

C++ Programming Assignment (#09)

Date: May 19, 2016

Instructor: Yoo, Younghwan

Due date: May 25, 2016

Programming Projects

1. Write a program to generate personalized junk mail. The program takes input from **two input files**. One (junkMail.txt) is the **junk mail** which contains the text of a letter, except that the name of the recipient is indicated by the three characters #N# or #F#. The other file (recList.txt) contains **the name of a recipient**. For each recipient in the file, your program generates a junk mail file by replacing the three letters #N# with the first name and #F# with the full name. Note that the number of recipients in the file may be greater than one.



Example of the first input file: junk mail

Dear #F#,

Am in a hurry writing you this note, I just wanted to seek your help on something very important, you are the only person I could reach at this point, and I hope you come to my aid. Because something very terrible is happening to me now, I need a favor from you now; I had a trip here in the UK on a mission.

Unfortunately for me all my money got stolen on my way to the hotel where I lodged along with my bag where my passport was, and since then I have been without any money I am even owing the hotel here. So please I need you to lend me about 1650 Pounds so I can make arrangements and return back. I have spoken to the embassy here but they are not responding to the matter effectively, I will return the money back to you as soon as I get home, I am so confused right now.

#N#, I will be waiting to hear from you.

Regards

Jun

Example of the second input file: recipient list

Younghwan Yoo

Jiwon Lee

Example of the output file:

Dear Younghwan Yoo,

Am in a hurry writing you this note, I just wanted to seek your help on something very important, you are the only person I could reach at this point, and I hope you come to my aid. Because something very terrible is happening to me now, I need a favor from you now; I had a trip here in the UK on a mission.

Unfortunately for me all my money got stolen on my way to the hotel where I lodged along with my bag where my passport was, and since then I have been without any money I am even owing the hotel here. So please I need you to lend me about 1650 Pounds so I can make arrangements and return back. I have spoken to the embassy here but they are not responding to the matter effectively, I will return the money back to you as soon as I get home, I am so confused right now.

Younghwan, I will be waiting to hear from you.

Regards

Jun

Option) In order to update file contents,

- 1) open the input file and a new file for data output separately,
- 2) read the input file contents and write them into the output file as they are if it does not have to be updated,
- 3) change the parts you want to update and write them into the output file,
- 4) close both the input and the output files,
- 5) delete the input file by using `int remove (const char * filename);`
- 6) rename the output file with the same name as the original input file by using `int rename (const char * oldname, const char * newname);`

※ Note that the original input file is removed from your computer in the case of the update.

2. Write a grading program for a class with the following grading policies:

- The input file has six columns for every student: ID, name, and four scores.
- The first and the second scores are for the midterm exam and the final exam, each graded on the basis of 100 points.
- The next two scores are for quizzes, each graded on the basis of 10 points.
- The final exam counts for 40% of the grade, the midterm counts for 30%, and the two quizzes together count for a total of 30%. (Do not forget to normalize the each score.)



	A+	A	B+	B	C	D	F
# of students	1	2	2	2	1	1	1

The above table shows the number of students who can receive each grade: The student who has the highest score is given A+, the next two students are given A, and so on. The output file has two more columns: the overall average numeric score and final letter grade. **Define a class for the student record.**

Sample input and output files:

201624402	Jessica Alba	75	60	7	7
201624405	Jack Black	80	55	8	5
201624410	Johnny Depp	95	90	10	9
201624412	Robert Downey	60	50	6	4
201624417	Chris Evans	80	75	8	9
201624421	Tom Hanks	90	95	9	9
201624429	Scarlett Johansson	80	70	8	7
201624430	Angelina Jolie	85	75	6	5
201624435	Rachel McAdams	70	75	7	8
201624438	Natalie Portman	95	95	10	10

201624402	Jessica Alba	75	60	7	7	69.0	C
201624405	Jack Black	80	55	8	5	68.0	D
201624410	Johnny Depp	95	90	10	9	93.5	A
201624412	Robert Downey	60	50	6	4	54.0	F
201624417	Chris Evans	80	75	8	9	80.0	B+
201624421	Tom Hanks	90	95	9	9	91.5	A
201624429	Scarlett Johansson	80	70	8	7	75.5	B+
201624430	Angelina Jolie	85	75	6	5	73.0	B
201624435	Rachel McAdams	70	75	7	8	73.0	B
201624438	Natalie Portman	95	95	10	10	96.5	A+