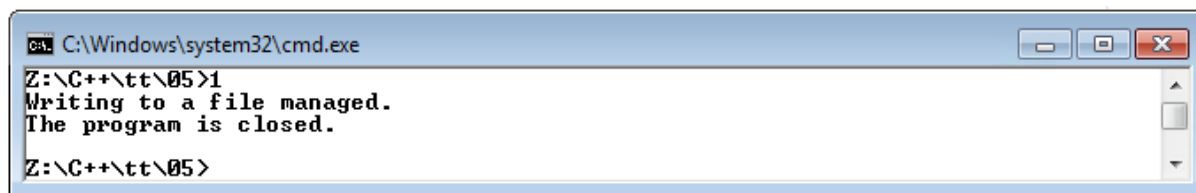


Notice: Return your C++ source codes into Oma before deadline. Only so you can get credits from this exercise. You can't return these source codes after deadline.

sources:

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

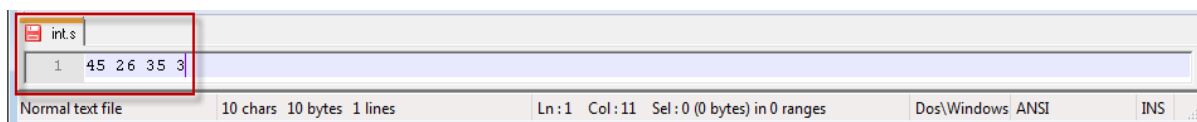
1. Implement a program **1.cpp** which writes the text "Hello world!" into the file "hello.usr". The file does not exist, it is created. Finally, the program will print a screen that writing to a file managed (kuva 1). Sample output is in figure 3.



```
C:\Windows\system32\cmd.exe
Z:\C++\tt\05>
Writing to a file managed.
The program is closed.
Z:\C++\tt\05>
```

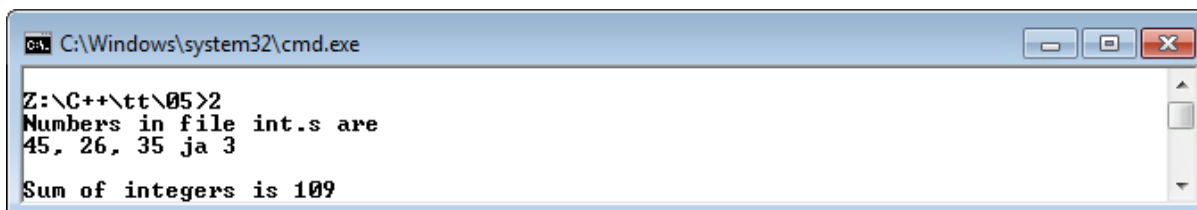
Figure 1. Sample print in Dev C++ -program

2. Implement program **2.cpp** which reads integer numbers from file "int.s" and counts the sum of integers (figure 2). File "int.s" contains 4 integers (figure 2). Integers are in the first line and separated by spaces. Finally program prints integers and the sum (figure 3).



```
int.s
1 45 26 35 3
```

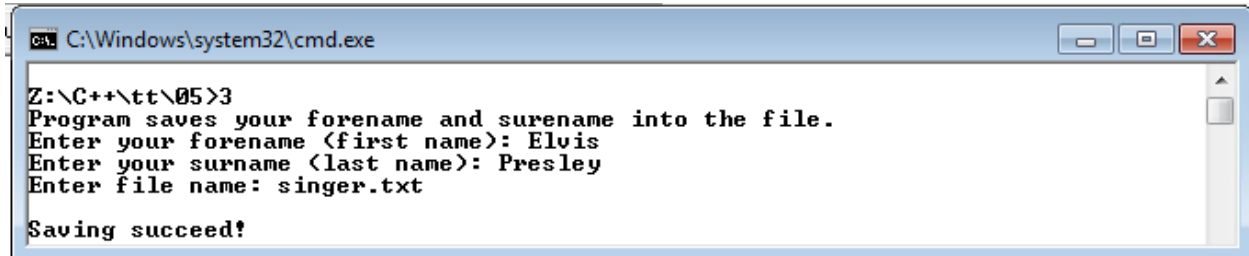
Figure 2. Content of file int.s



```
C:\Windows\system32\cmd.exe
Z:\C++\tt\05>
Numbers in file int.s are
45, 26, 35 ja 3
Sum of integers is 109
```

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

3. Implement program **3.cpp** which requests user's forename and surname (figure 4). These names will be save into a file which name user gives in program (figure 4). The prefix of file name is maximum 8 character. The extension of file name is maximum 3 character. The program and the file must be in same folder. Surname can be up to 20 characters long. Forename can be up to 15 characters long.



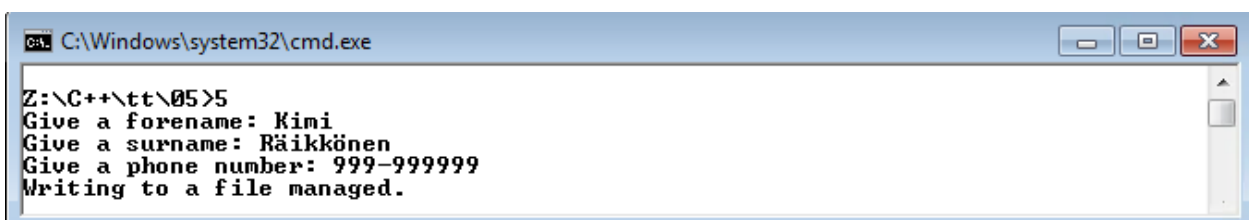
```
C:\Windows\system32\cmd.exe
Z:\C++\tt\05>3
Program saves your forename and surename into the file.
Enter your forename (first name): Elvis
Enter your surname (last name): Presley
Enter file name: singer.txt
Saving succeed!
```

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

4. Implement a program **4.cpp** which reads a text file **A.txt** and writes characters into the file **B.txt**. Reading and writing must be character at a time.
5. Implement a program **5.cpp** which insert a new name and phone number into the file <http://users.metropolia.fi/~pasitr/2017-2018/TI00AA50-3011/tt/05/phones.txt>. First the program requests a first name (forename). Second the program requests a last name (surname). Third the program requests a phone number. On the first line in the file "phones.txt" is the number of lines in the file. The value must increase by one when forename, surname and phone number are stored in the file. Input data must not contain spacebar. In the file personal data must be on a separate line (remember newline character). In the file can be up to 50 names (information lines). First line (counter) is not included. File content is in the beginning next:

4

Etunimi Sukunimi 050-3500980
Matti Meikäläinen 041-3478924
Brian Kottarainen 040-3980982
Brita Kottarainen 05-4567393



```
C:\Windows\system32\cmd.exe
Z:\C++\tt\05>5
Give a forename: Kimi
Give a surname: Räikkönen
Give a phone number: 999-999999
Writing to a file managed.
```

Figure 5. Sample print in Dev C++ -program