Notice: Return your C++ source codes into **Oma** before deadline. Only so you can get credits from this homework. You can't return these source codes after deadline.

sources:

- http://www.cplusplus.com/reference/cstdio/fopen/
- http://en.cppreference.com/w/cpp/io/c/fopen

1. Implement a program **1.cpp** which prints content (forenames, surnames and phone numbers) from file http://users.metropolia.fi/~pasitr/2017-2018/TI00AA50-3011/kt/05/phones.txt. Sample output is in figure 1.

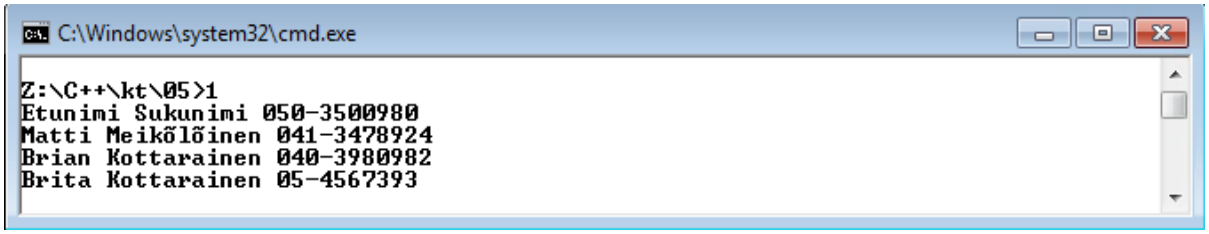

Figure 1. Sample print in Dev C++ -program

2. Implement a program 2.cpp in which user gives data and program delete person's information from file http://users.metropolia.fi/~pasitr/2017-2018/TI00AA50-3011/kt/05/phones.txt. First program requests forename. Second program requests surname. Then program checks if person's data are in the file. If the information can be found the program deletes these information from the file. If the information can't be found programs prints "Person's information can't be found". Sample output is in figure 2.

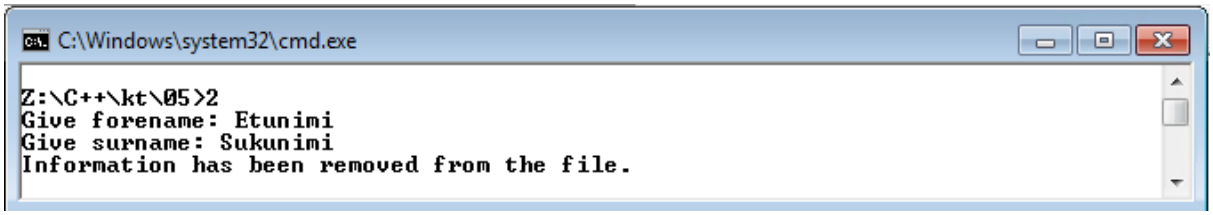

Figure 2. Sample print in Dev C++ -program

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3. Implement a program **3.cpp** in which you use **fputs()**. A program reads strings from the keyboard and writes them to the file called “test.txt”. To terminate the program, enter a blank line. Since **gets()** does not store the newline character, one is added before each string is written to the file so that the file can be read more easily. Sample output is in figure 3. [Sch03a, p. 222]

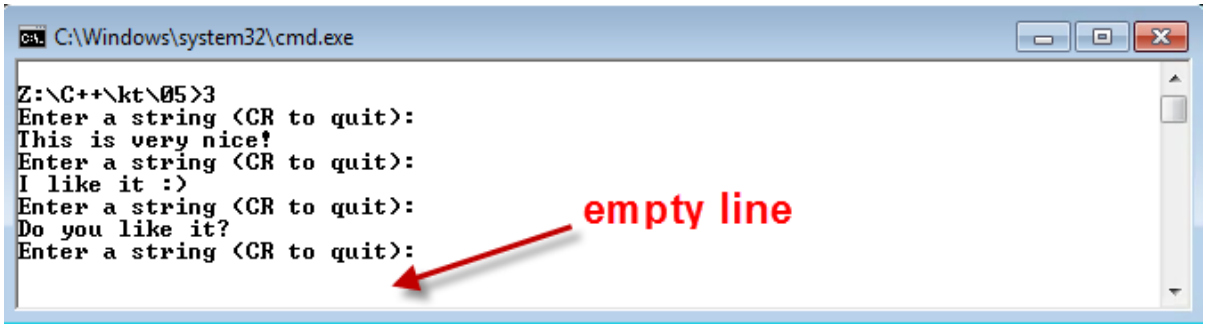

Figure 3. Sample print in Dev C++ -program

4. Implement a program **4.cpp** which writes objects into file. Then we generally want to use binary mode. This writes the same bit configuration to disk that was stored in memory, and ensures that numerical data contained in objects is handled properly. This program asks the user for information about an object of class person, and then writes this object to the disk file “**person.dat**”. After that program reads an object back from the “**person.dat**”. In figure is the listing of program. [Laf02, p. 592-593]

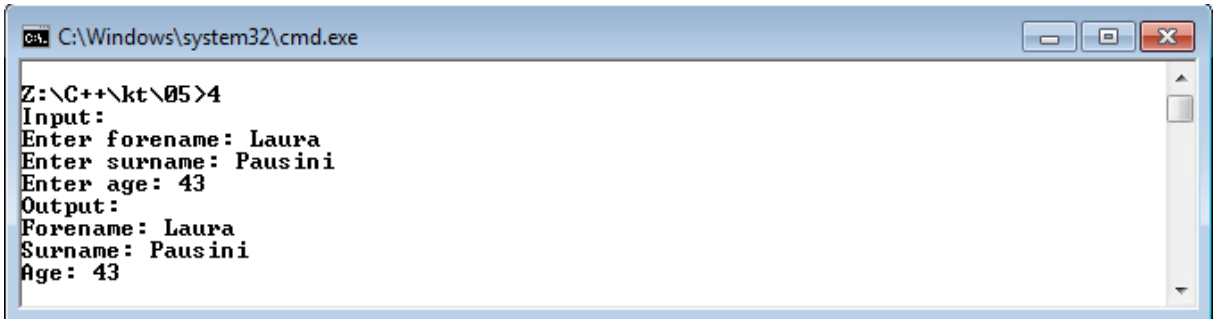

Figure 4. Sample print in Dev C++ -program