

CS 2213-001 Advanced Programming

Instructor [Dr. Turgay Korkmaz](#)

Homework 5

Due date: check BB

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

Total 5 points

(From our textbook Chapter 3)

Programming Exercise 13 (page 159-160): “Write a program that plays the game of hangman. In hangman, the computer begins by selecting a secret word at random from a list of possibilities...”

In the last paragraph, the question says that “implement it twice using `string.h` and `strlib.h`.” For this hw, you don’t need to implement it twice. One implementation would be enough. You can pick either `string.h` or `strlib.h` and accordingly implement your library and driver program.

Finally, it is not mentioned in the question, but you should make sure you will release (free) the dynamically allocated memories if you allocate any 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_hw4`, and do all your work under that directory.
2. You will implement a simple library (`randword.h` and `randword.c`) and use this library along with other libraries in your driver/client program, say `hangman.c`. To easily compile the library and driver program, you must have a Makefile and use “make” to compile your code. Also you need to have a text/data file storing a list of words. Compile your code and run it a few times and save the output (using

script) into output.txt file. So you will have at least 6-7 files in your LASTNAME_hw4 directory.

2. Go to parent directory of LASTNAME_hw4, and use

```
> tar -cf LASTNAME_hw4.tar LASTNAME_hw4
```

This will create a new file called LASTNAME_hw4.tar and it contains all your files in it. So if you just submit this, it will be enough.

3. Go to WebCT (BB), and just submit LASTNAME_hw4.tar as **attachment** before the deadline. DO NOT submit other .h or .c files.

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

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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