Lab 1 Native Mobile Apps

Andres Aguirre Gonzalez A01039656

How native code is packaged inside an APK?

Native code goes through a special process in android, it's default language it's java or Kotlin, however, you can give specific instructions on how to use other languages like c for instance.

What actions did I have to take to port java into c?

I had to create a jni folder, in which there are 2 files, one CMakeList.txt which contains the following code:

```
cmake_minimum_required(VERSION 3.4.1)

add_library( native-lib
             SHARED
             native-lib.c)

find_library(
        log-lib
        log )

target_link_libraries(native-lib ${log-lib} )
```

This acts as an initial configuration or setup for the c port.

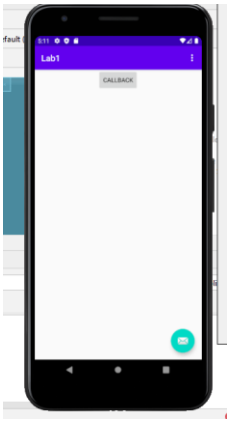
Also you need to add a file called native-lib.c, in which a function will be exported, in this case we export the "StringFromJni" function into the file:

```
JNIEXPORT jstring JNICALL
MainActivity.stringFromJni(JNIEnv *env, jobject MainActivity thiz) {
    // TODO: implement stringFromJni()
}
```

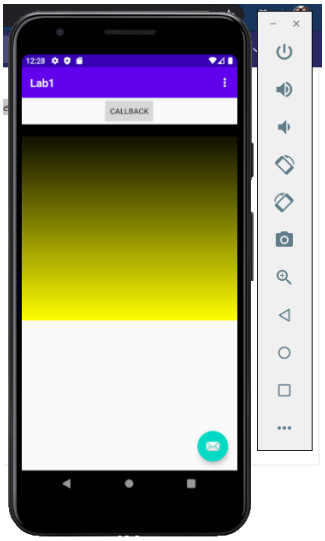
Which we declare in the MainActivity.java file in android studio

```
private native String stringFromJni();
```

In the end I just added a button in order to call the function in C and test if the onClick method called the C function



Then I created the surface and added the proper code to draw the gradient



Then worked on drawing directly from java, using the mandelBrot View

12:55
Lab1
CALLBACK