

Tutorial 9/Part B of Assignment 2

Due date: 19 October, 13.30 AWST

Marks: 20

This tutorial is part of your assignment 2. Note assignment 2 has three parts and three different due dates. This is the second part and will be marked during tutorial time.

The goal is to make yourself familiar with Android threading, network calls and remote uploading.

You must use **Reactive Programming, i.e., RxJava and RxAndroid**, for remote calls.

Functionalities:

1. **Search Images:** You will be able to search images in any web services, e.g., <https://pixabay.com> or <https://www.pexels.com>, from your app. When the searching happens, you should run the progress bar on the UI. [3 Marks]
2. **Display images:** You will be able to load 15 images from your search if it returns more than 15 images. Otherwise, just load all the images returned from the search. Note the search response usually has options for small or thumbnail images. Please use that for quick loading. The images are displayed, so they are scrollable (You are open to using any widget, such as RecyclerView). The app user should have the option to customise the views:
 - A) Single-column view: Only one picture is placed on a row of the scrollable view. [5 marks]
 - B) Double-column view: Two pictures are placed on a row of the scrollable view. [5 marks]
3. **Upload image:** The user will be able to select an image from the display and will be able to upload it to online storage (You can choose anything that works for you). This is a research part, and you are given the freedom to use online codes with proper references. For example, you can use Google Drive, Dropbox API. My personal preference is Firebase: <https://firebase.google.com> [7 marks]

Marking guidelines:

Full marks (100%): all the functionalities are executed without errors with the proper exception handles.

Partial marks (X%+Y%): X% functionalities are executed without errors with the proper exception handles. Y% Coding efforts are there for non-executable parts.

Partial marks (X%): X% functionalities are executed without errors with the proper exception handles. No Coding efforts are there for non-executable parts.

Partial marks (X%-1): X% functionalities are executed without errors; however, no exception handling.

Partial marks (X%-3): X% functionalities are executed without errors; however, no **Reactive Programming, i.e., RXJava and RXAndroid for remote calls.**