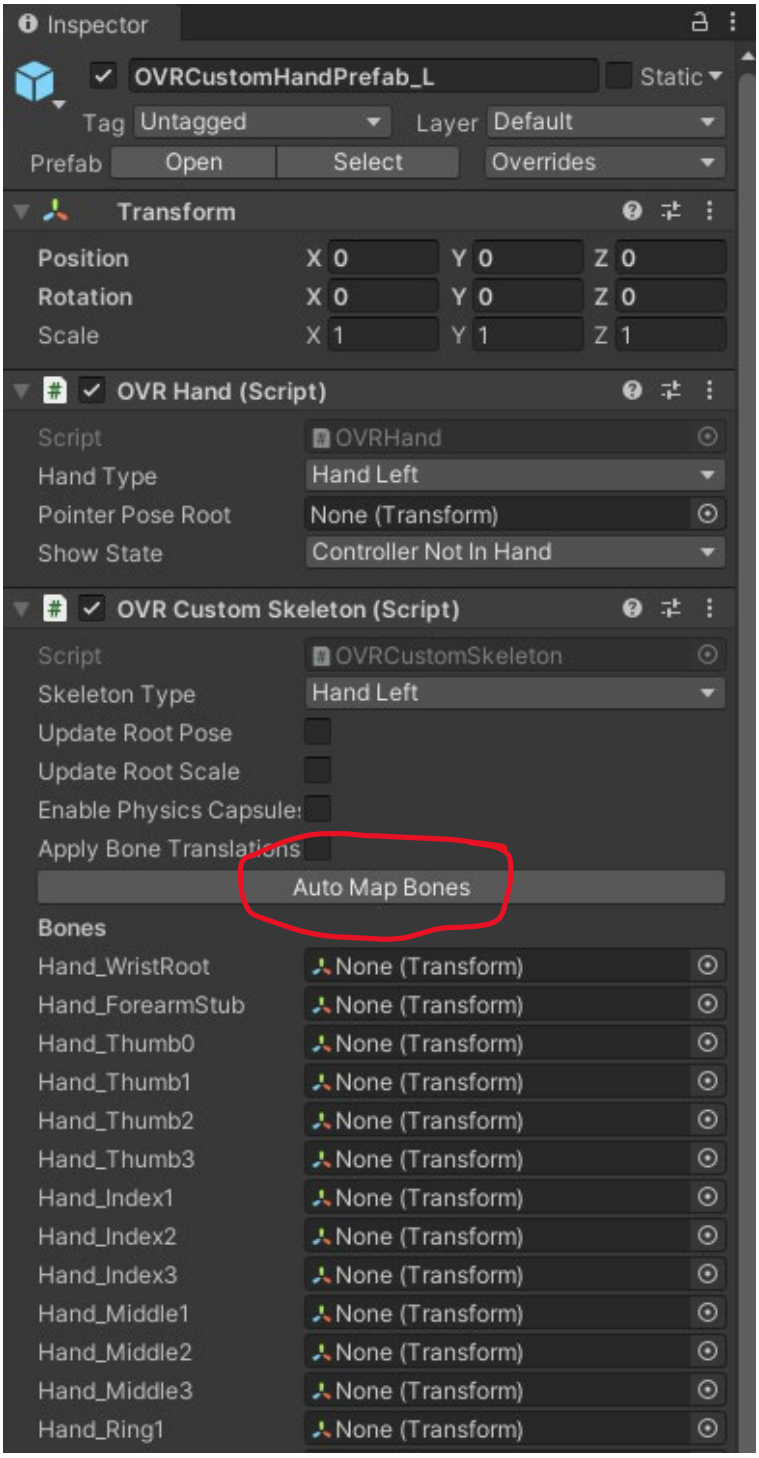
Set OVRCustomHandPrefab_L X rotation to 90 and Z rotation to -90 in the Inspector.

