

MM806 5th Assignment Report AR Museum – Tobias (Student Id : 1841131)

1. Video Capture and Android executable file (APK).

Please find the working video capture and executable file (apk) in this google drive file :

- Video capture :

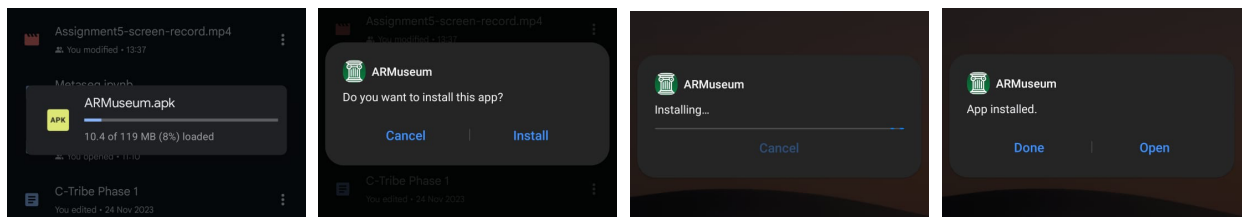
https://drive.google.com/file/d/1rZZCSiJEzD9EC3XKn2ZWVcA_GhDLM02W/view?usp=sharing

- Executable (apk) file :

<https://drive.google.com/file/d/1AjCigmJF2gm8c87PLZyAckwigDZSmf9M/view?usp=sharing>

2. Functionality

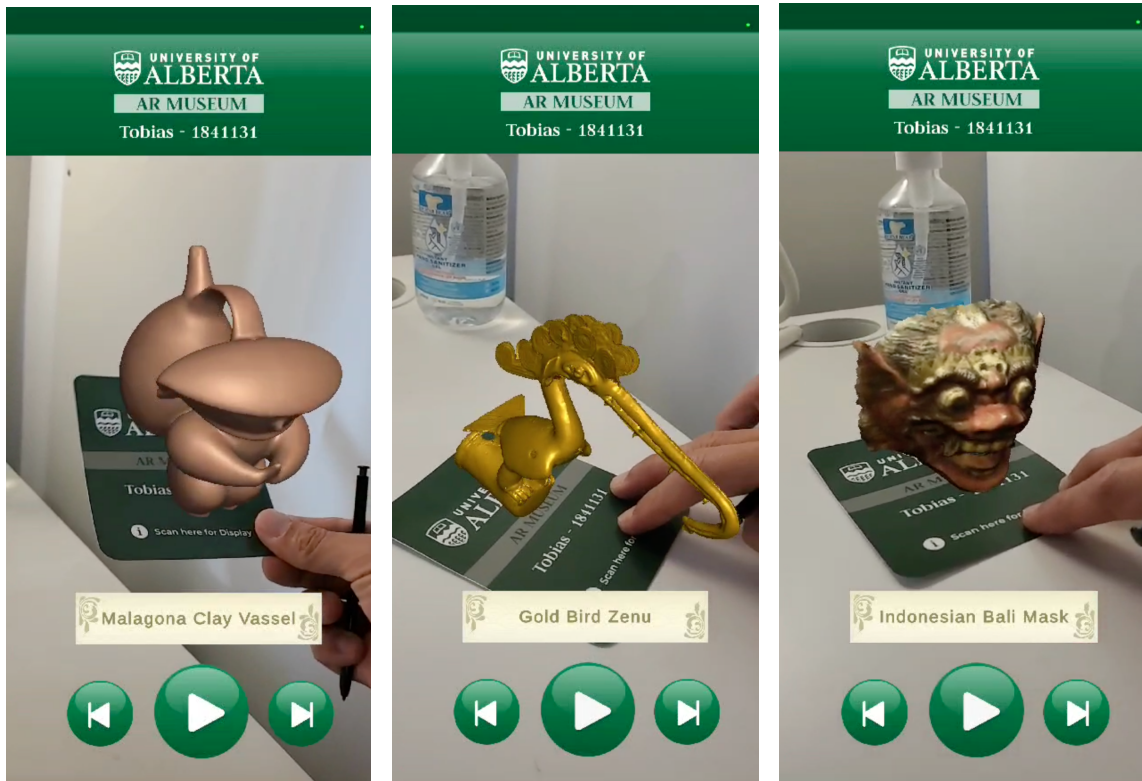
Please download and install the Apk file from the google drive to your android phone, make sure your android phone setting is enabled to install downloaded Apk file :



After the app installed, open the application and allow permission to use your phone camera. It will direct you to the splash screen and open the main scanning page. In order to show the AR Museum object, you need to face your camera to the image target below



After scan the camera to image target, **3d museum object will appear on top of it**, and if you click **play button** it will play the **sound description of the object selected**. You can **change the object** by click the **next or previous button**.



