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| **Week 9 Task** | **Title: Files** |
| **Name and Student ID** |  |

**Tutorial task(s)**

1. Explain the term: a) file b) stream c) buffer d) file management e) random file access f) sequential file access
2. How many files can open at once?
3. Define FILE?
4. What is the purpose of fopen() function?
5. What is the purpose of fclose() function?
6. Differentiate between text mode stream and binary mode stream?
7. What are the three general methods of file access?
8. Describe the different methods of reading and writing in to data file?
9. Compare fscanf() and fread()
10. What is the difference between fgets() and gets()
11. What happens if anyone doesn’t close a file?
12. What is the purpose of feof()?

Practice!

Write a C program that takes the name of a file as a command- line argument, opens the file, read through it to determine the number of words in each sentence, display the total number of words and sentences, and compute the average number of words per sentence. The result should be printed in a table (at standard output), such as shown below:

This program counts the words and sentences in the file “comp.text”.

Sentence: 1 Words: 29

Sentence: 2 Words: 41

Sentence: 3 Words: 16

Sentence: 4 Words: 22

Sentence: 5 Words: 44

Sentence: 6 Words: 14

Sentence: 7 Words: 32

File “comp.txt” contains 198 words in 7 sentences for an average of 28.3 words per sentence.

In this program, you should count a word as any contiguous sequence of letters, and apostrophes should be ignored. Thus, “O’Henry”, “government”, and “friend’s” should be considered as one word.

Also, in the program, you should think of a sentence as any sequence of words that ends with a period, exclamation point, or question mark. A period after a single capital letter (e.g., an initial) or embedded with digits (e.g., a real number) should not be counted as being the end of a sentence. White space, digits, and other punctuations should be ignored.