

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

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**Basic Instructions:**

1. In every file submitted you **MUST** place the following comments:
  - a) Assignment #.
  - b) Full name of all students in your group.
2. This is a group assignment and will follow the below rules:
  - a) You will be assigned to a group of 4-5 students.
  - b) **Group dynamics:** In each group, only one student is supposed to be sitting in front of a computer and performing the coding exercise. This student will be assigned by the instructor. Other group members should sit beside or behind the coding student and assist the coding student.
  - c) Only the coding student is allowed to type, enter, paste code into the project, and the other team members can only assist the student **verbally**. The team members are not allowed to share files with the coding student. All the team members should be actively engaged in helping and guiding the coding student.
  - d) The team members could request changing the coding student, however **10 points** will be deducted from the overall team grade for this change.
  - e) The instructor could decide on swapping the coding student at anytime during the lecture. So all group members should be actively engaged in assignment.
  - f) The team will lose **5 points** for every violation of this group assignment rules.
3. Your assignment will be graded for functional requirements and efficiency of your submitted solution. You will lose points if your code is not efficient, does unnecessary processing or blocks the UI thread.
4. Please download the support files provided with this assignment and use them when implementing your project.
5. Submission details:
  - a) Only one member of the group is required to submit the assignment on behalf of all the other group members.
  - b) Export your Android project and create a zip file which includes all the project folder and any required libraries.
  - c) The file name is very important and should follow the following format: **Group#\_InClass06.zip**. You should submit the assignment through Canvas: Submit the zip file.
6. **Failure to follow the above instructions will result in point deductions.**

## In Class Assignment 06 (100 Points)

In this assignment you will develop “CNN Technology News App”. The App displays news feeds from CNN News in Technology category. News feeds allow you to see when websites have added new content. You can get the latest headlines, as soon as it's published. In this assignment, you will learn how parse XML news feeds, using threads, and dynamic UI management.

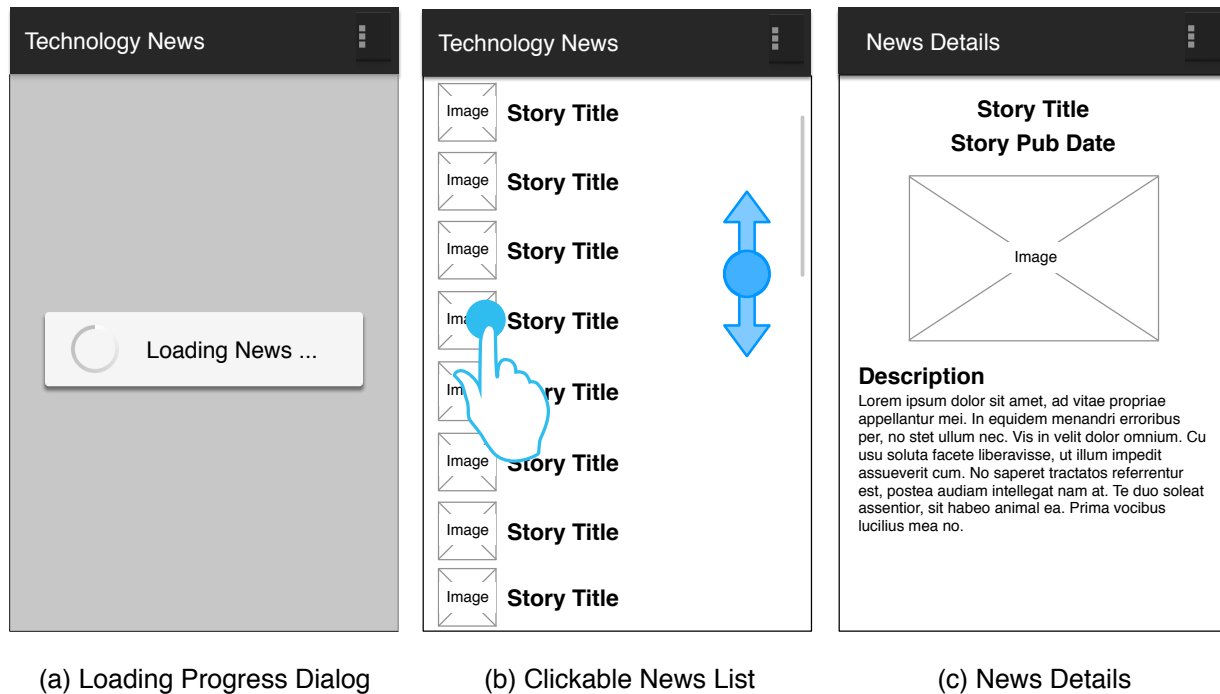


Figure 1, App Wireframe

### Part A: Main Activity (70 Points)

The launching activity is the Main Activity. Figures 1(a) and 1(b), show the UI for the Main Activity. The activity displays a list of the news provided by CNN Technology News feed website at [http://rss.cnn.com/rss/cnn\\_tech.rss](http://rss.cnn.com/rss/cnn_tech.rss). The requirements are as follows:

1. The list should be created using combination of **ScrollView** and **LinearLayout**, each row should include a horizontal **LinearLayout** that includes an **ImageView** and a **TextView**, as shown in Figure 1(b). You **should not** use a **ListView** in this assignment. The goal is to expose you to managing a list without using the **ListView** component.
  1. The story title is the new item “title” element and the image is the square image in the “media:content”.
  2. The image should be loaded using a thread or **AsyncTask**.
2. Use a thread pool (or **AsyncTask**) to communicate with the CNN Technology News API and to parse the result. Do not use the main threads to download the results.
3. Parse the XML stream using either **XMLPullParser** or **SAXParser** and return the result to the News List.
4. For each news item retrieve the title, description, pubDate, link, a square thumbnail url (media:content), and a large image url (media:content).

5. The News List should be sorted in an Ascending Order of the “pubDate” value. You can use the **SimpleDateFormat** in Android to format the retrieved dates. <http://developer.android.com/reference/java/text/SimpleDateFormat.html>.
6. Clicking a row item should start the News Details Activity, which provides more details about the current news item.

### **Part B: News Details Activity (30 Points)**

Detailed Activity shows details about a selected news item. The user can view more details about the news such as publication date, description etc.

The requirements are as follows:

1. The activity’s wireframe is shown in Figure 1(c). The news details should include the title, publication date, large image thumbnail, and description. Clicking the back key should return to the News Activity.
2. The publication date should be formatted as follows: MM/DD/YYYY HH:MM AM/ PM
3. The image should be retrieved using a background thread (Thread or AsyncTask).

*Note: In order to easily view the xml feed, you can download it as an RSS XML file and view it in FireCNN browser or you can copy and paste the xml to <http://codebeautify.org/xmlviewer> and click on “Beautify”.*