CSE 437 Lab Assignment 4: **Creating a Simple Service**

Introduction

A Service is an application component that can perform long-running operations in the background and does not provide a user interface. For example, an activity application component can start a service and it will continue to run in the background even if the user switches to another application. In this lab, you will develop a simple application that uses a service to play an mp3 file. Finally, you will be asked to use toasts to monitor the service life cycle and notify the user when the service is created, started, and destroyed.

Instructions:

1- *Create a new project with a blank activity*

2- *Add two buttons **Start Service** and **Stop Service**, as shown in Fig. 1*

3- *Use **onClick** attribute in the layout XML or **onClickListener** Interface definition in the main activity Java file to callback two methods*

- *startNewService -> to be invoked when the view "Start Service" is clicked.*
  - Use **startService (Intent service)** *to start a service*
- *stoptNewService -> to be invoked when the view "Stop Service" is clicked*
  - Use **stopService (Intent service)** *to stop a service*

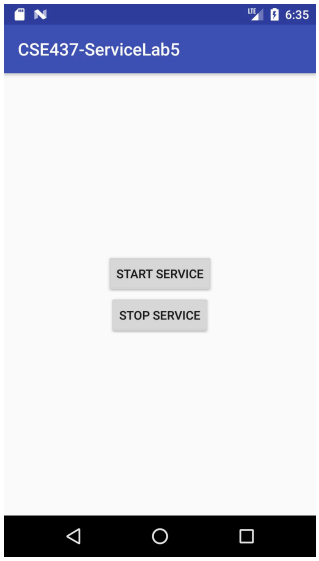


Fig.1 Main Activity Layout

- *Hint: Refer to http://developer.android.com/reference/android/content/Context.html to learn how to use these methods*

4- *Use the service to start and stop playing an mp3 file. Save the mp3 file in a raw folder (Right click on /res and create a new raw resource folder "name: raw")- make sure the file name is all small letters*

5- To play the mp3 file, Add **MediaPlayer** *class*
http://developer.android.com/reference/android/media/MediaPlayer.html

- in your service java file:

- *onCreate*

```
mpAudio = MediaPlayer.create(this, R.raw.your_mp3_file_name);
mpAudio.setLooping(true);
```

- *onStart*

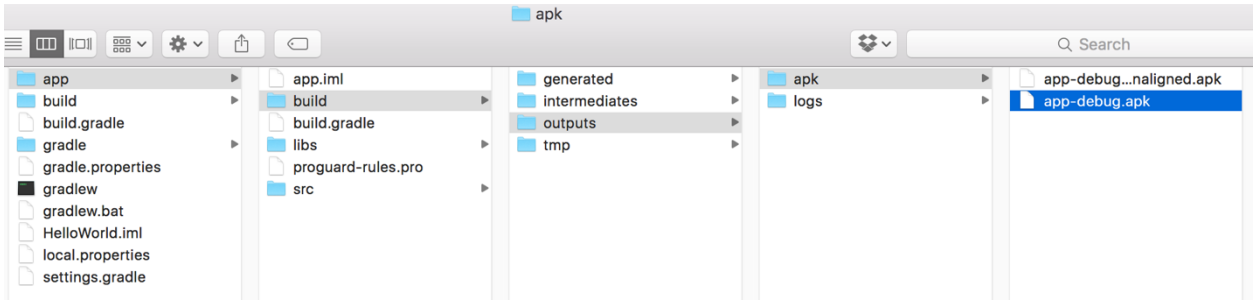
```
mpAudio.start();
```

- *onDestroy()*

```
mpAudio.stop();
```

Submission Instructions

1. Open a "Windows Explorer" window (Finder on Mac) and navigate to the project source code location



2. Copy the app-debug.apk file to your desktop. Rename the file to <lastname_firstname_lab04.apk> and send it to **pete.ragheb@gmail.com with the subject line: CSE437_Lab4**

3. Print a hard copy of the activity_main.xml files and the java file(s). Write your name and class number on the paper and submit it to the lab instructor.

4. Demonstrate your app on a real device and show it to the lab instructor during the lab time for marking and feedback.

5. Keep a copy of the project workspace for your record. The lab instructor might ask you to submit it during the marking process.