

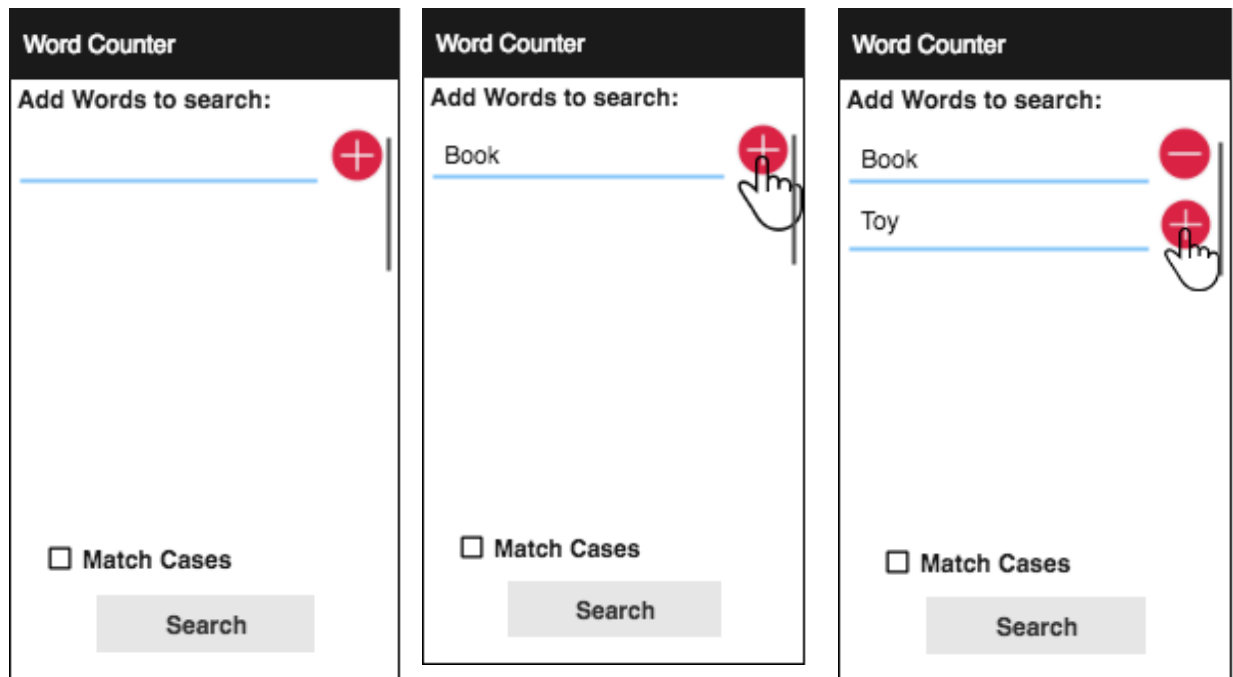
ITIS/ITCS 4180/5180 Mobile Application Development
Homework 3

Basic Instructions:

1. In every file submitted you **MUST** place the following comments:
 - a. Assignment #.
 - b. File Name.
 - c. Full name of all students in your group.
2. Each group should submit only one assignment on behalf of all the other group members.
3. Your assignment will be graded for functional requirements and efficiency of your submitted solution. You will lose points if your code is not efficient, does unnecessary processing or blocks the UI thread.
4. Export your Android project and create a zip file which includes all the project folder and any required libraries.
5. Submission details:
 - a. Compress the contents of your project folder. The file name is very important and should follow the following format: **HW3_Group#.zip**
 - b. Only one group member is required to submit on behalf of the whole group.
 - c. You should submit the assignment through Canvas: Submit the zip file.
- 6. Failure to follow the above instructions will result in point deductions**

Homework 3 (100 Points)