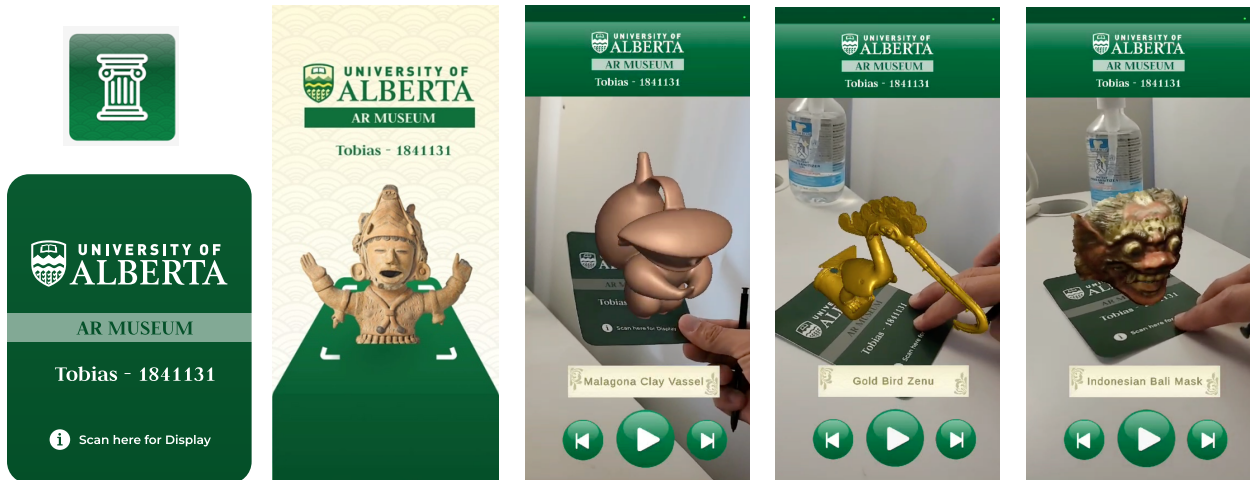
User flow:



