# VR Classroom Template

This document will help you with the setup of the project. This is focused in building for Oculus (Quest), but it should also work for other VR, as this project uses XR Interaction Toolkit.

I am using Unity 2019.4.4f1 and the 3D template (non URP, but it should also work for URP/HRP, you just need to convert the materials).

After downloading and importing this asset, you will notice a lot of errors. Don't panic! That's because we still have a couple of things to import.
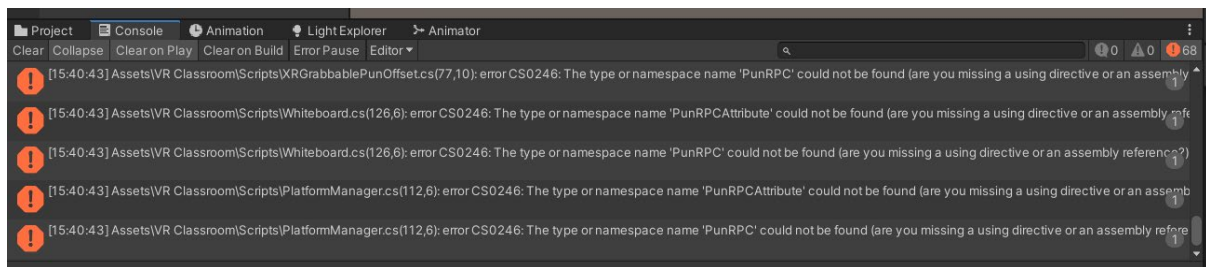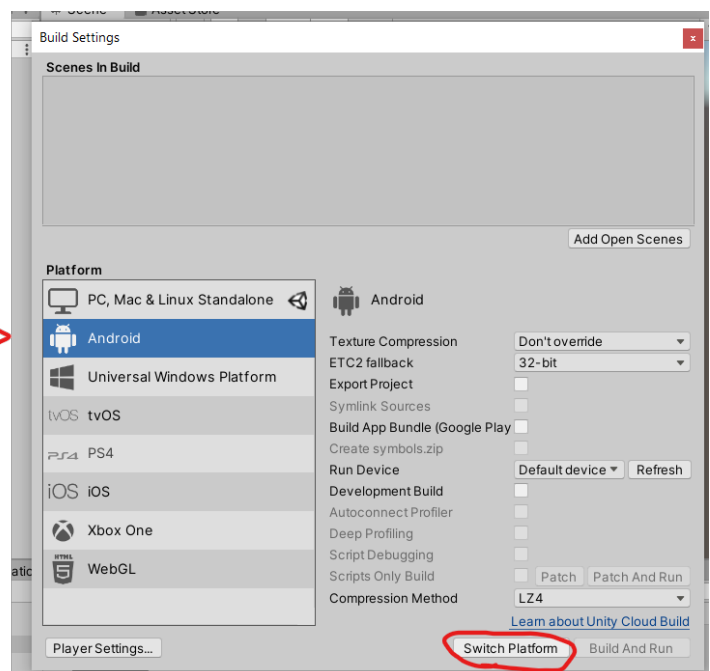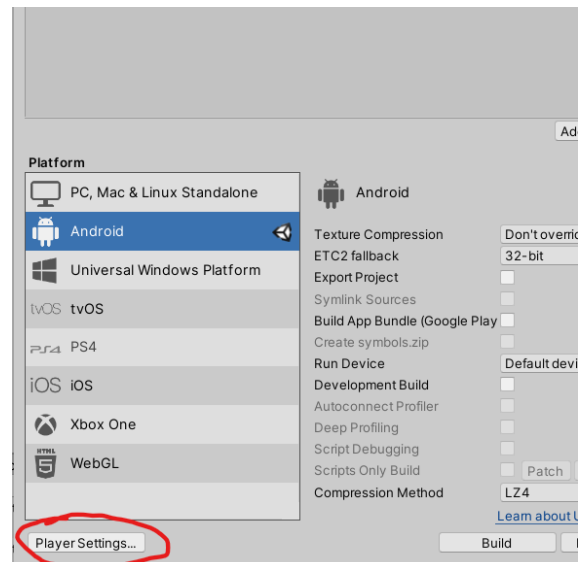

A) Setup for Quest: Let's begin!
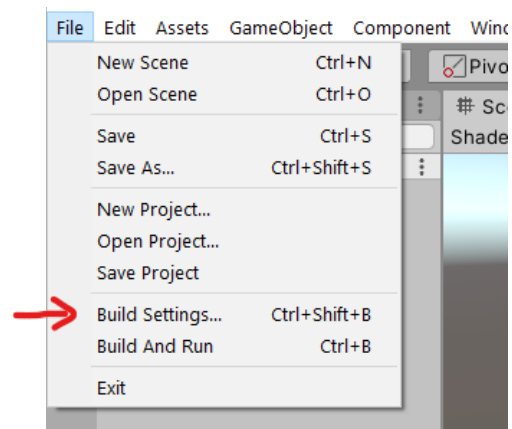
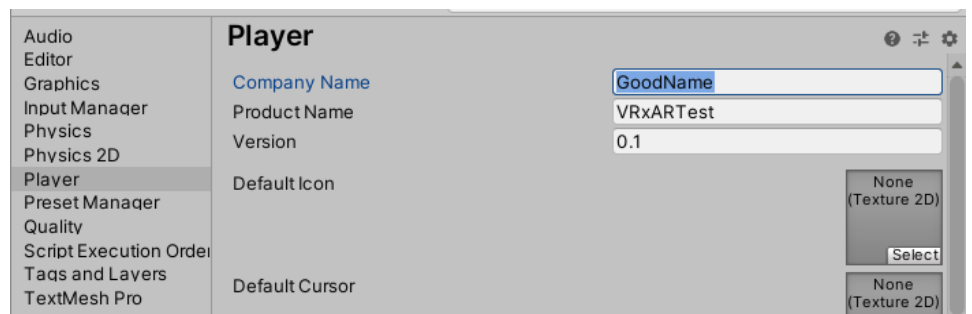1. Change the build target platform, going to File>Build Settings
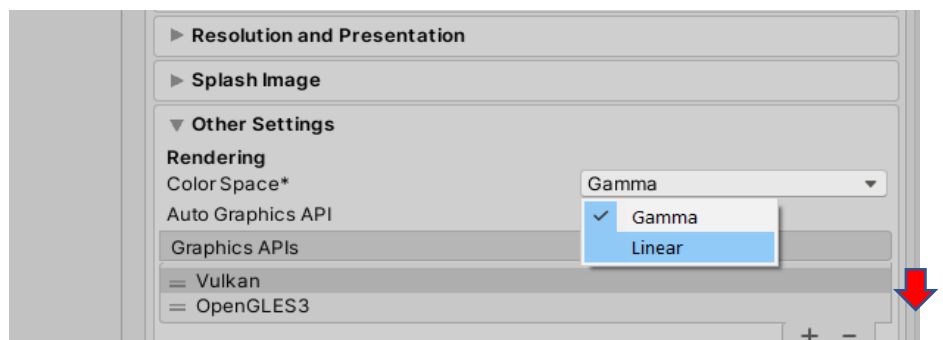

