Assignment 1: IntentService & Broadcast Receiver (optional)

Introduction: In this assignment you'll develop portions of an app that downloads an Atom feed, which is described in the URL below If you want more information. The Atom feed provides metadata about the most recently published videos on YouTube by CNN. The purpose of this app is to give you a real world example of a long-running process (network downloading of data) that is not only bad design to attempt on the UI thread, but would crash the app. The assignment skeleton provides you with the required methods for downloading and displaying the results. You will only be required to implement the IntentService framework (covered in the lessons from Module 2 in this MOOC) and the means by which the MainActivity interacts with it via a broadcast receiver and intents (which are covered in lessons from Modules 3 and 5 in MOOC 2).

Atom standard Wikipedia article: https://en.wikipedia.org/wiki/Atom_(standard)

Learning outcomes: This assignment is designed to be straightforward to implement. After completing this assignment, you should understand how to do the following:

- How to use the Android IntentService framework to perform long-duration background operations.
- How to return the results from the IntentService back to the MainActivity via a broadcast receiver and intents.

Resources: Please download the supplied source code from the git repository located at: https://gitlab.com/vandy-aad-3/aad-3-assg-1/. (Might require logging into a free Gitlab.com account to access) The downloaded files contain an Android Studio project. Start Android Studio and import the project. All your work for this assignment will be in the vandy.mooc.assignments.assignment package(and any subpackages), which contain file(s) with TODO statements in them. Open the files in the Android Studio IDE and look for the comments (format shown below in "Tasks") and add your code after each one of them. All logging output should be sent to Logcat via the Log.[d|e|i|w|v](String,String) statements and **not** System.out (The use of 'System.out' will disrupt Unit/Integration testing, so it is never advised for Android)**.**

The assignment will contain many other files outside the designated "assignment" directory/package that are required for the compilation and operation of assignment application. You're welcome to (and encouraged to) inspect these files, but you aren't expected to modify them for this assignment.

Tasks: Complete the TODO comments (which are formatted: // TODO - you fill in here.) in all of the files in the following directory & any subdirectories:

```
./app/src/main/java/vandy/mooc/assignments/assignment/
```

Submission for peer review: Although this assignment is optional and doesn't count as part of your final grade you are welcome to submit it for peer review to get feedback from other learners. Unfortunately Android's Integration Testing environment does not (yet) support the IntentService framework, so verification of the the proper execution of the application must be done manually.

Submission process: Run the _answerZip gradle task from the project root directory & submit the newly created ./zip/answer-files.zip file for review. We recommend manually checking the application prior to submission to check that the application functions properly.