Assignment 3: AsyncTaskDownloader (optional)

Introduction: In this assignment you will write Java code that leverages the Downloader assignment framework we provide and completes two Android activities, a factory class, and a broadcast receiver, along with applying the Android AsyncTask concurrency framework to implement threaded image downloading. We recommend you watch the lessons from module 4 and module 5 prior to attempting this assignment.

Learning outcomes: This assignment handles the User Interface components of the application and requires you to implement the specific AsyncTask Downloader Interface implementation and any changes to the two activities required. After completing this assignment, you should understand how to do the following:
● Leverage the AsyncTask framework to achieve multi-threading (background processing)
● Create a dynamically registered broadcast receiver
● Receive, process, and then make use of an Intent returning results via the broadcast receiver

Resources: Please download the supplied source code from the git repository located at: https://gitlab.com/vandy-aad-2/aad-2-assg-3/. 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(This package contains two folders: activities/ & downloader/). Open the files in these two directories in the IDE and look for the comments: // TODO (A3) 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)**.**

Tasks: Complete the TODO comments in the following files:

- aad-2-assg-3's GalleryActivity.java
- aad-2-assg-3's MainActivity.java
- aad-2-assg-3's AsyncTaskDownloader.java

Submission for peer review: Although this assignment 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. An integration test is available at

```
./app/src/androidTest/java/vandy/mooc/assignments/assignment/AssignmentTes
ts.java
```

We recommend running this test prior to submission to check that the application functions properly.