

CSc 332 (L) - Operating Systems

Lab – Spring 2018

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Task 0

Task 0 is intended to provide introduction to general purpose utility commands in Linux. The objective is to make students familiar with the Linux command line environment and C programming language. This task serves as a platform for the subsequent lab tasks on topics such as file & process management system calls and process synchronization concepts. *This task will not be graded. You don't need to turn your work in.*

PART A: Linux Commands

Study the following Linux general purpose commands:

*echo, man, who, cat, cd, cp, ps, ls, mv, rm, mkdir, rmdir,
more, date, time, kill, history, chmod, pwd, logout, shutdown*

PART B: C Programming

The following problems are intended for the beginners who have just started to code in C programming language.

- Write a program that displays "Hello, world!"
- Write a program to print the numbers between 1 and 10, along with an indication of whether each is even or odd
- Write a program to compute factorial of numbers between 1 and 10 using the following recursive function:

$$n! = \begin{cases} 1 & \text{if } n = 0, \\ (n-1)! \times n & \text{if } n > 0 \end{cases}.$$

- Write a program that will prompt the user to input 10 integer values. The program will then identify and display the smallest, largest, most occurring number (with the count), and the average of 10 integers
- Repeat the previous program with one modification. Instead of prompting the user to input integer values 10 times, read the values from an input text file, the name of which is specified as an argument
