**CSC 2500-003: Unix Programming Lab**  
**LAB 07**  
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General Instructions

Using your book and previous lecture material, fill out this assignment sheet. **Use red text to signify your answers.** This assignment corresponds with chapter 10 of your textbook. You should utilize online resources to answer these questions as well.

Submission Instructions

To submit, **write your name** and save this document as a PDF. Attach your PDF document and each script you’ve written to the iLearn dropbox.

# Lab Questions

1. The shell expands **$0** to the name of the calling program (Sobell, page 474), **$1–$n** to the individual command-line arguments (positional parameters; Sobell, page 475), **$\*** (Sobell, page 478) to all positional parameters, and **$#** (Sobell, page 479) to the number of positional parameters.

Write a script named **all** that displays (sends to standard output) the name of the calling program, the number of positional parameters, and a list of positional parameters. Remember to make the file executable (Sobell, page 100). Test the script with 0, 1, and 5 positional parameters. What does the script print out in each of the cases? (20)

It prints out the calling program name, the number of positional parameters and what those parameters are.  
 ex. $./all 1 2 3

$name: ./all

$numPos: 3

$listPos: 1 2 3

(.sh file included)

2. Make a symbolic link (Sobell, p.114) named **linkto** to the **all** script you wrote in the previous step. Call **linkto** with two arguments. What does the script report as the name it was called as? (10)

The name is now ./linkto\_all

(.sh file included)

3. Write a script named **myname** that uses echo (most of the examples in Chapter 10 use this utility) to prompt the user with **Enter your name:** , reads into a variable the string the user types in response to the prompt, and then displays **Hello** followed by the string the user typed. When you run the program it should look like this: (10)

$ **./myname**

Enter your name: Max Wild

Hello Max Wild

(.sh file included)

4. Rewrite **myname** from the previous step, calling it **myname2**. Have this version of the program prompt the user for a string, but instead of displaying **Hello** and the string on the screen (sending it to standard output) redirect the output so the program writes only the string the user entered (and not **Hello**) to the temporary file named **PID.name** where PID is the process ID number (Sobell, page 480) of the process running the script. Display the contents of the **PID.name** file. (10)

(.sh file included)

5. Write and run a script named **looper** that uses the **for** (Sobell, page 449) control structure to loop through the command-line arguments and display each argument on a separate line. (15)

(.sh file included)

6. Rewrite looper from the previous step, calling it **looper2**. Have this version of the program use the **for...in** control structure (Sobell, page 447) to perform the same task. (15)

(.sh file included)

7. Write a script named **ifthen** that prompts the user with **>>** and reads a string of text from the user. If the user enters a nonnull string, the script displays **You entered:** followed by the string; otherwise it displays **Where is your input?.** Use an **if...then...else** control structure (Sobell, page 439) to implement the two-way branch in the script. Use the **test** (Sobell, pages 435 and 1011) builtin to determine if the user enters a null string. What do you have to do to avoid getting an error message when you prompt with **>>**? (There are several ways to construct the test statement.) (20)

(.sh file included)