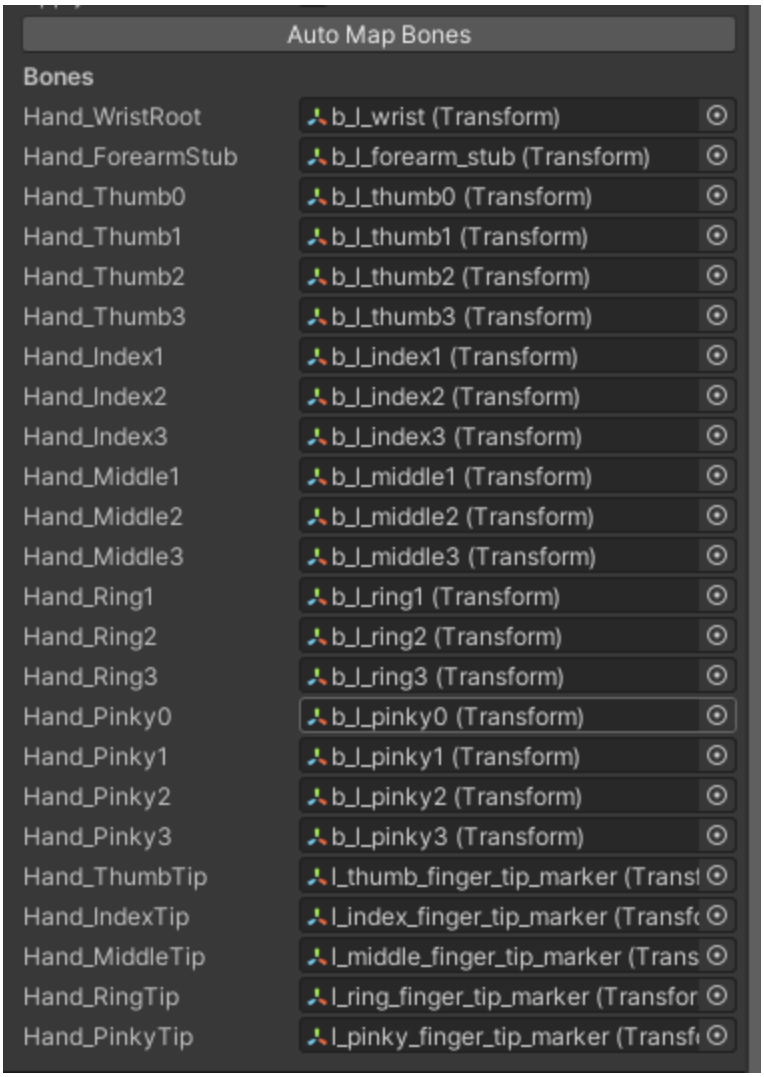


Set OVRCustomHandPrefab_R X rotation to -90 and Z rotation to -90 in the Inspector.



One at a time, click on OVRCustomHandPrefab_L and OVRCustomHandPrefab_R. In the Inspector for each, click on Auto Map Bones