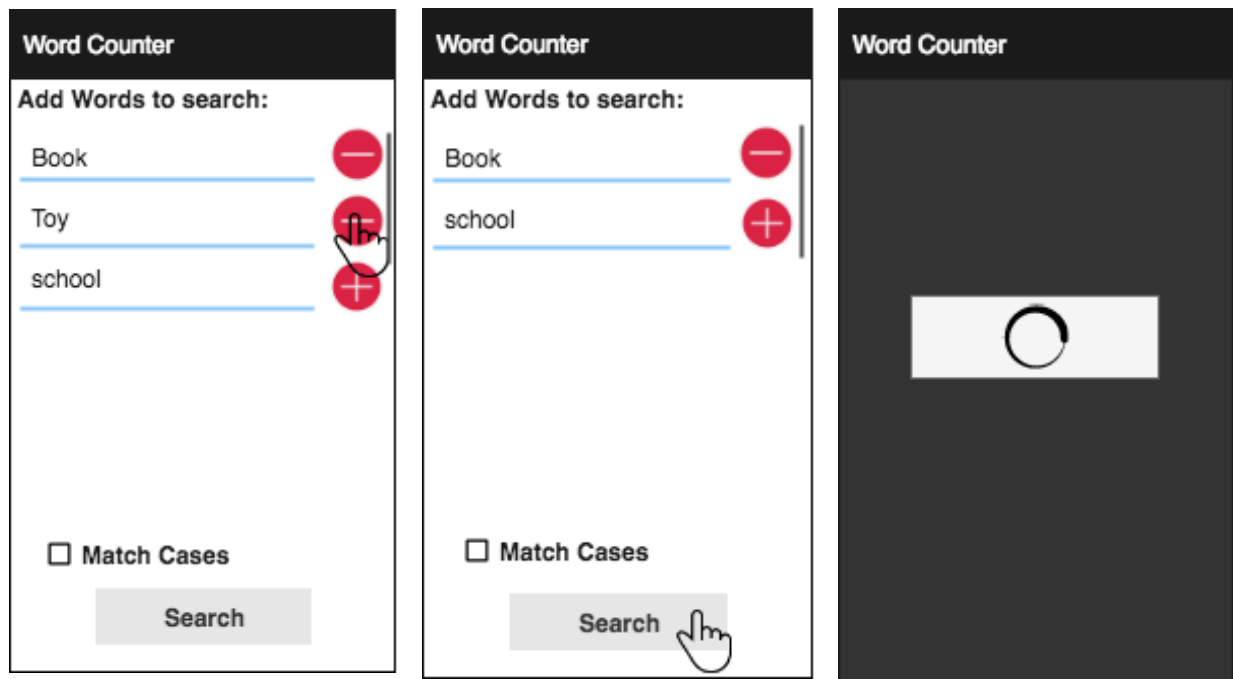
In this homework assignment you will continue to work on Threads/AsyncTasks. in this app, you will be reading a huge text file and search certain words from it. All the readings and searching will be done in Threads/AsyncTasks.



(a) Main activity

(b) Add new word

(c) Add one more, icon changes for already added items



(d) Remove one item

(e) Search

(f) Progress bar

Figure 1: Main Activity

Part 1: Main Activity (80 Points)

In this activity you will read the text file to find the keywords you want and count them. You need to do the following tasks:

1. You need to read the text file we provide. To read the text file you need to put the text file into Project->app->src->main->assets directory. If the “assets” directory does not exist, please create it under main. For more, please watch the video: [“https://www.youtube.com/watch?v=1CHDASXojNQ”](https://www.youtube.com/watch?v=1CHDASXojNQ).
2. Put the text file into the assets directory. Use InputStream to read the file.
3. You can add keywords and search them collectively. You should be able to add at least 1 to at most 20 keywords to search.
4. You should design the activity as it is shown in Figure 1.
5. You should display “Add words to search:” string on top of the activity.
6. Then use a ScrollView to add multiple keywords.
7. First, you will display one EditText and a floating add icon.
8. Then, you should be able to write the keyword into the EditText and click on the add icon. Clicking on the add icon should add this word in the list and create another EditText. It should change the first icon from add icon to remove icon (see Figure 1(c)).
9. If you click on the remove icon, the EditText along with the remove icon should be removed from the list (see Figure 1(d and e)).
10. You should put a checkbox giving an option to match the cases of the keywords. If the checkbox is checked, you must search the keywords matching the cases in the text file. If it is not checked, you need to find all the cases. For example, If you

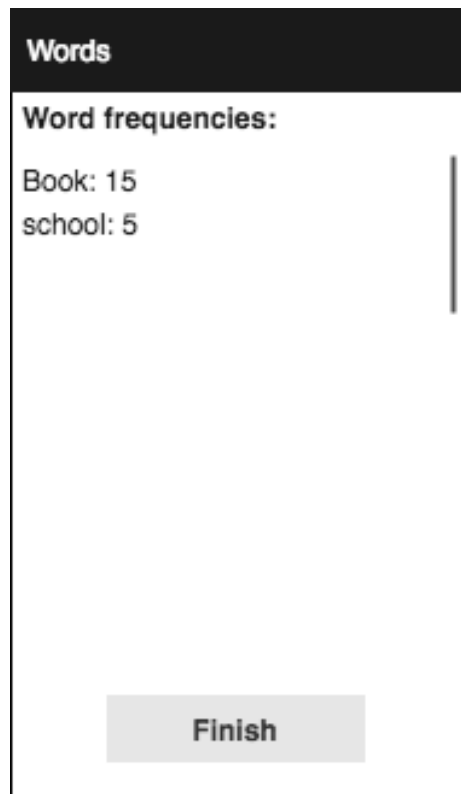


Figure 2: Result Activity

search the word “box”, you should find all the words matching all cases, such as “Box”, “bOx”, “BOX”, “BOx” etc.

11. There will a button labeled as “Search” to search the keywords.
12. When you click on the Search button, it will create Threads/AsyncTasks for counting the frequencies of the keywords in the text file and start the second activity to display the results.
13. You need to display a progress bar while counting the words.
14. You must create one Thread/AsyncTask for each keyword.

Part 2: Result Activity (20 Points)

In this activity you will be displaying the frequencies of the keywords in the text file. You need to do the following:

1. You need to display “Word frequencies:” string on top.
2. Then you must put a ScrollView to list all the Words and their frequencies maintaining the case conditions.
3. You need to put a Finish button at the bottom. Clicking on Finish button should bring you back to the Main Activity with empty fields.