3. Additional Features

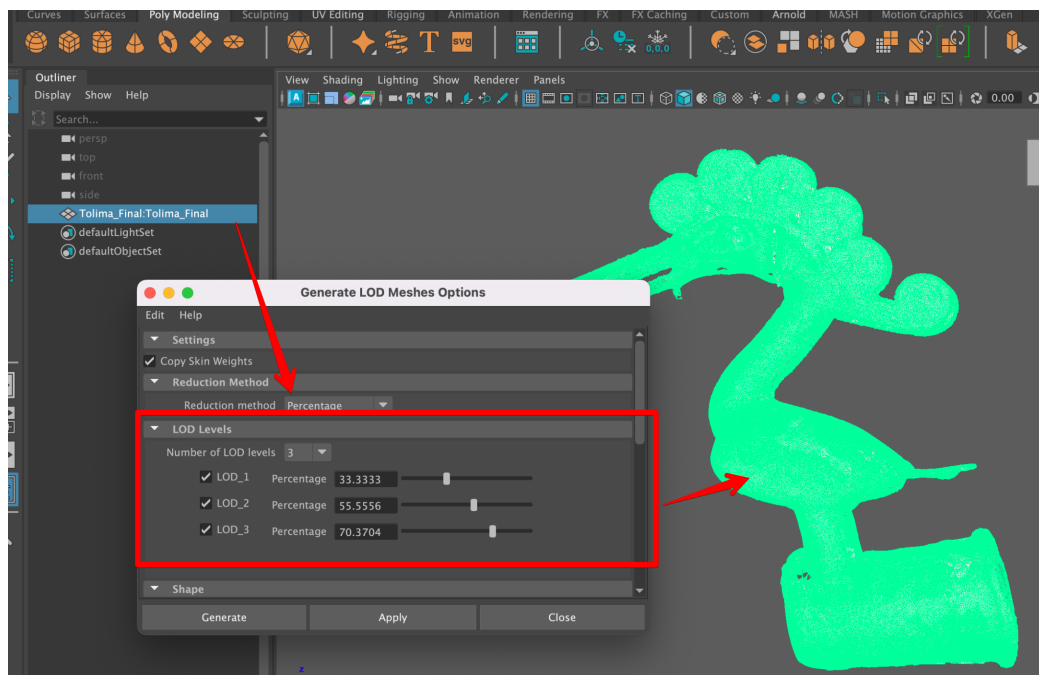
3.1 Visual Quality

In order to enhance the visual quality, here I add the user interface components, such as image target, app icon, splash screen, header and UI button (next, prev) to change object and play sound description

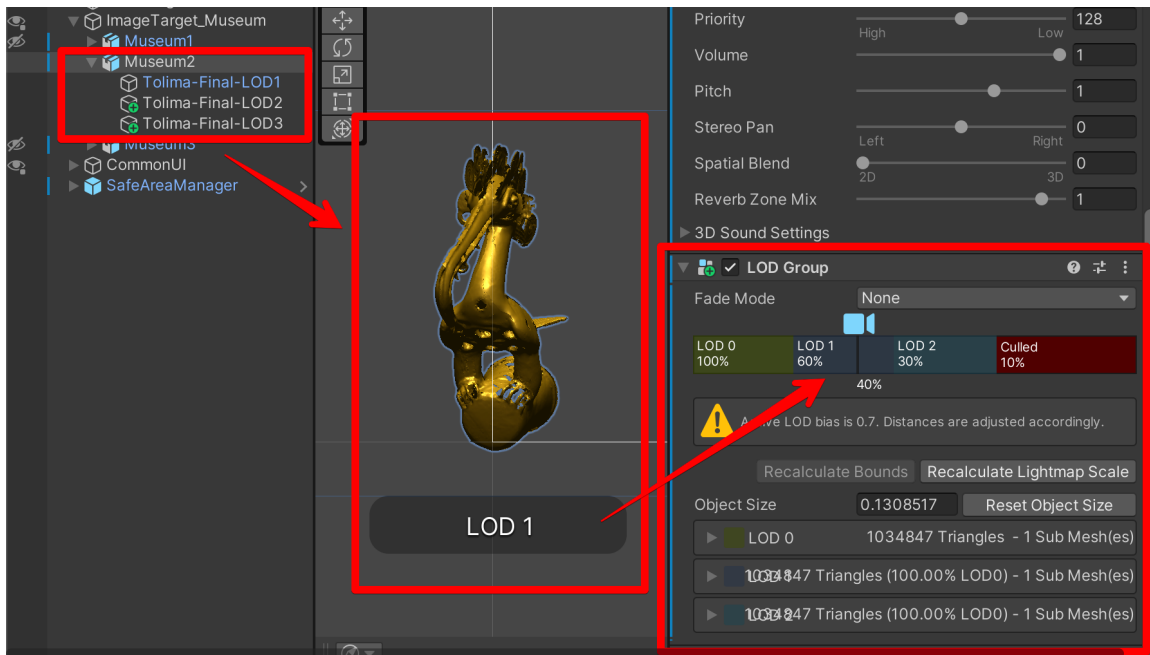


3.2 Level Of Detail (LOD)

To optimize the speed, here I am using 3 different levels of LOD for the museum object. The LOD created separately using 3D Maya software and applied accordingly in Unity3D



