

COMP1602: Computer Programming II

Assignment #5

This assignment is divided into two parts. The details of Part a are given below. Part B will be available soon.

Part A

This part of the assignment requires you to maintain a list of words and their synonyms. The words and their corresponding synonyms are stored in a two dimensional array. The word is stored in the first column of the row whilst the remaining columns contain the synonyms of the words. The number of synonyms for a word is unknown beforehand. Each word appears only once in the file. It is the first element of a row.

The data is read from a text file *synonyms.txt*. Each line of data consists of a word followed by an unknown number of synonyms for that word. Some words have no synonyms. The number of words in the file is also unknown. The end of file marker indicates the end of the file.

Some sample data from the file is shown below.

Appliance	Refrigerator	Stove	Microwave			
Baby Child	kid	toddler	chile boy	girl	son	daughter
Bathroom	restroom	washroom				
Boat yatch						

Description

(a) Your program should display the following menu:

Synonym Checker

1. Load Synonyms
2. Search Synonyms
3. Display Words and Synonyms
5. Quit

Please enter an option:

When an option is selected, the appropriate action must be taken, after which the menu is re-displayed:

1. When this option is selected, the program should open the file, *synonyms.txt*, and read each word and its synonyms into the 2D array.
2. When this option is selected, the program should request the user to specify the word whose synonyms it wants displayed. If the word is found all the synonyms of that word is displayed. A word can appear anywhere in the 2Darray. The row on which that word appears will be all the synonyms of the word.

COMP1602: Computer Programming II

Assignment #5

If the word entered is not found in the 2Darray or there are no synonyms for that word appropriate messages are displayed. If the synonyms were not previously loaded via Option 1, an error message should be displayed.

3. When this option is selected, all the words and their synonyms are printed in a tabular format.
4. When this option is selected the program should terminate successfully.

If an invalid option is selected an appropriate message is displayed and the menu redisplayed.