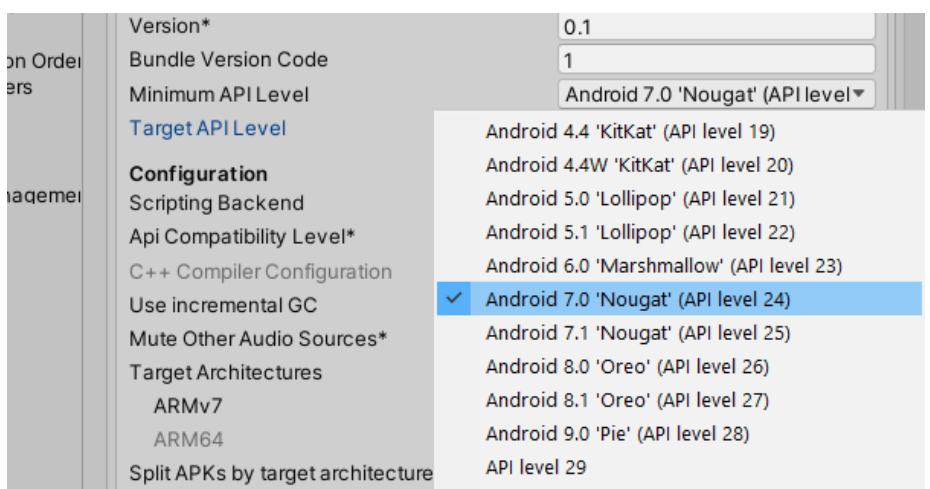2. Select Android and hit switch platform.

3. Open player settings

4. Fill your

great company name.

5.Go to "Other Settings", and select Linear space. Also select Vulkan and take it out of the list with the "-" sign, so only OpenGLES3 is left.
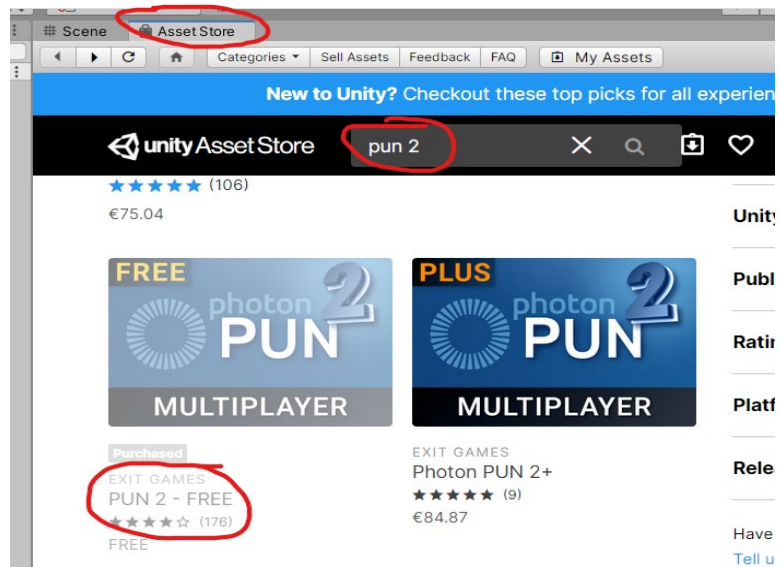

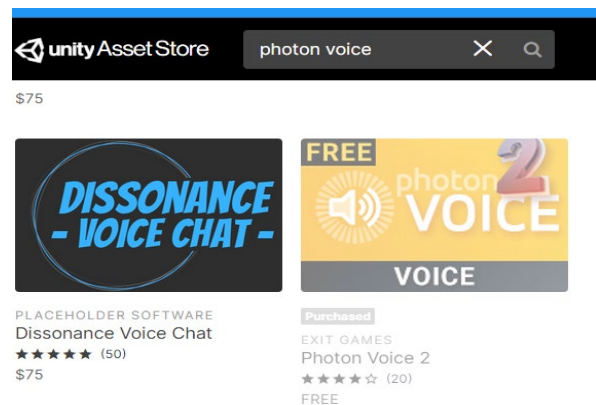6. Finally, in the Minimum API Level, chose 7.0/ lv 24.

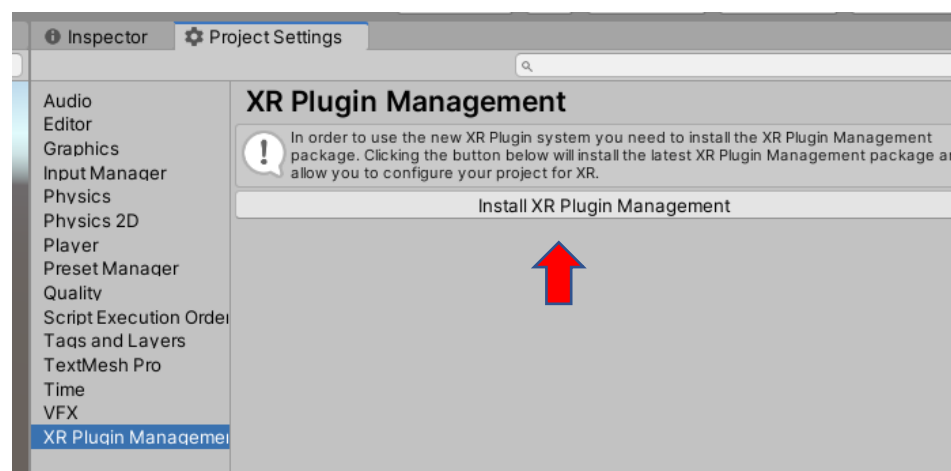**B) Let's Import stuff! (and get rid of errors)**

