

CS 2213-001 Advanced Programming

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Homework 7

Due date: check BB

!!!! NO LATE HOMEWORK WILL BE ACCEPTED !!!

Total 5 points

(Abstract Data Type - Library)

Programming Exercise 7 from Chapter 8... “For certain applications, it is useful to be able to generate a series of names that form a sequential pattern...”

You are mainly asked to implement a label generation library (i.e., `labelgen.h` and `labelgen.c`) and use it in a simple a driver/client program which is given in the question.

As always, make sure you release (free) the dynamically allocated memories if you allocate any memory in your programs. So, before submitting your program, run it with `valgrind` to see if there is any memory leakage... Also if you need to debug your program, compile your programs with `-g` option and then run it with `gdb` and/or `ddd`.

What to return: !!!! NO LATE HOMEWORK WILL BE ACCEPTED !!!

1. Create a directory, say `LASTNAME_hw7`, and do all your work under that directory.
2. You will implement label gen library (`labelgen.h` and `labelgen.c`) and use it along with other libraries in your driver/client program, `driver.c`.
3. To easily compile the library and driver program, you must have a `Makefile` and use “make” to compile your code.
4. After compiling, run your program a few times with different data files that you should create and save the output (using script) into `output.txt` file. So you will have around 6-7 files in your `LASTNAME_hw7` directory.
5. Go to parent directory of `LASTNAME_hw7`, and use

```
> tar -cf LASTNAME_hw7.tar LASTNAME_hw7
```

This will create a new file called `LASTNAME_hw6.tar` and it contains all of your files. So just submit this `.tar` file.
6. Go to WebCT (BB), and just submit `LASTNAME_hw6.tar` as **attachment** before the deadline. DO NOT submit other `.h` or `.c` files individually.

/* Don't forget to include comments about the problem, yourself and each major step in your program! */

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You must submit your work using Blackboard Learn and respect the following rules:

- 1) All assignments must be submitted as either a zip or tar archive file unless it is a single pdf file.
 - 2) Assignments must include all source code.
 - 3) Assignments must include an output.txt file which demonstrates the final test output run by the student.
 - 4) If your assignment does not run/compile, the output.txt file should include an explanation of what was accomplished, what the error message was that prevented the student from finishing the assignment and what the student BELIEVES to be the underlying cause of the error.
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