**Midterm**

**Android**

**Summer 2016**

**Version 2**

**Dr. Scharff**

* **Read the complete document.**
* **Complete this document. Rename it as *LastNameFirstnameAndroidExam-S2016-v1.docx***

**and send it to Dr. Scharff by email** [**mobilesenegal@gmail.com**](mailto:mobilesenegal@gmail.com)

* **Do not change the order of the questions.**
* **Send me the apk file.**
* **Send me questions by email** [**mobilesenegal@gmail.com**](mailto:mobilesenegal@gmail.com) **or through Slack**

**Your name: Jimmy Glorial MANDABRANDJA**

1. **Practical part**

Develop an app that converts dollars into francs CFA. The app will take dollars as inputs and return francs CFA as outputs. Note: 1 dollar = 586.84 francs CFA.

Your app will use Fragments.

Be creative and design a good-looking user interface!

Push your code in github with the name FirstNameLastNameMidterm.

Grading criteria:

* Code is in GitHub
* Code uses fragments
* Code is indented
* Apk is easily accessible
* Code uses variables with well-chosen names
* No errors and no crash
* Look-and-feel
* Names of files should be respected.

1. **Written part**
2. What is the permission that permits to use the Internet? Write the XML code that will be present in AndroidManifest.xml.

<uses-permission android:name="android.permission.INTERNET" />

1. What is the directory where layout files are located? Explain.

This following path show the directory where layout files are located;

**ProjectName**\app\src\main\res\layout

1. During an Activity lifetime, what is the first callback method of the *Activity* class invoked by the system?

The first callback method of the *Activity* class invoked by the system during an Activity lifetime is:

@Override

public void [onCreate](https://developer.android.com/reference/android/app/Activity.html#onCreate%28android.os.Bundle%29)(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

// The activity is being created.

}

1. In order to display a Ul defined in the XML layout file *main.xml*, what *Activity* method should be called?

*Activity* method should be called is: setContentView(View);

1. What *Activity* method should be called to retrieve a reference to an Android view by using the *id* attribute of an XML resource?

findViewById (int id)

1. What does the following code achieve?

Intent intent = new Intent(FirstActivity.this, ThirdActivity.class);

startActivityForResult(intent);

This code lunches the ThirdActivity.

1. Write the code to log **an error**. The code will display “Error” and the value of a variable *i.*

Log.e(“Error”,” Message d’erreur” +i);

1. Write the code to create a Toast that displays “*This is not a feature, but a big bug!*”. The duration of the Toast is *Toast.LENGTH\_LENGTH*.

Hint: You will use the method *makeText*.

public static Toast makeText (Context context, CharSequence text, int duration)

Complete the code below:

Context context = getApplicationContext();

Toast toast = Toast.makeText(context, “*This is not a feature, but a big bug!*”, *Toast.LENGTH\_LENGTH*);

1. Complete the code of the following AsyncTask class. What you have to complete is introduced by \_\_\_\_.

public class DownloadFilesTask \_\_1\_\_\_ AsyncTask<URL, String, Integer> {

protected \_\_2\_\_\_ doInBackground(\_\_3\_\_... urls) {  
         int count = urls.length;  
         long totalSize = 0;  
         for (int i = 0; i < count; i++) {  
             totalSize += Downloader.downloadFile(urls[i]);  
             publishProgress((int) ((i / (float) count) \* 100));  
             // Escape early if cancel() is called  
             if (isCancelled()) break;  
         }  
         return totalSize;  
     }  
  
     protected void onProgressUpdate(\_\_4\_\_\_... progress) {  
         setProgressPercent(progress[0]);  
     }  
  
     protected void onPostExecute(\_\_5\_\_\_ result) {  
         showDialog("Downloaded " + result + " bytes");  
     }  
 }

How do you execute a DownloadFilesTask t?

DownloadFilesTask t = new DownloadFilesTask();

t. execute();

1. What is the name of the build system that is used in Android Studio?

**Android Studio** uses **Gradle** as build system