1. Go to the Asset Store tab, search for "Pun 2" and import the free version.
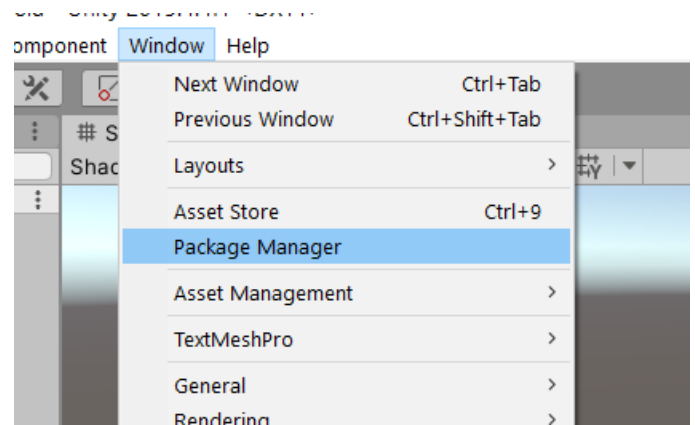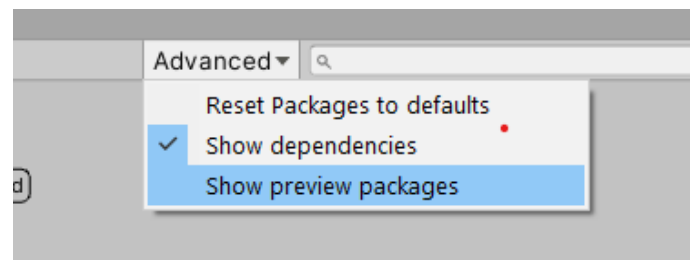

2. After that, import Photon Voice 2 (free).

3. Go again to the project settings tab (File>Build Settings>Player Settings) go to XR Plugin management and Install XR Plugin management, yes, click that button!
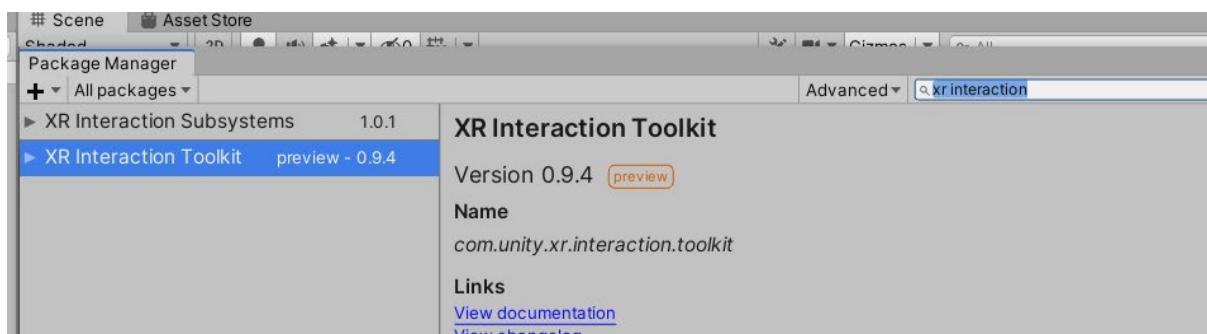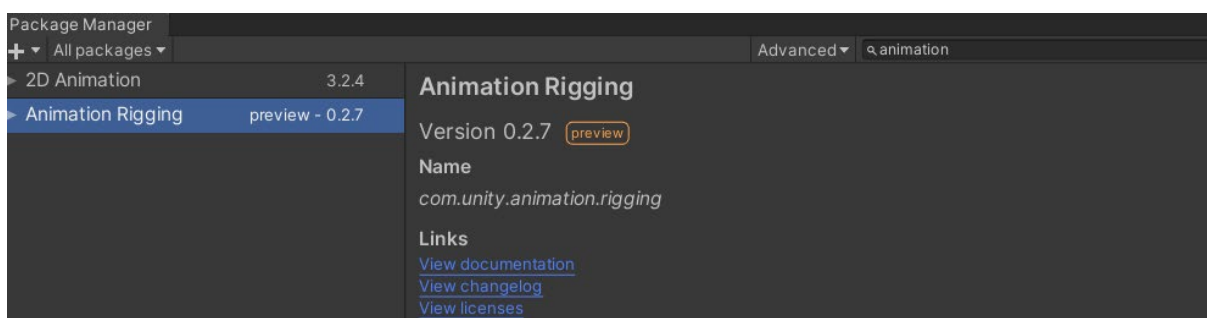
4. Go to Window>Package Manager.

5. In the package manager, check "Show preview packages" under Advanced.

6. And now Search for "XR interaction" and install the XR Interaction Toolkit with the "install" button at the lower right corner.

7. Finally import the "Animation Rigging" package, that will handle the avatar IK.

At this moment you should not have errors in the project. Cool!

C) Setting up Photon

Photon is a free (until certain big limit) networking solution for Unity, and in my personal taste, the best one around.

