ITIS/ITCS 4180/5180 Mobile Application Development
In Class Assignment 6

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 6 (100 Points)

In this assignment you will make simple HTTP requests, parse the CNN RSS feed, and store your liked news items into a local SQLite database The app is composed of 3 activities, namely **MainActivity**, **NewsActivity** and **PreviewActivity**.
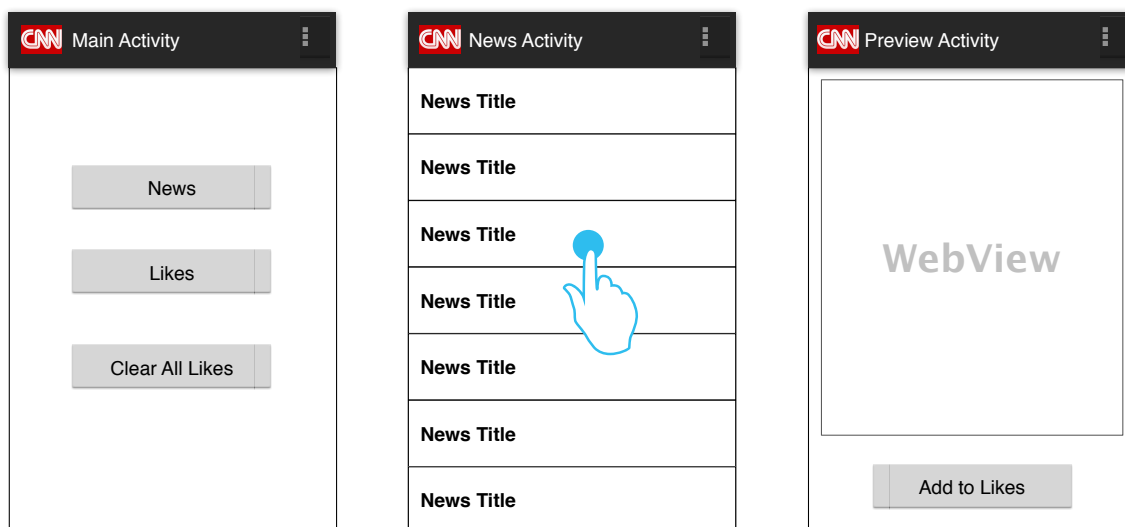
Important App Requirements:
Points will be deducted if your application does not follow the below requirements:
1. The required Android Virtual Device (AVD) should have **minimum SDK version set to 14 and target SDK at least 17**. The app should display correctly on 3.2" QVGA (ADP2) (320x480: mdpi). Your assignment will not be graded if it does not meet these requirements, and you will not be granted any points on your submission.
2. All API calls, XML downloading and parsing should be performed using Threads (or AsyncTask) and your code should not block the main thread.
3. Your code should use standard naming conventions, such as, uppercase class names, and lower case variable/method names. Also your variable and method names should be descriptive of the data or action performed.

API Description
- The API used in this assignment is the CNN Technology News RSS API. The URL to the api is http://rss.cnn.com/rss/cnn_tech.rss

(a) Main Activity   (b) News Activity   (c) Preview Activity

Figure 1, Application User Interface

Part 1 (10 Points): Main Activity
The interface should be created to match the user interface (UI) presented in Figure1(a). You will be using layout files, and strings.xml to create the user interface. The implementation requirements include:

1. Tapping the "News" or "Likes" button should start the News Activity, and should pass the News Activity a flag to indicate which button was pressed.
2. Tapping the "Clear All Likes" button should delete all the previously liked news items from the SQLite database.

Part 2 (50 Points): News Activity

The interface should be created to match the user interface (UI) presented in Figure1(b). You will be using layout files, and strings.xml to create the user interface. The News Activity is responsible for loading the news items either from the CNN RSS feed or from the likes stored in the local SQLite database. The implementation requirements include:
1. If the "News" button was clicked in the Main Activity, then the RSS feed should be contacted to retrieve the ListView items. When loading the news items from the CNN RSS feed use a thread pool (or AsyncTask) to communicate with the api and to parse the generate result. Do not use the main threads to download the api results.
2. If the "Likes" button was clicked in the Main Activity, then the news items should be retrieved from the local SQLite database.
3. Tapping on a list item for a specific app item should setup the required intent to start the **Preview Activity** and to pass it the selected news information.
4. Tapping on the device's back button should finish this activity.

Part 3 (40 Points): PreviewActivity

This activity should receive the news information from the News Activity. The activity should display the news URL in an embedded WebView as indicated in Figure 1(c). The implementation requirements include:
1. The news URL should be displayed in the WebView, which is a simple component that is able to display a webpage in the hosting activity. You should consider showing overriding the WebView functionality to be able to handle redirects.
2. When the user clicks the "Add to Likes" button the displayed news item should be added to the SQLite database.