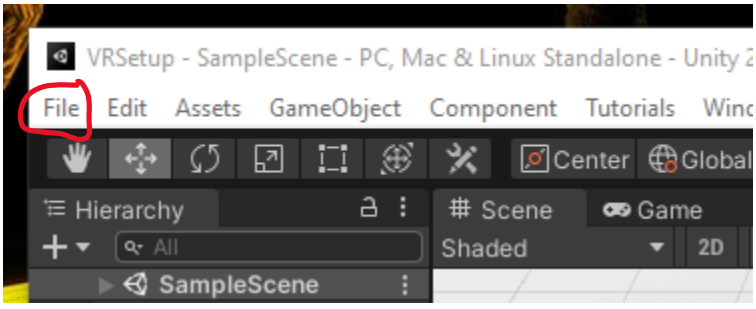




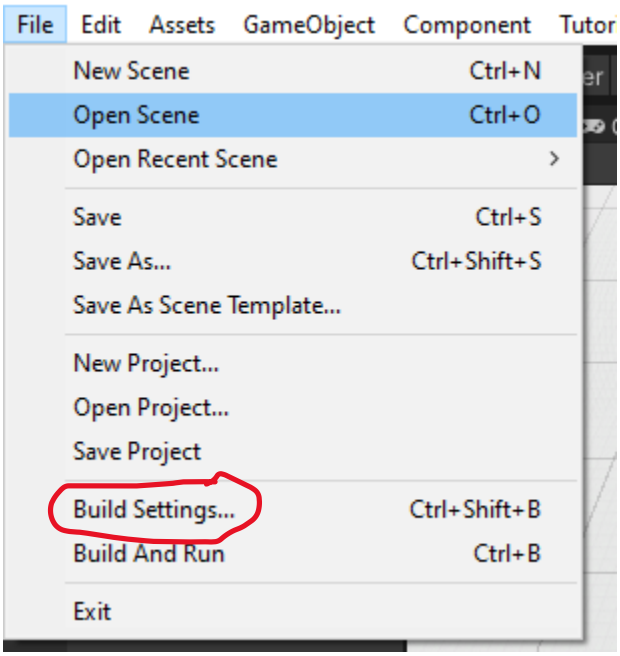
Save the SampleScene

16. Build to Oculus Headset

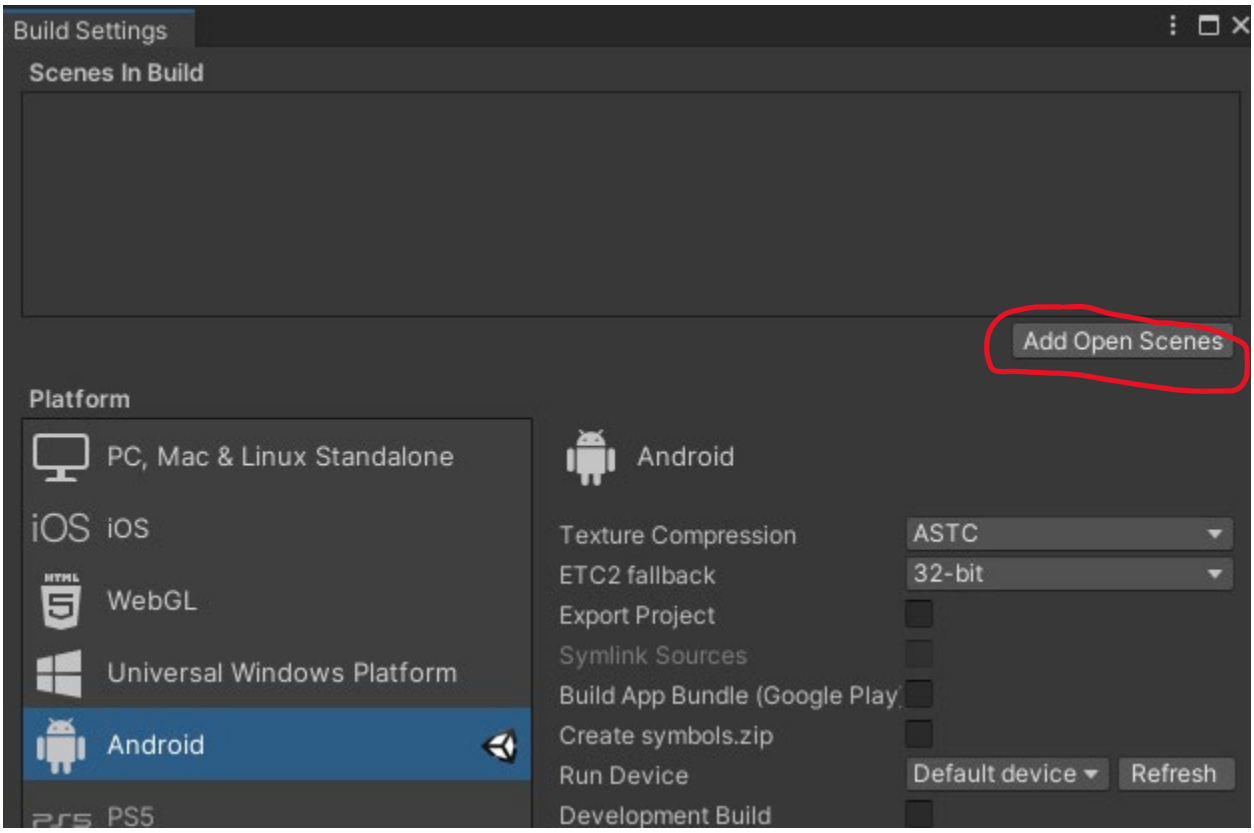
Click on File

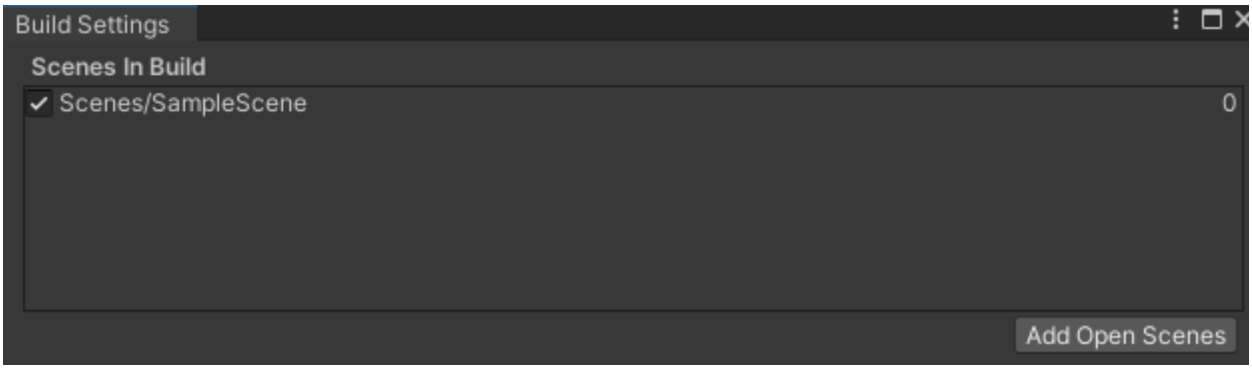


Click on Build Settings



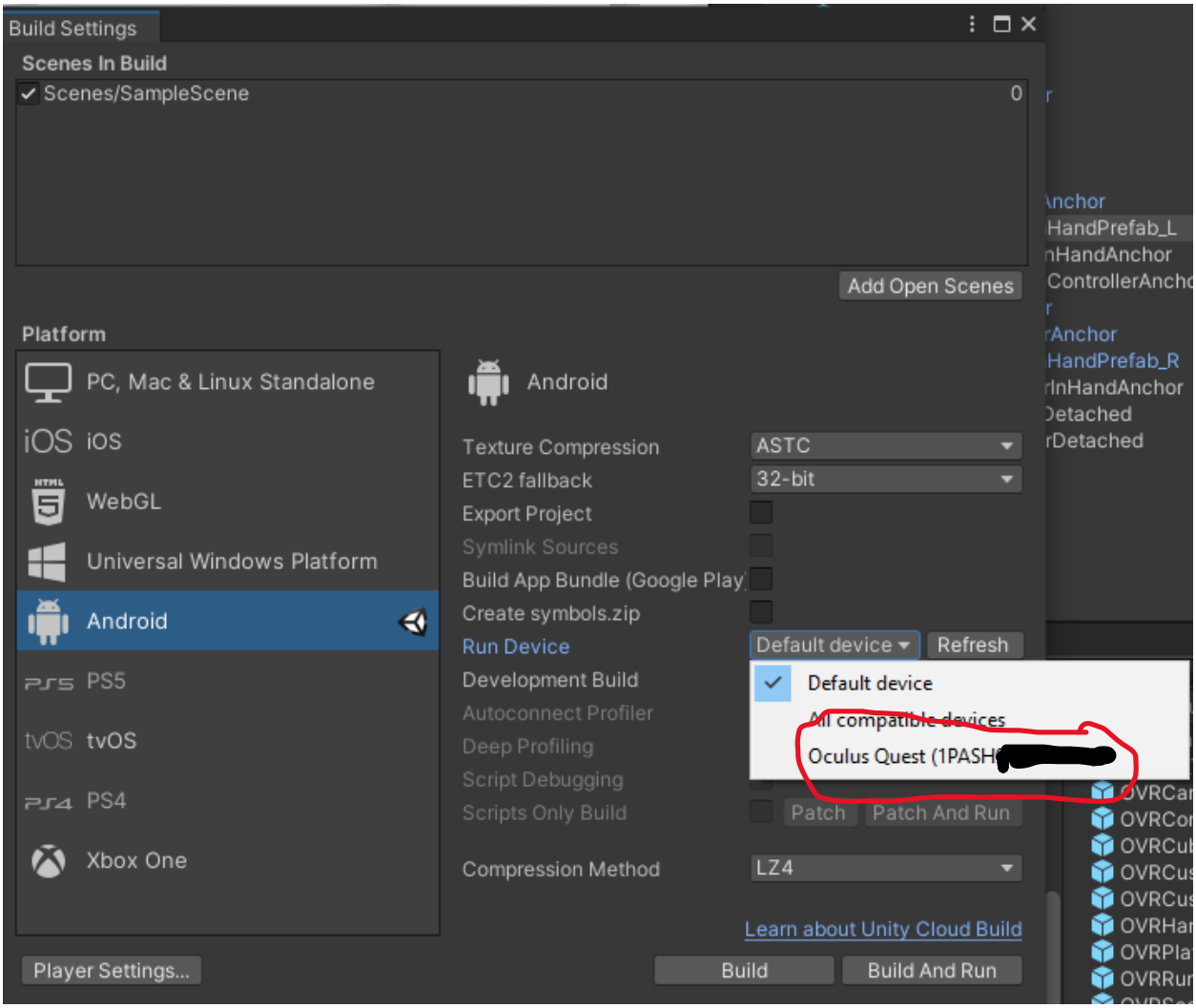
Click on Add Open Scenes