1. Go to www.photonengine.com and create an account if you don't have already.

2. Click on CREATE NEW APP

Your **Photon Cloud** Appli

Show · in Status

All Apps Active

CREATE A NEW APP

3. Set the type to PUN

Photon Type *

Photon PUN

4. Put a name to your app and hit Create.

Name *

Your Greate APP Name

5. Find your app in the list and double click on the App ID and copy it, we need to fill this ID in Unity.
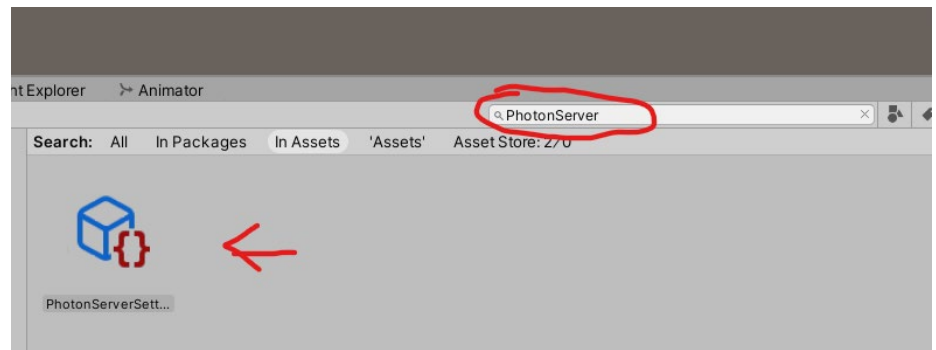
PUN 20 CCU

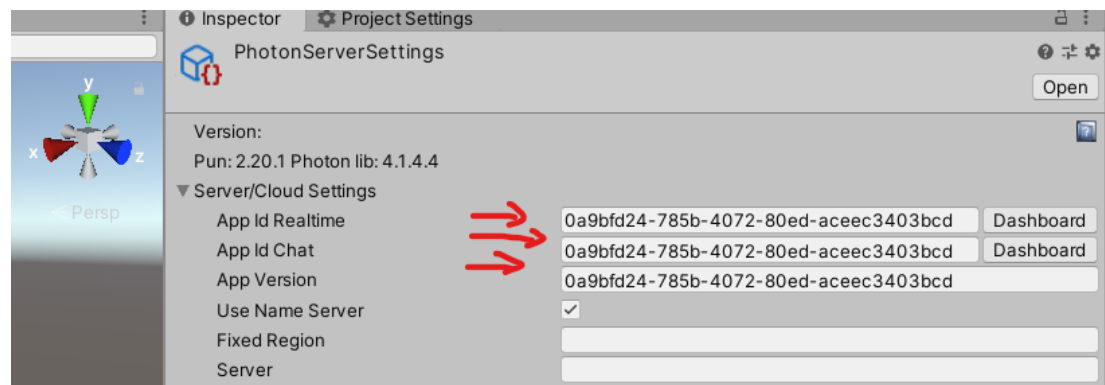Your Greate APP Name

App ID: 0a9bfd24-785b-4072-80ed-aceec34

Peak CCU
0

Traffic used
0%

6. Go back to unity and search for PhotonServer and click on it.

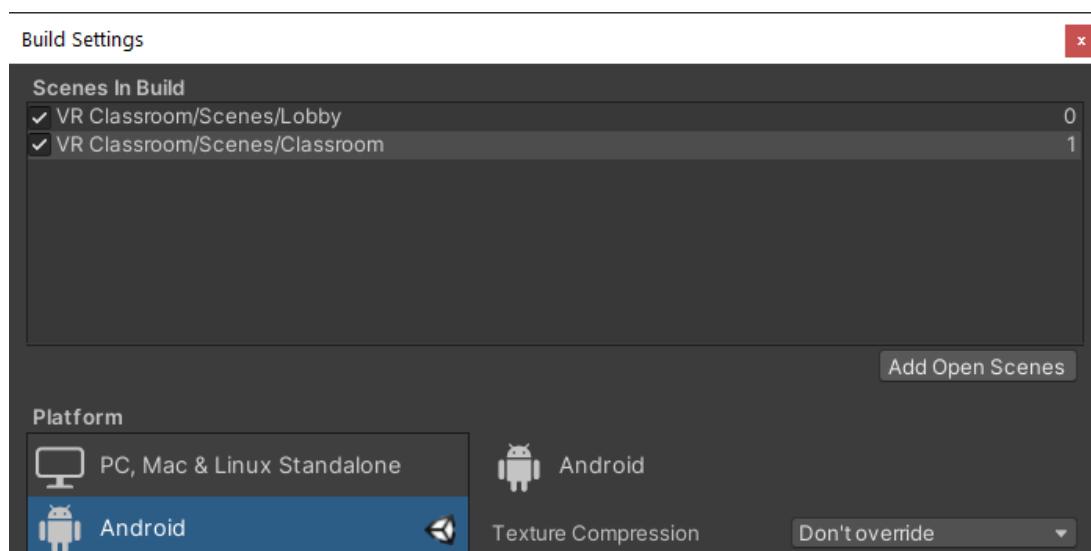7. Paste your app id in these three places and save your project.

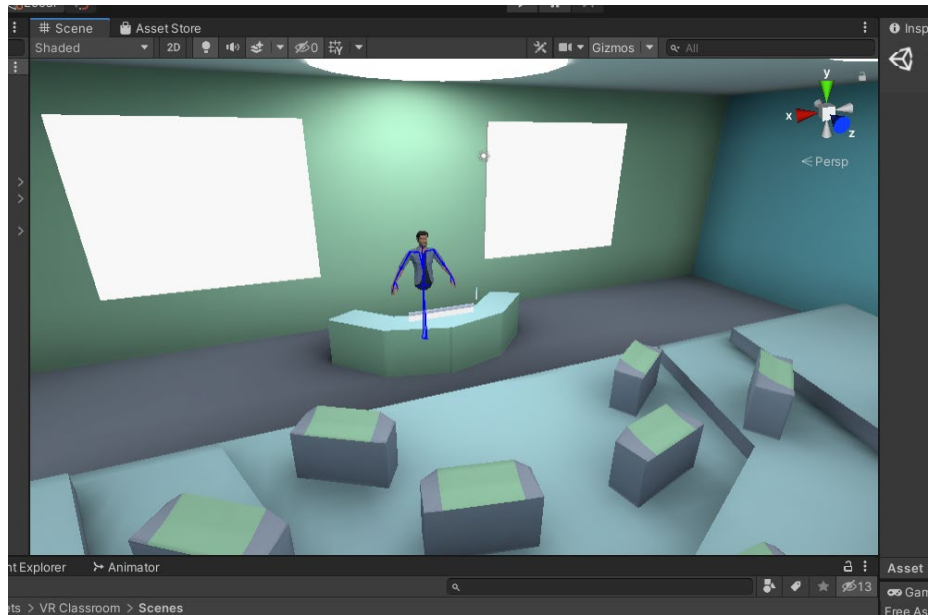**Photon's Setup Ready!!**

D) Setting the scenes and XR Settings: we are almost there!

