CTIS264 COMPUTER ALGORITHMS

PYTHON LABSTUDY 2

In this lab you will study on:
. Bubble sort
. File read
. string split/strip/upper/lower functions

Please write your answers in PYTHON, execute them and attach the output of your execution as .txt file and submit all of them to Moodle.

1. Please **prepare a text file** which will contain any text more than 1 line. (you may copy a paragraph related with any topic)
2. **Write a function** which will read the lines from text file and find the words and store them into an array.
3. **Write a function** that sorts an array with **Bubble Sort** algorithm.
4. **Write a function** that takes a word and find how many times that word exists within the text file. (you may use an array that you create instead of the file). (uppercase and lowercase should be counted as the same word.)
5. **Write a main program**
   a. Calls the first function and creates an array for the given text file
   b. Calls the function and sorts the created array, and printout the sorted array.
   c. Ask a word from the user and calls the last function to display the number of times that word appears within the file. If the word does not exist, display an appropriate message.

Sample Run:

Enter the file name: mytext.txt

Sorted List of words:

['a', 'a', 'according', 'activities', 'after', 'also', 'also', 'amateurs', 'an', 'an', 'and', 'and', 'and', 'and', 'another', 'are', 'are', 'are', 'are', 'are', 'are', 'are', 'as', 'as', 'as', 'as', 'authors', 'be', 'being', 'benefits', 'blurred', 'both', 'broadcast', 'broadcast', 'businesses', 'by', 'by', 'by', 'by', 'call', 'can', 'contribute', 'contributor', 'crowd', 'crowdsourced', 'crowdsourcing', 'crowdsourcing', 'crowdsourcing', 'crowdsourcing', 'crowdsourcing', 'crowdsourcing', 'crowdsourcing', 'crowdsourcing', 'definition', 'definitions', 'definitions', 'definitions', 'different', 'different', 'distributed', 'due', 'either', 'entity', 'experts', 'extrinsic', 'financial', 'first', 'for', 'form', 'from', 'from', 'gain', 'gather', 'give', 'global', 'group', 'in', 'in', 'in', 'in', 'in', 'in', 'in', 'in', 'inexpensive', 'information', 'initiating', 'integrating', 'intellectual', 'intrinsic', 'is', 'is', 'is', 'is', 'it', 'known', 'known', 'kudos', 'large', 'limits', 'literature', 'losing', 'many', 'may', 'may', 'model', 'monetarily', 'more', 'motivated', 'motivated', 'motivations', 'motivations', 'new', 'not', 'not', 'numbers', 'obtain', 'of', 'of', 'of', 'of', 'of', 'of', 'of', 'of', 'of', 'of', 'of', 'of', 'online', 'only', 'open', 'or', 'or', 'or', 'or', 'or', 'or', 'or', 'organization', 'other', 'owned', 'passing', 'picture', 'place', 'prizes', 'problem', 'problem', 'problems', 'produce', 'services', 'situation', 'small', 'social', 'solution', 'solutions', 'solutions', 'solutions', 'solutions', 'solutions', 'solvers', 'solving', 'some', 'spare', 'studying', 'submit', 'such', 'such', 'tasks', 'term', 'term', 'than', 'that', 'that', 'that', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'the', 'their', 'their', 'then', 'they', 'they', 'this', 'this', 'this', 'those', 'time', 'time', 'to', 'to', 'to', 'to', 'to', 'to', 'to', 'unknown', 'unknown', 'use', 'use', 'users', 'users', 'volunteers', 'way', 'were', 'when', 'which', 'which', 'who', 'with', 'with', 'work', 'working']

Enter word: definitions

definitions repeats 3 times