

Homework Assignment #11

Due 9:00am Apr 6(F) 2018

Read Chapter 9 of the book.

A biomedical research company has collected a number of blood donor candidates' information, including name, blood type, Rh factor, and blood pressure for each candidate, in a text file named **donorcandidates.dat**. The Blood type is either A, B, AB, or O. The Rh factor is + or -. The blood pressure consists of two readings: systolic and diastolic (both are **double** numbers). The example data file is shown in a text editor as:

```
Darby Gerge A + 95 65
Helen Dee B - 87 60
Giovanni Lupa AB - 112 78
Cat Donovan O + 120 80
```

You are required to write a program that read the donor candidates' information from the **donorcandidates.dat** file, and find out which candidates are viable donors, whose blood pressure is in the desirable range (90-119 for systolic and 60-79 for diastolic), then store those viable donors' information in another text file named **viabledonors.dat**. Your main program should call the following two functions:

- I. A function named **readinfo**, it takes one input argument, i.e., the file name where donor candidates' information is stored, and reads the information from it, stores all the information in a single variable, and return that variable as the only output argument.
- II. A function named **writetable**, it takes two input arguments, the first one is the variable name where the viable donors' information are stored, and the second one is a filename of the text file where the viable donor's information is stored.

The resulting text file should have the following content and format:

First name	Last name	Bloodtype	RH	Systolic	Diastolic
Gerge	Darby	A	+	95.00	65.00
Lupa	Giovanni	AB	-	112.00	78.00

Use error-checking for all file open and close actions. Also, print a message for each file opened or closed successfully. For example, the following messages should be displayed upon successfully running the main program:

```
File opened successfully: donorcandidates.dat
File closed successfully: donorcandidates.dat
File opened successfully: viabledonors.dat
File closed successfully: viabledonors.dat
```