1. Search for the 2 scenes included in the package going to VRCrossAR>Scenes and drag them to the build settings in the correspondent order.
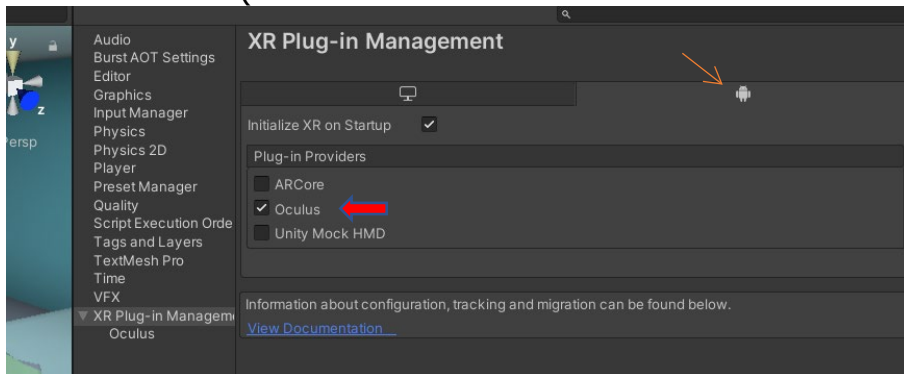
It should look like this:

2. Open the Classroom scene, and you should see something like this:

3. Now go to project settings again (Edit>Project Settings) and in the XR Plugin Management check your desired platform, in my case, Oculus (in android tab for quest).
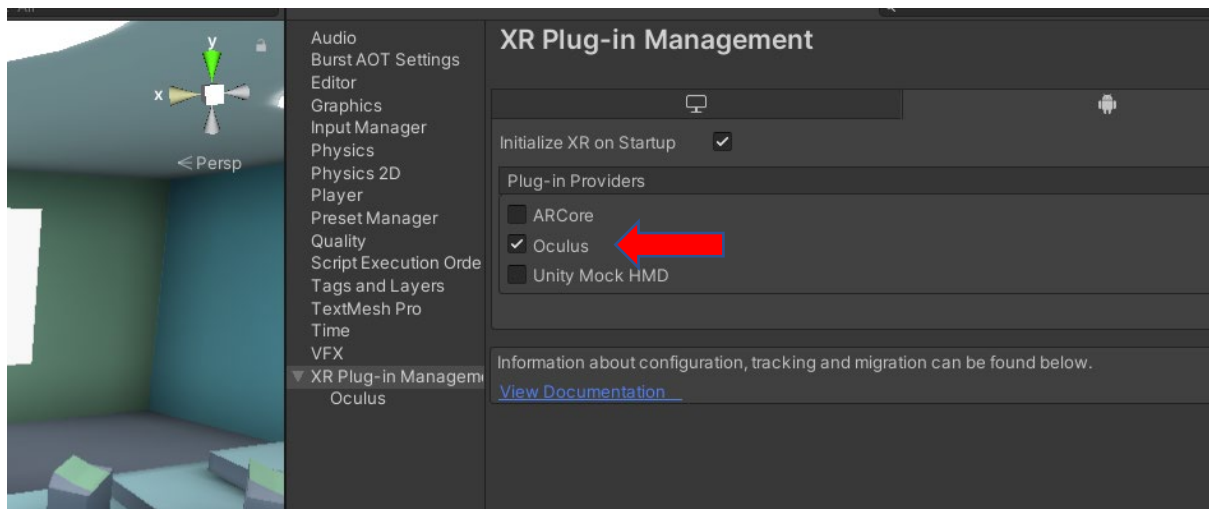

We have everything needed in our project at this time, we should now do the Builds!

E) Teacher VR build (Oculus Quest)

1. Select the Manager Game Object in the scene, and in the dropdown select "Teacher".

2. In project settings>XR Plug in, make sure you have Oculus checked in the android tab.

3. Connect your Oculus Quest headset and Build! (If a Text mesh pro window appear, cancel the build and "Import TMPro essentials, then start building again).

We are in VR!!

D) Student Build (VR)

1. Select the Manager Game Object in the scene, and in the dropdown select "StudentVR".
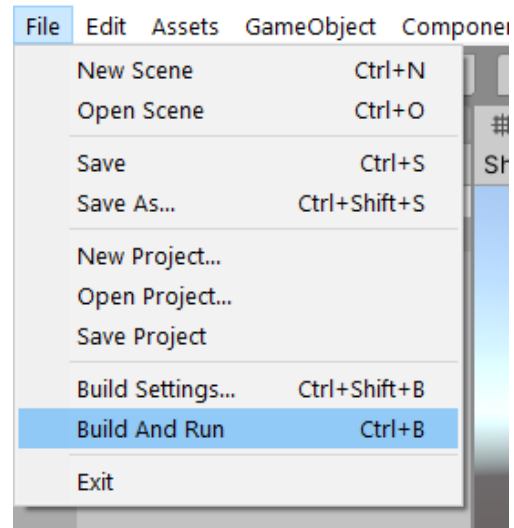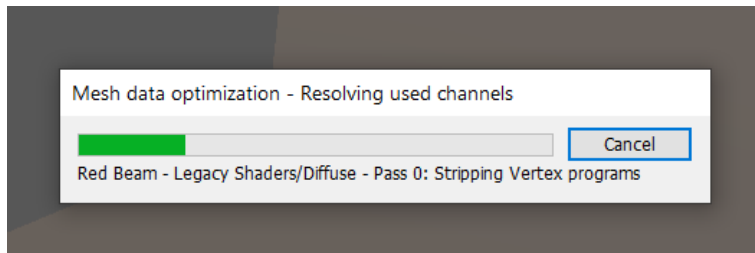

