BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Assignment #1

School of Computing and Academic Studies | COMP3717

Programs: CST | Due: Tue Oct 15, 2019 at 11:59 pm

ASSIGNMENT DETAILS

The assignment involves development of a mobile app that provides information about Harry Potter books. You will use the Google APIs JSON endpoints at https://www.googleapis.com/books/v1/ for data.

The purpose of this assignment is for you 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.
- The assignment consists of two screens. On the first screen, the user lists titles of books written about the good wizard Harry Potter. These need to be read dynamically from the JSON end point at https://www.googleapis.com/books/v1/volumes?q=harry+potter. The title data comes from the **item >> title** field.


```
{
 "kind": "books#volumes",
 "totalItems": 1322,
 "items": [
  {
   "kind": "books#volume",
   "id": "39iYWTb6n6cC",
   "etag": "gAC6VpXQRqQ",
   "selfLink": "https://www.googleapis.com/books/v1/volumes/39iYWTb6n6cC",
   "volumeInfo": {
    "title": "Harry Potter and the Philosopher's Stone",
    "authors": [
     "J.K. Rowling"
    ],
    "publisher": "Pottermore Publishing",
    "publishedDate": "2015-12-08",
    "description": "\"Turning the envelope over, his hand trembling, Harry saw a purple wax
surrounding a large letter 'H'.\" Harry Potter has never even heard of Hogwarts when the let
in green ink on yellowish parchment with a purple seal, they are swiftly confiscated by his
eyed giant of a man called Rubeus Hagrid bursts in with some astonishing news: Harry Potter
Wizardry. An incredible adventure is about to begin!",
    "industryIdentifiers": [
```


- When the user taps on a book, the second screen appears displaying details about that book, namely:
  - Title
  - smallThumbnail [this is an image that needs to be displayed]
  - authors
  - publisher
  - publishedDate
  - description
  - ISBN_10

- 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 displays books	5	
Screen 2 displays book details	10	
○ Look & Feel ○ Layout ○ Theming ○ Color Scheme ○ cater to portrait and landscape orientations ○ scalability	10	
Other • 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	5	
TOTAL:	**30**	