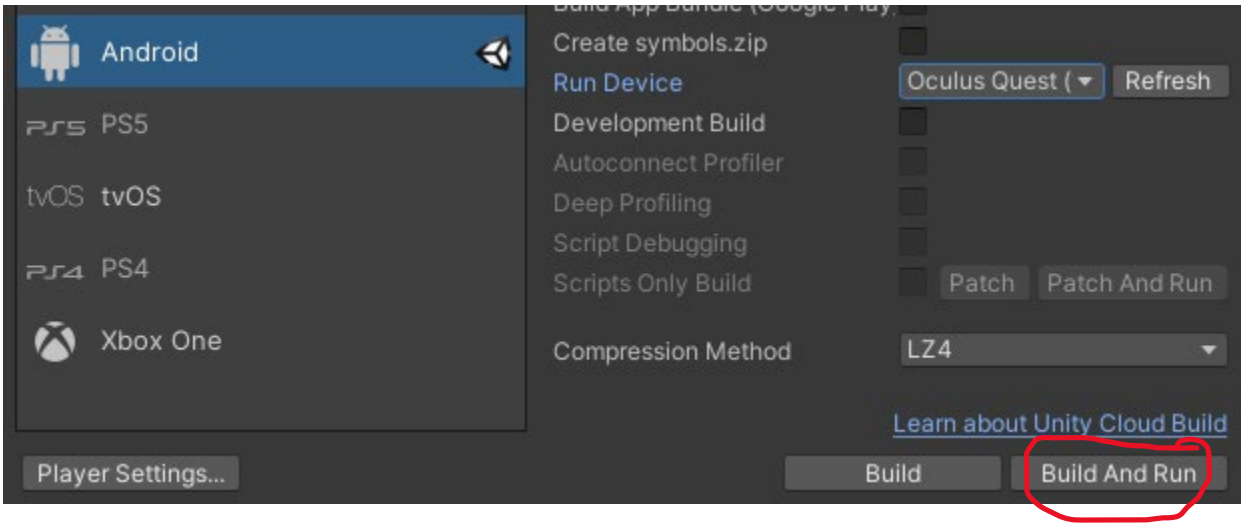


Turn on the Oculus Quest headset, then connect the Oculus Quest headset to the computer (The headset must be set to developer mode)
In the headset click to allow data to share between the computer and the headset

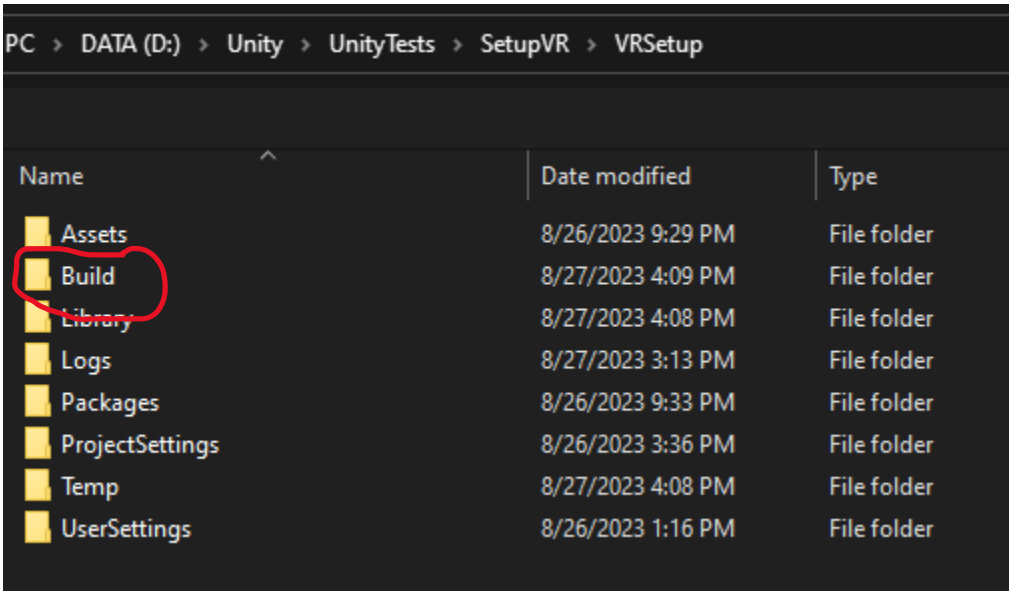
Select the Oculus Headset under Run Device (you may have to click Refresh first)



Click Build And Run



When running this the first time, you will be asked for a file name and where to save it.
I recommend creating a new Folder in the Main Unity folder called Build. Then save the file to that folder.



17. Take a look around and wave.