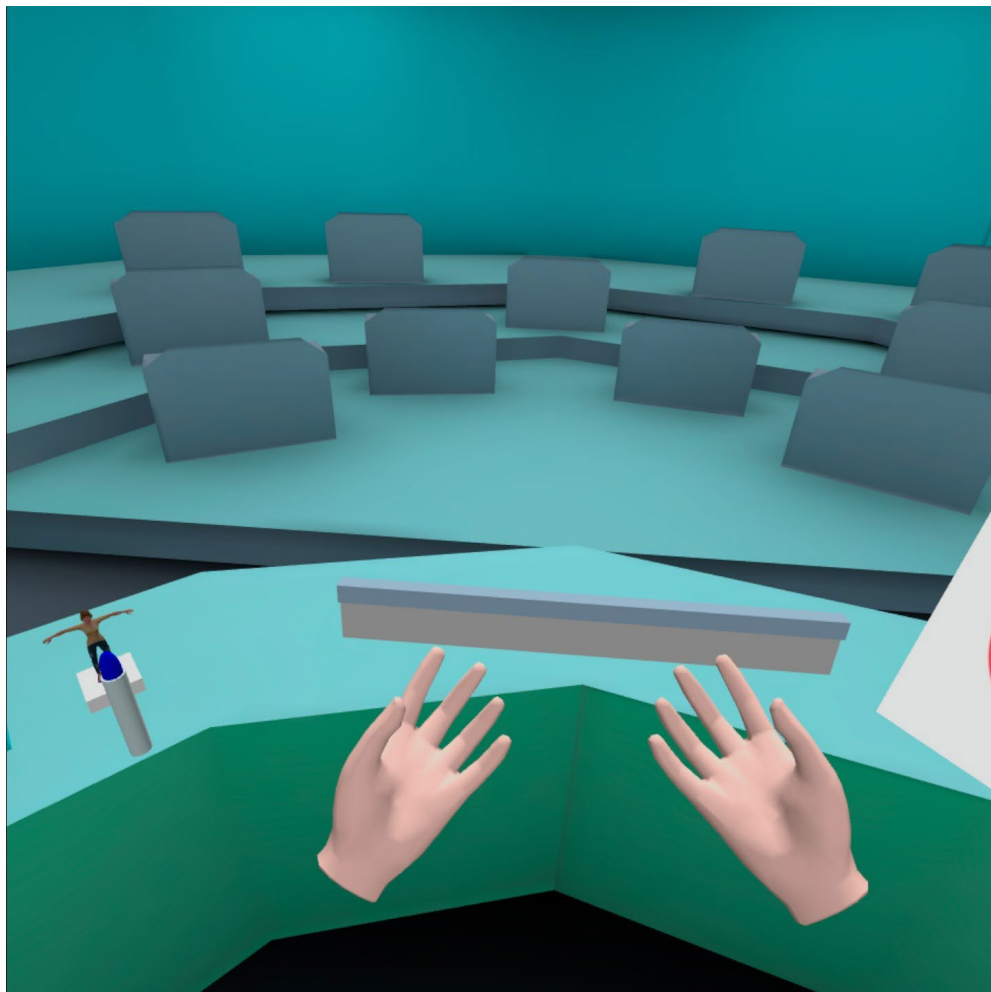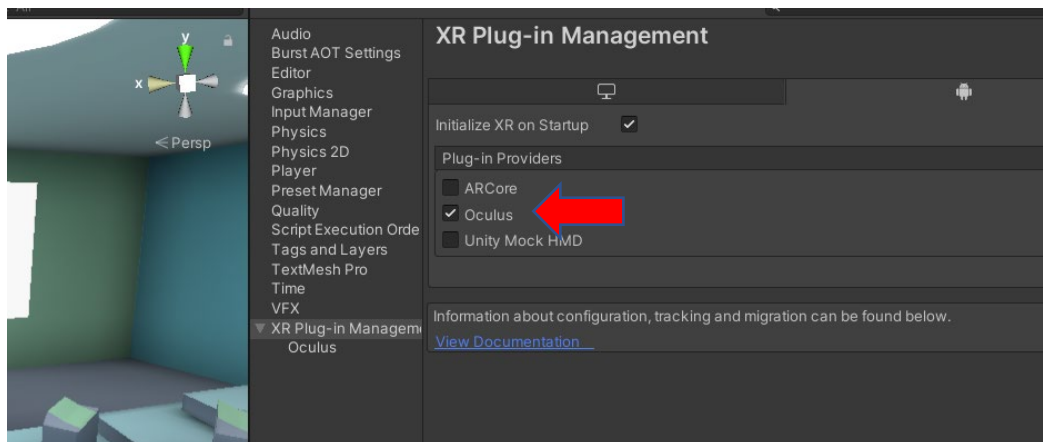2. In project settings>XR Plug in, make sure you have Oculus checked in the android tab.

3. Connect your Oculus Quest headset and Build! (If a Text mesh pro window appear, cancel the build and "Import TMPro essentials, then start building again).

We are in VR as a student, and we can hear the teacher giving his/her class!
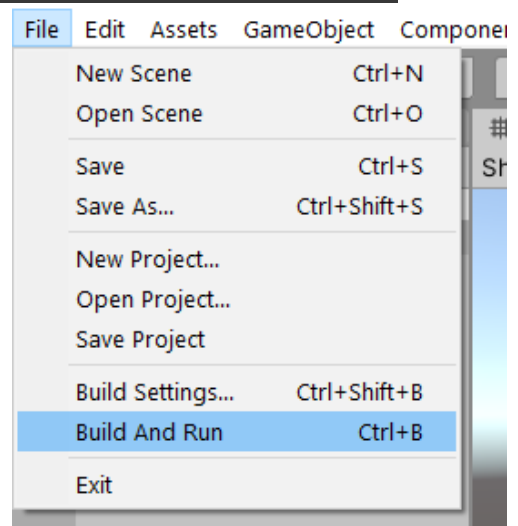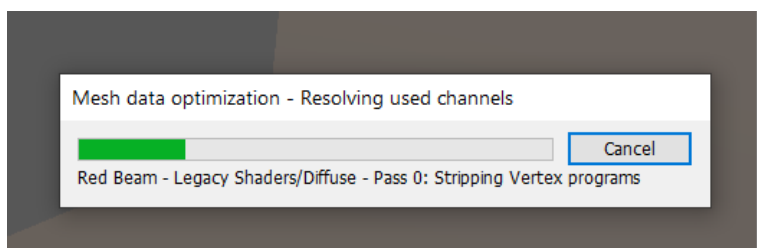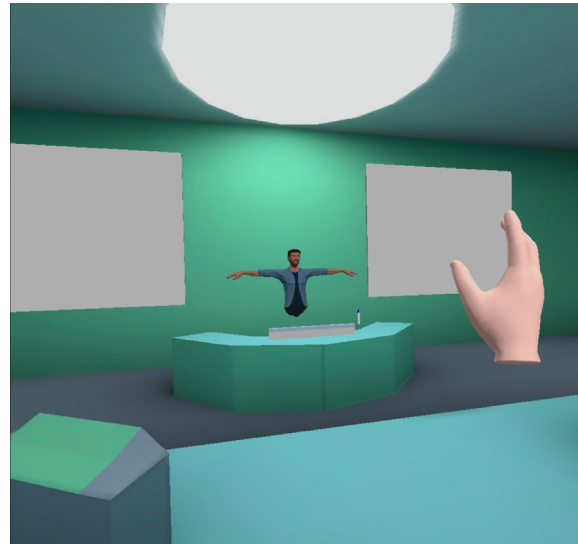

