

# COL100 Lab 8

I semester 2016-17

Week 8, 2016

## Objective

To be able to write simple C programs involving operations on 1D array of various data types.

## Instructions

1. After 1 hour 45 minutes have passed, your code will be checked. Whatever you have completed till this point will be recorded. Anything that you complete later will not be recorded.
2. If you complete an assignment later, you can ask the TAs of your lab session any problems and doubts that you face. There is no need to show the TA your code, if there is no problem in it.
3. You cannot attend any lab session other than your allotted session, without informing the TAs of the session you are attending. This too is permitted only for genuine reasons.
4. Also, you will not get attendance, if you do not attend your own lab session, nor will your performance be noted. (Even if you fill in the attendance sheet, it will not be uploaded later.)

## Programs

- Press Ctrl + Alt + T to open a terminal.
- cd to the directory COL100.
- In this directory, create another folder, called as lab4.
- cd to lab4.

1. Write a program to convert a string like "124" to an integer 124.
2. Write a program that extracts part of the given string from the specified position. For example, if the string is "Working with strings is fun", then if from position 4, 4 characters are to be extracted then the program should return string as "king". If the number of characters to be extracted is 0 then the program should extract entire string from the specified position.
3. Write a program to sort n elements of an array in ascending order of their magnitude and removes all the duplicate entries..
4. Write a program to reverse the order of the characters of the given array.

## Optional Programs

1. Write a program to delete a particular character from the string. Program should prompt user to enter a string and the character to be deleted.
2. Write a program to compare two arrays. You have to take care that two arrays may or may not have elements in same order.

## Useful Commands in Linux

1. Open terminal: Ctrl + Alt + T
2. Terminate current Linux command: Ctrl + C
3. Make a new directory: `mkdir dirname`
4. Copy: `cp src dest`
5. Rename: `mv originalname newname`
6. Delete: `rm filename`
7. Change working directory: `cd path`
8. List contents of a folder: `ls`
9. List contents of a folder including hidden files: `ls -a`
10. Print current directory: `pwd`

## Points to Remember

1. To set proxy: Open an internet browser and set the Automatic proxy configuration url to `http://www.cc.iitd.ernet.in/cgi-bin/proxy.btech` (or `proxy.dual` if you are a Dual Degree student).  
(For Firefox, open Options > Advanced > Network Tab > (Connection) Settings > Choose “Automatic proxy configuration” and set the URL)

## Optional : Use vim editor

1. Open a file: `vim filename.txt`
2. Insert in a file: `i` ( insert mode) (Use Esc to come out of the insert mode)
3. Navigation: arrow keys
4. Undo `u`
5. Redo `Ctrl+R`
6. Saving a file `:w`
7. Closing a file without saving `:q!`
8. Saving and closing a file `:wq`
9. Deleting a line `dd`
10. Copying a line `yy`
11. Pasting a line `p`