

ITIS/ITCS 5180 Mobile Application Development  
In Class Assignment 7

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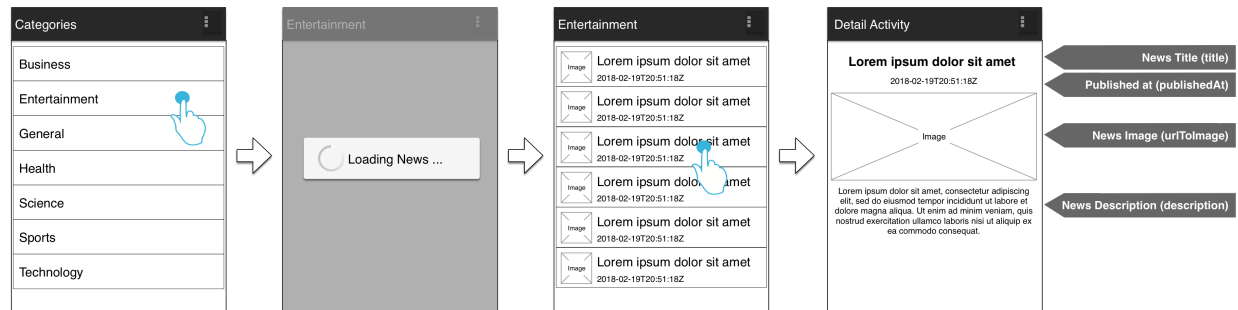
**Basic Instructions:**

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. 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. Export your Android project and create a zip file which includes all the project folder and any required libraries.
5. Submission details:
  - a. Only a single group member is required to submit on canvas for each group.
  - b. The file name is very important and should follow the following format:  
**Group#\_InClass06.zip**
  - c. 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 07 (100 Points)

In this assignment we are going to develop a news application using the [newsapi.org](https://newsapi.org) JSON API. Follow the following steps to setup the API:

- Create a new account and register as a developer at <https://newsapi.org/register>
- Get an API Key to be used for this application.
- In this application we are going to use the top headlines api, for information check the following link <https://newsapi.org/docs/endpoints/top-headlines>



**Figure 1, Application Wireframe**

### **Part 1 - Categories Activity**

The interface should be created to match the user interface (UI) presented in Figure 1. You will be using layout files, and strings.xml to create the user interface. Perform the following tasks:

1. The categories should be displayed using a ListView. The possible categories are business, entertainment, general, health, science, sports, and technology as indicated in the api documentation at <https://newsapi.org/docs/endpoints/top-headlines>
2. Clicking on a category should start the News activity and pass the category selected in the intent extras.

### **Part 2 - News Activity**

The interface should be created to match the user interface (UI) presented in Figure 1. You will be using layout files, and strings.xml to create the user interface. Perform the following tasks:

1. This activity expects a category to be passed in the intent extra.
2. Your application should connect with the api and download the requested photo only if there is an established internet connection. If there is no internet connection you should display a Toast message indicating that there is no internet connection and do not attempt to send the HTTP request.
3. Use AsyncTask/Thread to connect to the top headlines to retrieve and parse the JSON returned for the selected category. The AsyncTask/Thread class should be in a separate file/class not inner to the main thread. Show a progress dialog while the API communication and JSON parsing is being performed.
4. When the api data is retrieved:

- a) Display the news items retrieved using a ListView as shown in the Figure 1. Each list item should display the news image, news title, and news published at date.
  - b) Use Picasso to retrieve and display the images.
5. **Do not** store the photos, simply download and display the retrieved photos. Also do not attempt to download all the URLs receive, and your app should only download and display a single news photo at any given time.
  6. If the api returns an empty list of news items then clear the currently displayed news item and display an error Toast message “No News Found”.
  7. Clicking on a news item should start the Detail Activity, and pass the news object in the intent extras.

### **Part 3 - Detail Activity**

The interface should be created to match the user interface (UI) presented in Figure 1. You will be using layout files, and strings.xml to create the user interface. Perform the following tasks:

1. This activity expects a news object to be passed in the intent extra.
2. The activity should display the news item title, published date, image, and description.