D) Student Build (Phone)

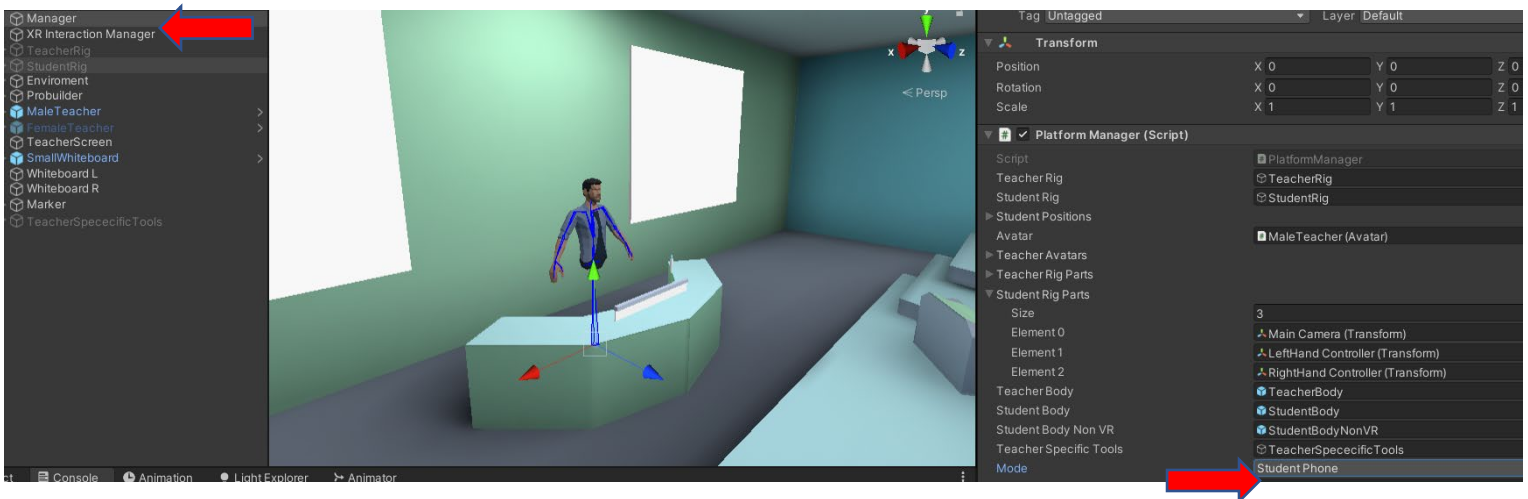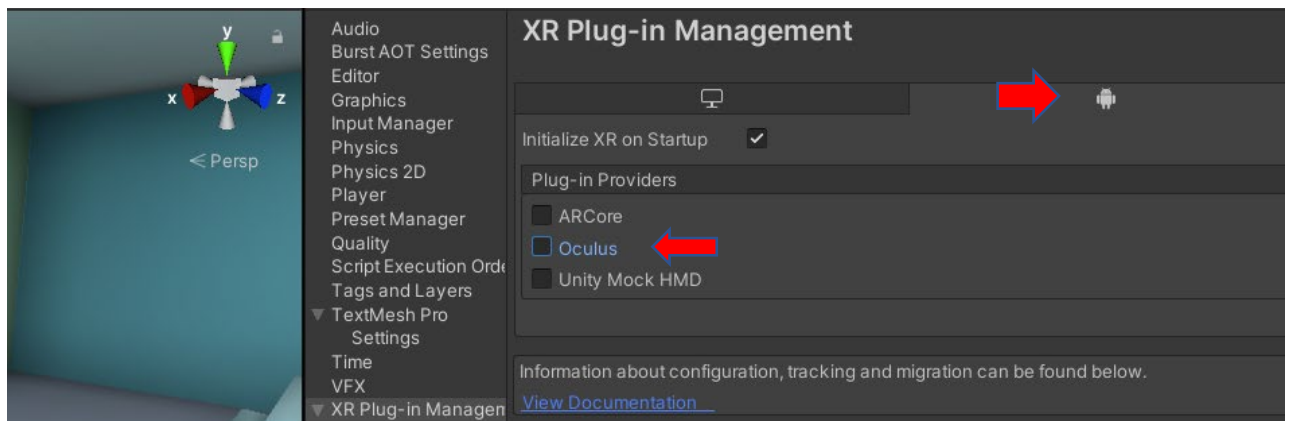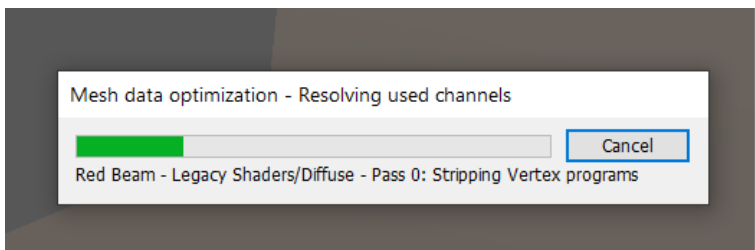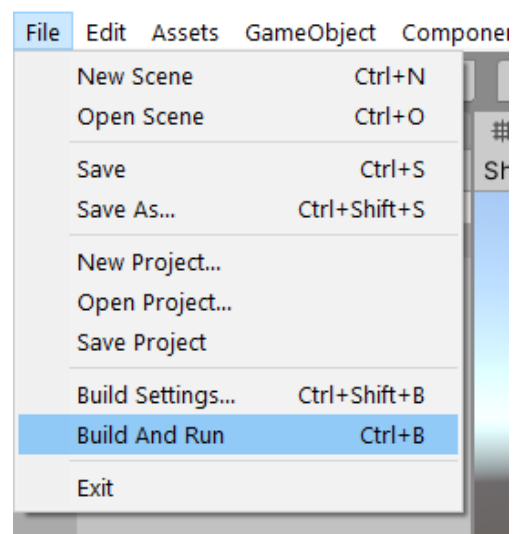1   **.** Select the Manager Game Object in the scene, and in the dropdown select "StudentPhone".

