CSC 412 – Operating Systems

Lab Session 01, Fall 2024

Tuesday, September 10th and Thursday, September 12th, 2024

What this Lab Session Is About

0.1 Objective

The objectives of this lab session is to make sure that you get some experience with bash scripting, to help you complete the first programming assignment

I remind you that there is no deliverable nor deadline for this lab. You are not expected to "complete" anything. Just use the time to ask questions, experiment, and make sure that you understand what is going on.

Because the purpose of these labs is for you to get familiarized with some new concept or tool, in a short hour, we can't afford to waste time on regular good programming practice such as data validation (e.g. checking the number of arguments of a C program) or proper function design. These concerns are for the assignments. Here we try to move fast, try things, and learn from our mistakes.

0.2 Handout

The handouts for this lab are the source files of two bash scripts and of a very small C program. The bash script `script01.sh` shows you how to define variables, get their value, and perform very simple operations The bash script `script02.sh` illustrates different way of extracting and evaluating the script's arguments, either by referring explicitly to "the second argument" or by accessing arguments through a loop and indexing.

1 Task 1 ("Getting Feet Wet" Task)

Version 1
Write a script that takes as arguments two integer values and prints out the sum of these two numbers.

Version 2
Write a scripts that builds the C program of the handput (`sumProg.c` source file) and calls the executable with the two arguments provided by the user.

2 Task 2

Write a script that takes as arguments an arbitrary number of integer values and prints out the sum of these numbers.

3 Task 3

Write a script that takes as arguments an arbitrary number of integer values and prints out the values found in the array, eliminating repeat.

In fact, write *two* versions of this script: One that simply iterates through the input list and directly prints the values to the standard output, and another version that allocates an output array to store the values, and then prints the values stored in that array.