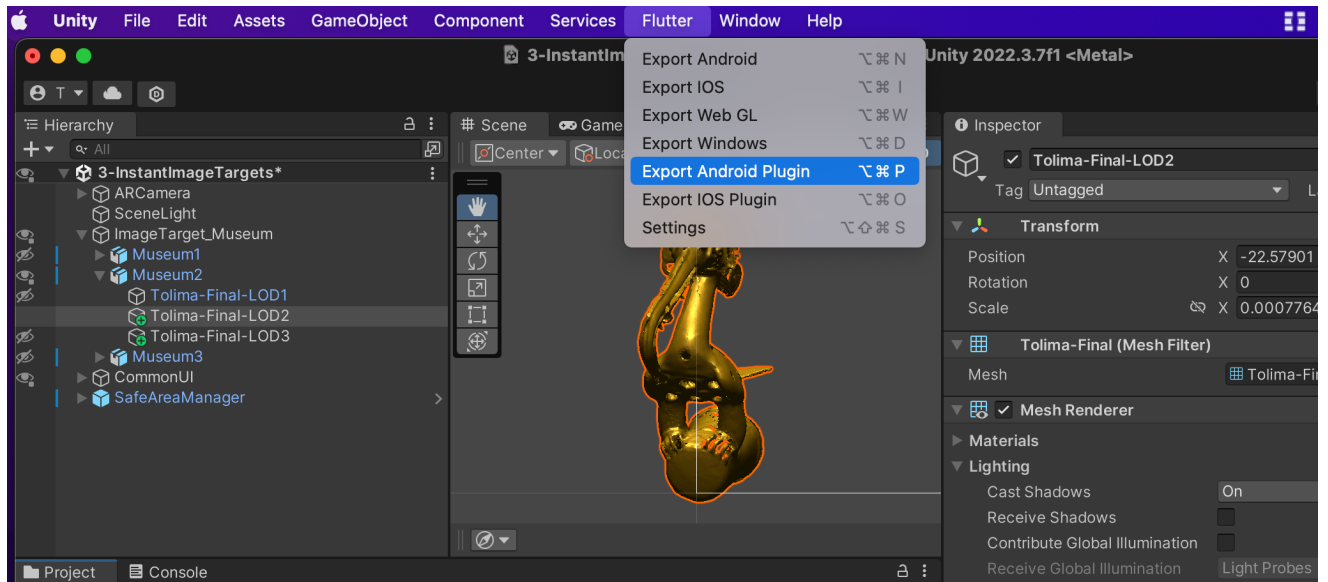
Level Of Detail (LOD) created using Maya

