

CS4322 Lab 12

Requirements

Create a simple Augmented Reality Android App

- Create a new project, choose “Minimum SDK” as “API24”
- Getting the 3D model, download and set up Sceneform 1.16.0
 - Go to Gradle Scripts > build.gradle
 - Add this line inside the dependencies block
 - `api project (":sceneformux")`
 - Then in the same file inside the “android” block and just after “buildTypes” blocks add these lines
 - ```
CompileOptions{
 sourceCompatibility JavaVersion.VERSION_1_8
 targetCompatibility JavaVersion.VERSION_1_8
}
```
  - Then go to the `app > manifests > AndroidManifest.xml`
  - Add the following lines before the “application” block

```
<!--This permits the user to access Camera-->
<uses-permission android:name="android.permission.CAMERA"
/>

<!--This helps to check a specific feature in the phone's
hardware,here it is OpenGL ES version. Sceneform needs
OpenGL ES Version 3.0 or later-->
<uses-feature android:glEsVersion="0x00030000"
android:required="true" />

<!--Indicates that this app requires Google Play Services
for AR.Limits app visibility in the Google Play Store to
ARCore supported devices-->
<uses-feature android:name="android.hardware.camera.ar"
android:required="true"/>
```
- Create a main activity and layout
- Screenshots are shown as follows:

UI, shown in  
Android Studio



Actual UI  
in phone



There are several important points that are general requirements for labs in this course:

- Use a separate Android Studio project for each lab, unless otherwise instructed.
- Include a comment at the beginning of each source file (.java file) you submit that includes your name and the lab date.
- Names for variables and other program components should be chosen to help convey the meaning of the variable.
- Turn in an archive of the entire Android Studio project for each lab. Do not attempt to turn in individual files, some course management systems mangle such files.

Submit your work using the appropriate link in Desire2Learn.