

Lab 3

© INSTRUCTOR: DR. MD. MAHFUZUR RAHMAN

100 Points

Objectives:

Today we will be covering the following topics:

1. Create, compile, and run your first C program.
2. Modify, compile, and run the modified program.

Instructions:

- Attendance is mandatory.
- Labs must be completed individually.
- If you have any questions, please do not hesitate to ask TA.
- Follow submission instructions in the deliverable section.
- Lab assignments are due by 5:00 PM the day after your lab session. For example, if your lab is on Thursday, your deadline will be Friday at 5:00 PM. Similarly, if your lab session is on Tuesday, your deadline will be Wednesday at 5:00 PM, and so on.

1. Create or copy the following `hello world` program using the `vi` editor and save it as `lab3.c`:

```
/*
    hello world
*/

#include <stdio.h>

int main (int argc, char *argv[]) {

    printf("hello world.\n");

    return 0;
}
```

- (a) (10 points) Start recording your session using the `script` utility.
- (b) (10 points) Show the contents of `lab3.c` using the `cat` command.
- (c) (10 points) Compile `lab3.c` using the `gcc` compiler and appropriate output file name using `-o` flag.
Usage Example: `gcc filename -o executable_file_name`
- (d) (10 points) Run your program using appropriate command.
Usage Example: `./executable_file_name`
- (e) (10 points) Copy the program into a separate file, named `lab3_modified`. (use the `cp` command)
- (f) (10 points) Use the `vi` editor to edit the program. Add your full name, followed by “is modifying the program” in a separate `printf` statement after the line `hello world`.
- (g) (10 points) Show the contents of `lab3_modified.c` using the `cat` command.
- (h) (10 points) Compile `lab3_modified.c` using the `gcc` compiler and appropriate output file name using `-o` flag.

- (i) (10 points) Run your program using appropriate command.
- (j) (10 points) Finish your recording (use the **exit** command).

Deliverables

For today's lab, clean the text file (.txt) you recorded during your terminal session, because the file might have unwanted characters. In other words, make it as you observed during your terminal session. Please name your text file as **last-name_firstname_lab03.txt**. You will need to submit the text file (terminal session record) to the **Lab 03** dropbox in iCollege.

Broader Grading Criteria

- If no C (.c) file is submitted (regardless if .txt file submitted or not), a student will receive only 40% for attendance. Submission will not be graded.
- If a C file is given but no .txt file (terminal session) is given, a submission will receive a maximum 70% (will vary between 40% and 70% based on the correctness of the C program).
- If a .txt file is given along with the .c file, but the .txt file is not clean and not comprehensible to the TA, a submission will receive a maximum 80% (which will vary from 40% to 80% depending on the accuracy of the C program).
- If both a clean .txt file and the .c file are given, your submission will normally be evaluated based on the tasks and the corresponding point distributions.
- Screenshots are not substitutes for code and/or the .txt files submission.