

Lab 5

© INSTRUCTOR: DR. MD. MAHFUZUR RAHMAN

100 Points

Objectives:

Today we will be covering the following topics:

1. Practice of `for/do/while` loops in a C program
2. Usage of selection statements
3. Formatted I/O

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 next day after your lab session.
1. Write a program that prints a one-month calendar using the `vi` editor and save it as `lab5.c`. The user specifies the number of days in the month and the day of the week on which the month begins. For example, it will look like the following on the terminal:

```
Enter number of days in month: 31                (e.g., 31 is user input)
Enter starting day of the week (1=Sun, 7=Sat): 3  (3 is also user input)
```

Your requested month's calendar is:

```
    1  2  3  4  5
  6  7  8  9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31
```

Do the following tasks:

- (a) (20 points) Make sure you are using the same input prompt as suggested. [check your format string]
- (b) (20 points) Make sure you used a `for/while` loop to do the task. [to count the days in the month]
- (c) (20 points) Make sure you used a selection statement (`if` statement) to insert a newline after every week.
- (d) (05 points) Start recording your session using the `script` utility.
- (e) (10 points) Show the contents of `lab5.c` using the `cat` command.
- (f) (10 points) Compile `lab5.c` using the `gcc` compiler. Use appropriate flag for the executable file name using `-o`.
- (g) (10 points) Run your program using appropriate command.
- (h) (05 points) Finish your recording (use the `exit` command).

Deliverables

For today's lab, clean the text file (.txt) you recorded during your terminal session, if there are unwanted control characters. In other words, make it as you observed during your terminal session. Please name your text file as **last-name_firstname_lab05.txt**. You will need to submit the text file (terminal session record) and your C file (lab5.c) to the **Lab 05** 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.