CS 478: Software Development for Mobile Platforms

Homework #1

Due time: 7:00 pm on 1/29/2015
Submit (pdf or MS Word file) using assignment submission in Blackboard page
Total points: 40

Instructor: Ugo Buy

TAs: Kunal Khona and Md Abu Nasr Bikas

This homework will require that you download and open the Android Studio on your computer. In addition, you will be asked to show that you tried out some basic app editing and debugging features of the studio. Your deliverable is a MS Word or pdf file that contains snapshots from your display showing that you executed the instructions below. Note that the requirements for running the studio on MS Windows include the following features:

- Microsoft Windows 8/7/Vista (32 or 64-bit)

- 2 GB RAM minimum, 4 GB RAM recommended

- 400 MB hard disk space

- At least 1 GB for Android SDK, emulator system images, and caches

- 1280 x 800 minimum screen resolution

- Java Development Kit (JDK) 7

- Optional for accelerated emulator: Intel processor with support for Intel VT-x, Intel EM64T (Intel 64), and Execute Disable (XD) Bit functionality

The requirements for Apple Mac OSX are similar; the full list can be found at the following URL for both OS families and for Linux:

http://developer.android.com/sdk/index.html#Requirements

1. (10 points) Download and install the Android Studio on your computer. Next, download the files that you require to run both Marshmallow (API level: 23) and KitKat (API level: 19) on phones and tablets using the *SDK Manager* tool in the studio. Attach a screenshot containing a picture of the SDK manager after the downloads are complete.

2. (10 points) Create two Nexus 5 devices, one each running Marshmallow and KitKat, using the *AVD Manager* tool in the Studio. Attach a screenshot of the AVD display showing that both devices have been created.

3. (10 points) Now create a new app in the studio. Use all the defaults when you create the app. However, when you open the app you should change the text appearing the app from "Hello World!", the default string, to a string saying your first and last names (e.g., "Hello, Ugo Buy!"). Run your app using the Nexus 5 virtual device and attach a screenshot showing the full phone display, including your first and last names.

4. (10 points) Now include a logcat output statement in the *onCreate()* method that was generated automatically by the studio, subject to the following requirements.

   (a) Use the INFO priority level for the statement.

   (b) The statement's tag should reflect the name of the activity issuing the statement.

   (c) The statement's description should include your first and last names (e.g., "Ugo Buy was here!").

   Attach a studio screenshot showing the logcat output after you filtered the name of your activity from the general logcat output.

   Submission instructions. Create an MS Word file or pdf document containing all screenshots listed above. The file should be named xxx.docx or xxx.pdf, where xxx denotes your last name. Submit the file using the submit link in the assignment page of the Blackboard course web site. No late submissions will be accepted.