

11/12/2012

0112541
Programming Languages
Assignment - 4
(Due 17/12/2012 – 23:59h)

In this assignment, the student is asked to implement a text analyzer. The program should be written in C language.

- A specific file, named **filelist.txt**, would store file names, which need to be analyzed. The user should generate this file via a text editor.
- The program would open the **filelist.txt** and open/process the related files based on the filenames in the filelist.txt.
- Each file should consist of paragraphs, sentences and words.
- The program would calculate the number of paragraphs, the number of sentences and the number of words for each file and would record it into a user-defined data structure.
- After completing the recording process, the program would save all the information, which were recorded in the structure, into a file, which should be readable when opened by a text editor.

USEFUL INFORMATION

- A newline character separates two paragraphs.
- A sentence ends with a dot.
- A character array between two spaces counted as one word.
- Non-alphabetical words consist of numbers, hyphens, etc.

Example: I have been playing, this (game) since 1998. I had 2-3 injuries during this time.

Result : **Paragraph:1, Sentence: 2, Word: 15, Non-alphabetical words: 2**

Your algorithm should give the outputs specified below:

- The number of paragraphs,
- The number of sentences,
- The number of words,
- The number of non-alphabetical words such as 1989, 1, 22, %22, 1985-1986 etc. , for each file listed in filelist.txt.
- A file including the aforementioned information.

The program should include a menu for the given tasks.
You should define some structures to save related information jointly.

You should also report;

- The list of your functions with the parameters.
- Test results

Note: Use reasonable variable names.

ATTENTION

Do not forget to read the document “ASSIGNMENT RULES”, located in my website.

EXAMPLE

Filelist.txt

file1
file2
file3
file4

file1

The Computer Science and Engineering Department, initially founded as Electronic Computation Division in 1970, continued its activities as a part of Engineering Faculty between 1983 and 1992, following the reorganization in 1992 the department became a part of Faculty of Electrical Engineering and Electronics.

Computer Engineering Program is currently operates with full time 3 Professors, 2 Associate Professor, 11 Assistant Professors, 1 Instructor, 24 Research Assistants and part time 1 Professor, 1 Assistant Professor. In Computer Engineering Program there are also courses given by academic staff from other departments of the University.

file2

The Computer Science and Engineering Department, initially founded as Electronic Computation Division in 1970, continued its activities as a part of Engineering Faculty between 1983 and 1992, following the reorganization in 1992 the department became a part of Faculty of Electrical Engineering and Electronics. Computer Engineering Program is currently operates with full time 3 Professor, 1 Associate Professor, 10 Assistant

Professor, 1 Instructor, 20 Research Assistants and part time 1 Professor, 1 Assistant Professor. In Computer Science Program there are also courses given by academic staff from other departments of the University.

Computer Science teaching plan contains 53 courses which adds up to 156 credits. The percentages of the courses established as %26 Basic Sciences, %51 Occupational Courses and %23 Other Courses to provide a balanced distribution. The credits of the optional engineering courses are determined as %14 to allow students to gain expertise on the subjects they are interested in.

file3

In our department which aims to graduate engineers to international arena, a compulsory English preparation class has been started beginning from 1985-1986 which continues successfully since. In addition to the preparation class, English courses given in various ways take %10 of the all credits rest of the graduate study; also some of the occupational courses are taught in English.

file4

Computer Science teaching plan contains 53 courses, which adds up to 156 credits. The percentages of the courses established as %26 Basic Sciences, %51 Occupational Courses and %23 Other Courses to provide a balanced distribution. The credits of the optional engineering courses are determined as %14 to allow students to gain expertise on the subjects they are interested in.

In our department which aims to graduate engineers to international arena, a compulsory English preparation class has been started beginning from 1985-1986 which continues successfully since. In addition to the preparation class, English courses given in various ways take %10 of the all credits rest of the graduate study, also some of the occupational courses are taught in English.

The program applied in Computer Engineering is prepared by taking the opinion of internal allies (Teaching Staff, Students and Management) and external allies (Graduates, Associations, Private Sector, Government, Civil Community Organizations, Families) then filtered by science and technology. The system is supported with feedback mechanisms (Student Questioners, Evaluations of Teaching Staff, Evaluations of other external allies about outputs and goals) to respond variable features quickly, to provide continuity by renewing itself and to reach its goals.

Output File

Filename:file1

Paragraph: 2

Sentences: 2

Words:

Non-Alphabetical Words:

Filename:file2

Paragraph:

Sentences:

Words:

Non-Alphabetical Words:

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