ITIS/ITCS 4180/5180 Mobile Application Development
In Class Assignment 2

Basic Instructions:

1. In every file submitted you MUST place the following comments:
   a. Assignment #.
   b. File Name.
   c. Full name of all students in your group.
2. Each group should submit only one assignment. Only the group leader is supposed to submit the assignment on behalf of all the other group members.
3. Please download the support files provided with this assignment and use them when implementing your project.
4. Export your Android project as follows:
   a. From eclipse, choose *"Export…"* from the File menu.
   b. From the Export window, choose *General* then *File System*. Click *Next*.
   c. Make sure that your Android project for this assignment is selected. Make sure that all of its subfolders are also selected.
   d. Choose the location you want to save the exported project directory to. For example, your *Desktop* or *Documents* folder.
   e. When exporting make sure you select *Create directory structure for files*.
   f. Click Finish, and then go to the directory you exported the project to. Make sure the exported directory contains all necessary files, such as the .java and resource files.
5. Submission details:
   a. When you submit the assignment, compress your exported Android project into a single zip file. The format of compressed file name is InClassAssignment#.zip
   b. You should submit the assignment through Moodle: Submit the zip file.
6. **Failure to follow the above instructions will result in point deductions.**

In Class Assignment 2 (100 Points)

In this assignment you will build your first Android application. You will get familiar with common Android components and how to interact with them. You will build a single activity Tip Calculator application.

Notes:

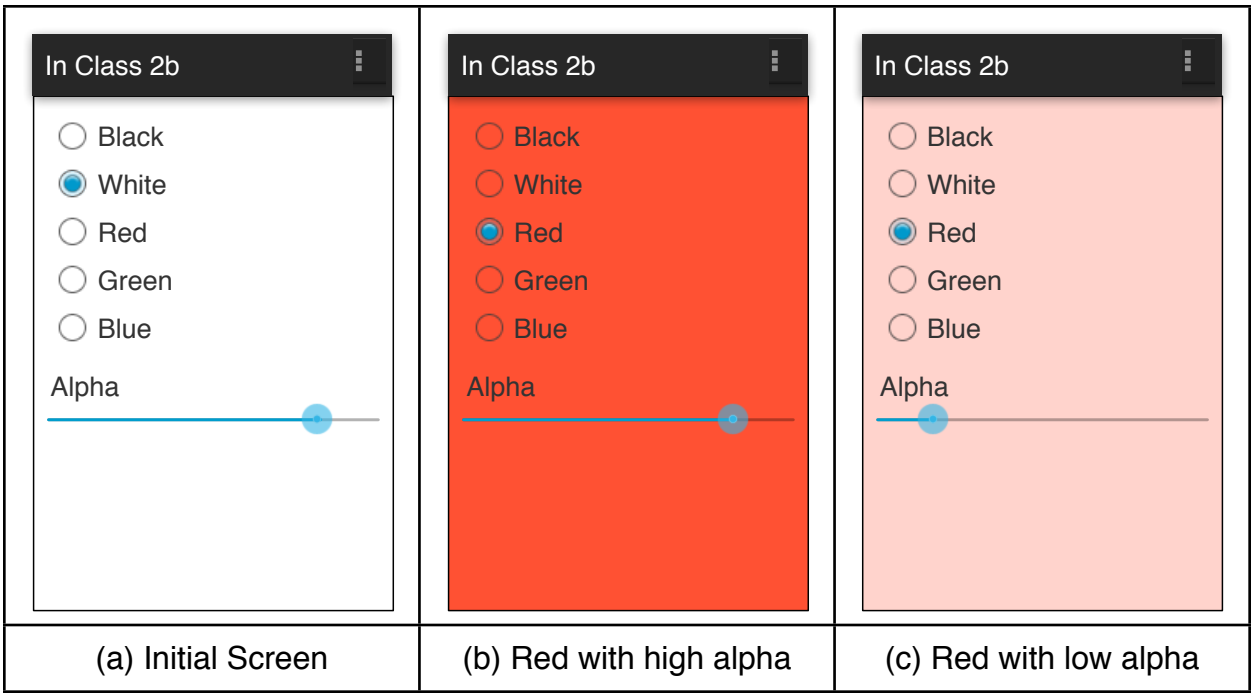
1. The recommended Android Virtual Device (AVD) should have minimum SDK version set to 11 and target SDK at least 17. The app should display correctly on 3.2" QVGA (ADP2) (320x480: mdpi).

Figure 1, Application User Interface (Part 1)

Part 1 (50 Points): Using Buttons

The interface should be created to match the user interface (UI) presented in Figure 1(a). You will be using layout files, and strings.xml to create the user interface. The layout XML file can be modified through the raw xml, or through the GUI tools provided within eclipse. To build the UI, please follow the following tasks:

1. Create a new android project called "In Class 2a".
2. The string values used for the button labels should be read from the strings.xml file and should not be hardwired in the layout file.
3. The initial background color of the activity should be set to White.
4. Upon tapping a button the background color of the activity should change to match the color indicated on the tapped button. Figure 1(b) shows the activity color set to red after tapping on the "red" button.



(a) Initial Screen	(b) Red with high alpha	(c) Red with low alpha

Figure 2, Application User Interface (Part 2)

Part 2 (50 Points): Using Radio Buttons and SeekBar

The interface should be created to match the user interface (UI) presented in Figure 2(a). You will be using layout files, and strings.xml to create the user interface. The layout XML file can be modified through the raw xml, or through the GUI tools provided within eclipse. To build the UI, please follow the following tasks:

1. Create a new android project called “In Class 2b”.
2. The string values used for the button labels should be read from the strings.xml file and should not be hardwired in the layout file.
3. The initial background color of the activity should be set to White.
4. Use a RadioGroup containing RadioButtons to enable the user to pick from the color options. When the application starts the “White” radio choice should be selected.
5. Upon selecting a radio button the background color of the activity should change to match the color indicated on the selected radio button. Figure 2(b) shows the activity color set to red after selecting the “red” radio button.
6. Use the SeekBar to enable the user to control the opacity (alpha value) of the background color. When the application starts the alpha value should be set to 90%. Upon changing the SeekBar value the background color alpha value should be changed to correspond to the SeekBar progress. Figure 2(b) shows a high selected alpha value, and Figure 2(c) shows a low selected alpha value.