2   In project settings>XR Plug in, make sure you have Oculus **NOT** checked in the android tab.

XR Plug-in Management

Initialize XR on Startup ☑

Plug-in Providers
☐ ARCore
☐ Oculus ←
☐ Unity Mock HMD

Information about configuration, tracking and migration can be found below.
View Documentation

3. Connect your Android phone and Build! (If the device is not detected, make sure you have developer mode enabled, and USB Debugging enabled).

File Edit Assets GameObject Componer

New Scene   Ctrl+N
Open Scene   Ctrl+O

Save   Ctrl+S
Save As...   Ctrl+Shift+S

New Project...
Open Project...
Save Project

Build Settings... Ctrl+Shift+B
Build And Run Ctrl+B

Exit

Mesh data optimization - Resolving used channels

[████   ] Cancel

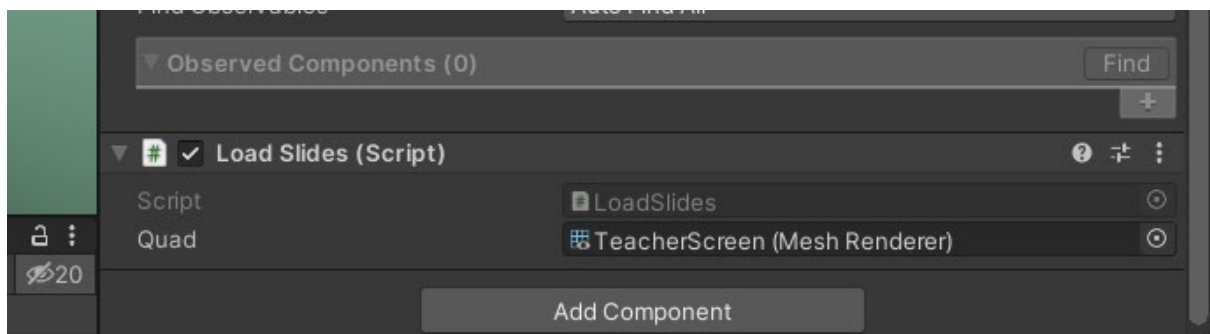Red Beam - Legacy Shaders/Diffuse - Pass 0: Stripping Vertex programs

We can attend the class with our phones!

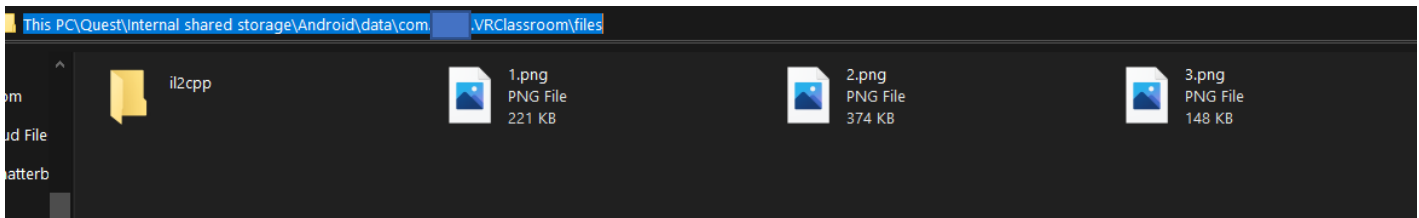## E) Last but not least, importing slides as teacher (Oculus Quest)

There's a "LoadSlides.cs" script attached to Manager game object in the scene, wich handles loading png files loaded in the device.
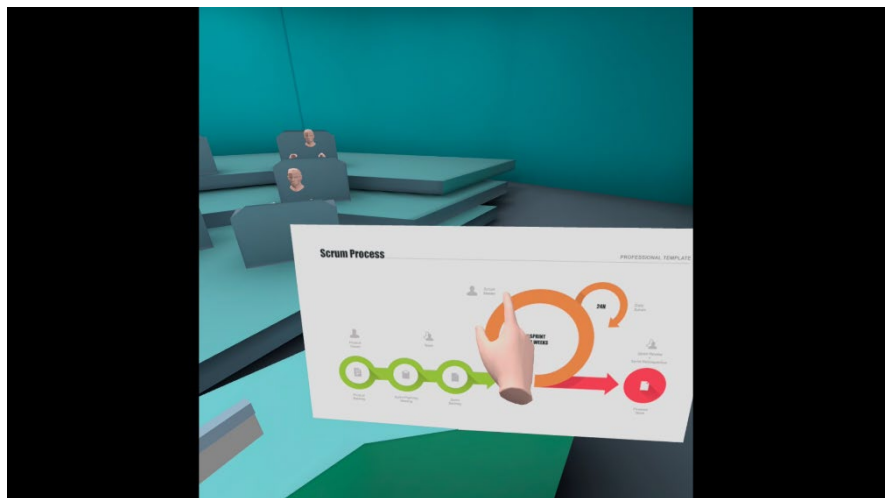
1.You need to name the slides you want to load as "1.png", 2.png", 3.png" etc.

2. Then, connect your Oculus Quest, and drag them to the path:

This PC\Quest\Internal shared storage\Android\data\com.YourCompany.VRClassroom\files

Then the slides will load automatically when you start the app.

If you have any other questions/issues, don't hesitate to write to chiligamesco@gmail.com