

GEDB029: Basis and Practice in Programming (Autumn 2012)

Homework 4 : Message Manager

Due-date : 2012. 12. 27 11:59 PM

Description

Write a program that allocate 10,000 bytes of character memory space and distributes them

- 1) There are three users Amy, Bob and Chris.
- 2) It is 140 characters that can be input at a time (<140).
- 3) The number of whole input is 100.
- 4) The contents of input are messages which each user sent to other.
- 5) The input is passed through 'message.dat' and this program can get options from command prompt arguments (in following restriction).
- 6) The input consists of 'from:to:string' format each of which represents 'whom messages are from', 'whom messages are to' and the contents of messages respectively.
- 7) The program terminates with EOF.

Restriction

- 1) The program should show error message and terminate in case of not enough memory while getting input.
 - 1-1) The size of a message is given that of smaller than 140, you don't need to care exception handling of it
- 2) Your program can get options from command prompt when it is executed as arguments.
 - 2-1) `-s <sender>` : prints the messages (from the sender).
 - 2-2) `-r <receiver>` : prints the messages (to the receiver).
 - 2-3) `-p <pattern>` : prints all messages that match the given pattern.
- 3) The memory allocation function which you should use is 'salloc(size)'. It take the length of a array as a argument and returns the start address of allocated memory space.
- 4) The name of input file should be 'messages.dat'.
- 5) It is only 'messages.h' that you can include as header files. (DO NOT include 'stdlib.h')

Example

<pre>\$./a.out -s Amy Hello bob How is it going? Do you know today's homework?</pre>	<pre>\$./a.out -r Bob Not enough memory!</pre>
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