



Assignment #1

School of Computing and Academic Studies

COMP3717

Programs: CST

Due: Sun Feb 16, 2020 at 11:59 pm

ASSIGNMENT DETAILS

The assignment involves development of a mobile app that provides news from <https://newsapi.org/>. Each team will obtain an API key from <https://newsapi.org/>. The query looks like this:

<https://newsapi.org/v2/everything?q=bitcoin&from=2019-12-28&sortBy=publishedAt&apiKey=d5931b98add24c0887aad530e6d6068d>

In the above HTTP request:

q	is the keyword you are querying. In this example it is bitcoin
from	is the starting date which should always be one week behind
apiKey	Is the API Key

The purpose of this assignment is to familiarize yourself with *Listeners*, *Adapters*, *ListView* controls, *AsyncTask* objects and reading JSON objects.

- Assignments must be done in teams of two students assigned by your lab instructor.
- Data needs to be read dynamically from the JSON end point.
- The assignment consists of three screens (or activities). On the first screen, an input box is displayed allowing the user to enter any keyword (Example: basketball, Canada, impeachment, etc ...). The user enters a keyword then result titles are displayed on another activity in a *ListView*. When the user clicks on an item in the list then the third screen displays details, including an image. Returned data looks like this:

```
{
  status: "ok",
  totalResults: 3284,
  - articles: [
    - {
      - source: {
        id: null,
        name: "Forbes.com"
      },
      author: "Billy Bambrough, Contributor, Billy Bambrough, Contributor",
      title: "Bitcoin Rival Suffers Devastating Double Spend Attack",
      description: "Bitcoin gold, a relatively minor cryptocurrency that split off from the original bitcoin blockchain in late 2017, has suffered a so-called 51% attack resulting in over $70,000 worth of bitcoin gold tokens being double spent...",
      url: https://www.forbes.com/sites/billybambrough/2020/01/28/bitcoin-rival-suffers-devastating-double-spend-attack/,
      urlToImage: https://thumbor.forbes.com/thumbor/600x315/https%3A%2F%2Fspecials-images.forbesimg.com%2Fimageserve%2F873696144%2F960x0.jpg,
      publishedAt: "2020-01-28T20:48:07Z",
      content: "Bitcoin gold, a relatively minor cryptocurrency that split off from the original bitcoin blockchain in late 2017, has suffered a so-called 51% attack resulting in over $72,000 worth of bitcoin gold tokens being double spent. A 51% attack can occur when malici... [+4588 chars]"
    },
  ],
}
```

- The details screen shows the following data:
 - Source
 - author
 - title
 - description
 - url
 - smallThumbnail [this is an image of urlToImage]
 - publishedAt
 - content
- Your application must cater to portrait and landscape. This also involves proper scaling to screen size.
- If there are any technical details missing, try to make realistic assumptions
- Use Android resource files whenever possible and avoid using literal strings/dimensions in the application
- Make sure you set the minimum SDK to be 23
- All click events are to be handled by listeners
- You are encouraged to go beyond what has been asked for, in terms of functionality and app design. At a minimum, you should satisfy the basic features mentioned.
- When you create the Application in Android Studio name the Application *LastName1_LastName2*. This is required to enable the marker to identify whose submission it is and keep the number of assignment apps installed on the emulator to a small number.
- The names of students in the team should display as a header on the main activity

TESTING YOUR ANDROID APP

- This assignment will be tested with the Pixel 3 emulator.
- Within Android Studio, open the AVD manager (Android virtual device manager)
 - Install the *Pixel 3* virtual device with API 28
 - Launch the *Pixel 3* device in the emulator
 - Drag and drop your APK file into the *Pixel 3* emulator. Your program should automatically install.
 - Open your program to test it
- **Note:** If your program has not been digitally signed, there will be no created certificate. As a result, for security reasons, your program will not install in the Android operating system.

SUBMISSION:

- Put the following information into a *readme.txt* file located in the root of your application:
 - your names, BCIT ID numbers and your preferred email addresses. Avoid your my.bcit.ca email account because it has file attachment restrictions. This is necessary in case the marker wishes to urgently contact you.
 - what you have not completed
 - any major challenges
 - any special instructions for testing your app
- Also, put your *.apk* file in the root of your application.

- Look in the *.gitignore* file to determine which files are not needed. Delete those files before submitting the source code of your assignment so that it has a small foot-print. This should be done after closing Android Studio.
- Assignments must be zipped (.zip extension) and uploaded to the drop-box folder for Assignment 1 in D2L (Learning Hub). Do not use any compression utility other than plain zip.
- Assignment Zip files should be named **LastName1_ LastName2.zip**
- Your ZIP file will include all directories and files comprising your entire android app.
- There will only be one submission per team.
- If you make more than one submission, then you must version the submission filename by adding _v1, _v2, etc.

COMP3717 ASSIGNMENT 1 MARKING GUIDE:

Name 1: _____ Set _____

Name 2: _____

Name 3: _____

Task	Max Mark	Actual Mark
Screen 1 enables user to enter a keyword	3	
Screen 2 displays titles	5	
Screen 3 displays book details	12	
Scalability from portrait to landscape	2	
<ul style="list-style-type: none"> ○ Look & Feel ○ Layout ○ Theming ○ Color Scheme ○ cater to portrait and landscape orientations ○ scalability 	8	
Other <ul style="list-style-type: none"> • click events are to be handled by listeners • student names on the main screen • app & submission names as prescribed • Followed instructions • Design and coding conventions • readme.txt & .apk in the root of the app NOTE: there will be a deduction of 5 marks if you do not upload an APK file. There will also be 1 mark deducted for every day that you do not respond to the marker's request for missing artifacts.	5	
TOTAL:	35	