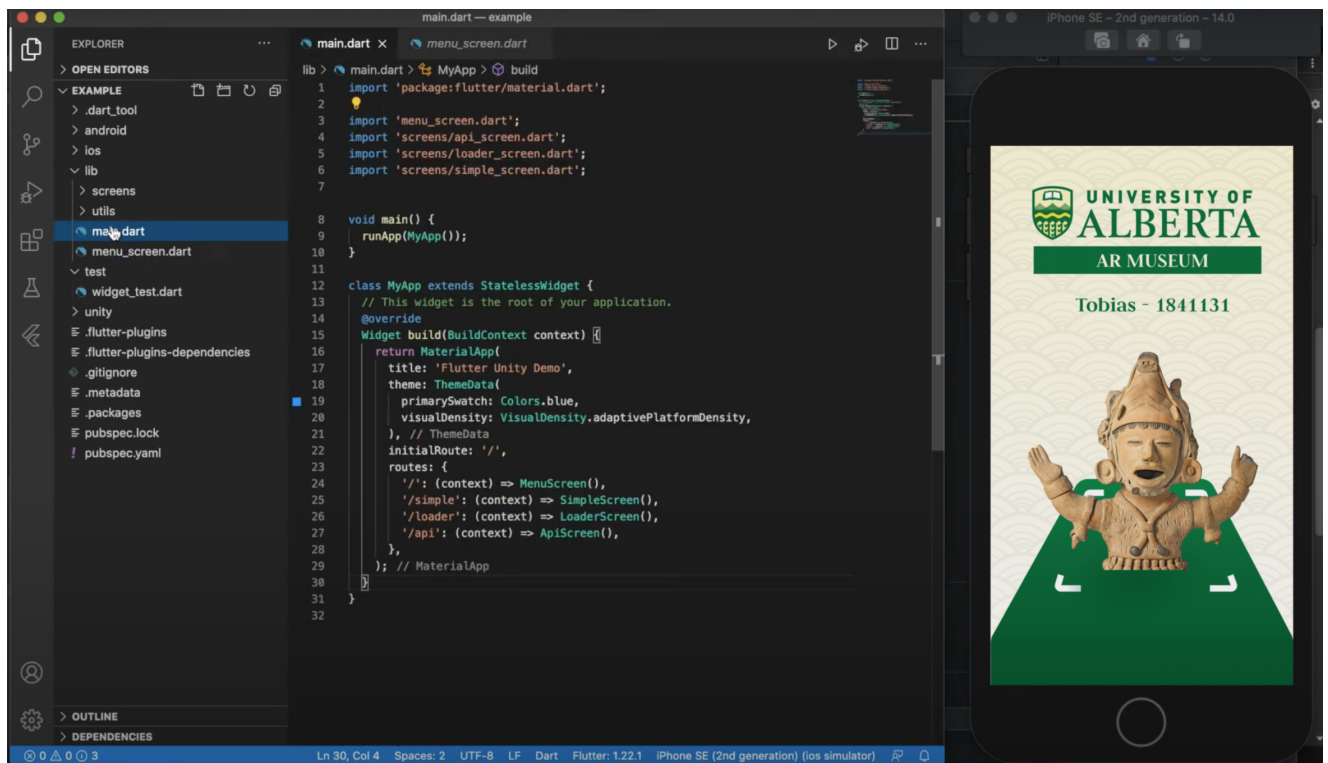


Level Of Detail (LOD) setting in Unity3D

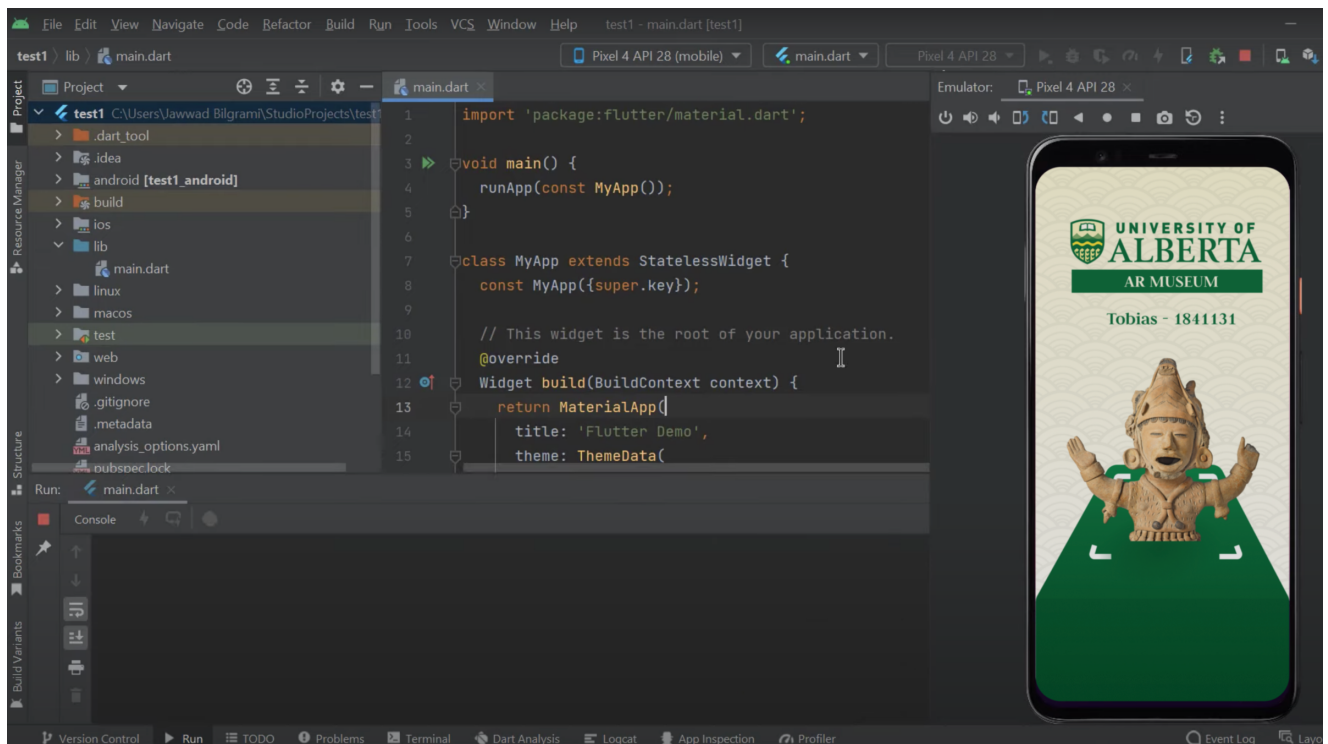
3.3 Flutter framework to use same AR environment for iOS and Android

Instead of using separated AR environment for iOS and Android, here I am utilizing Flutter + Unity (AR Experience Toolkit) with the same AR environment





Flutter integration with iOS XCode



Flutter Integration with Android Studio