

Programming Fundamentals

Assignment



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Instructions:

1. Be yourself, don't copy paste.
2. Deadline: Monday May 2nd, 2022.
3. If you need any help reach me out at junaid.zaffar@ucp.edu.pk
4. Read instructions file separately for submission and rubrics.

Questions: 1

Write a C++ program that reads a file literature.txt which contains some text as shown below in an array. Sentences may end with a full stop or question mark?. While counting words, ignore special characters e.g ()-; , : occurring in between sentences.

Do the following operations for this character array:

- a) Count number of sentences in the file.
- b) Count number of words in the file.

literature.txt

A small breakfast-room adjoined the drawing-room, I slipped in there. It contained a bookcase; I soon possessed myself of a volume, taking care that it should be one stored with pictures. I mounted into the window-seat: gathering up my feet, I sat crosslegged, like a Turk; and, having drawn the red moreen curtain nearly close, I was shrined in double retirement.

Folds of scarlet drapery shut in my view to the right hand; to the left were the clear panes of glass, protecting, but not separating me from the drear November day. At intervals, while turning over the leaves in my book, I studied the aspect of that winter afternoon. Afar, it offered a pale blank of mist and cloud; near, a scene of wet lawn and storm-beat shrub, with ceaseless rain sweeping away wildly before a long and lamentable blast.

Questions 2:

Write a C++ program that reads username and password one by one from a file, and stores length of username and password in a new file (lengths.txt). Note: we don't know how much data a file has.

userdata.txt

```
rehan_1 reh123an
ali.saad 1@!%$
taimoor.bilal abc123@#
akbar_khan a|:a|/
```

lengths.txt

```
7 8
8 5
13 8
12 7
```

Questions 3:

Write a C++ program that searches for a word from a list of words stored in a file "words.txt".

Note: we don't know how much data a file contains.

words.txt
Programming
Technique
Science
Compiler
Debugger

Question 4:

You have a file "word.txt" which contains some words. Your task is to write a C++ program to find the frequency of each word and store the word with its frequency separated by a coma into another file word_frequency.txt. Then read word_frequency.txt file and find the word which has the maximum frequency and store the word with its frequency separated by a coma into another file "max_word.txt".

Your program should contain the following functions:

- 1) read function: to read the data.txt and word_frequency.txt file into arrays when needed.
- 2) write function: to write the results obtained by frequency function and max function in word_frequency.txt and max_word.txt respectively, when needed.
- 3) frequency function: to find the frequency of each word.
- 4) max function: to find the word with maximum frequency.

Example:

word.txt	word_frequency.txt	max_word.txt
Happy	Happy,2	Happy,2
Sad	Sad,1	
Good	Good,1	
Bad	Bad,1	
Happy		

Question 5:

Write a C++ program which has a function for reading two text files, f1.txt and f2.txt and identifying the difference between the lines of both text files, i.e. writing on the screen the lines that differ in both files, adding # if the line corresponds to f1.txt, and & if it corresponds to f2.txt. You can consider getline function of ifstream class. The function will take two arguments (ifstream &file1, ifstream &file2)

f1.txt	f2.txt
This is a test line. Hello World.	This is a test line. Hello Guys.

Output:

Hello World

& Hello Guys