CYBR 1500 Assignment, Week 6

# Part I: Required Readings and Lecture Content

* Watch the videos here for the lectures.

Video Lecture 1, Week 6 Update: <https://youtu.be/5lkFpBJSqrA>

Video Lecture 2, The Pipe Command: <https://youtu.be/yJg5U4UAFSs>

Video Lecture 3, Chapter 12, part 1: <https://youtu.be/auz48__1VX8>

Video Lecture 4, Chapter 12, part 2: <https://youtu.be/CcHYtDM9Rhs>

* Read and be familiar with chapter 12 of Blum & Bresnahan.

# Part 2: The Pipe Command

# Create a file name test1.txt using the nano command with the following content

1. Please use the cat command to verify that you successfully create the file in step 1.
2. Use the pipe command to sort all the numbers in the file test1.txt in reverse order. Note: you can use sort -nr

sort -n will sort the output numerically

-r option will be for reverse order

1. Create a file named <yourfirstname>file.txt, e.g, trangfile.txt in which you write short paragraph introducing about yourself.
2. Use the cat command to display the content of your <yourfirstname>file.txt.
3. Using the pipe command to count the number of words in <yourfirstname>file.txt Note: use wc -w to count the words
4. Search the list of processes for which ones are using bash.

Note: use ps -ef (to output all process in full format) as input to grep bash command.

>>>>>Paste your terminal capture below this line >>>>>

**andrew@andrew-VirtualBox**:**~**$ ls

**backup.tar**  **Documents**  **Music**     **Public**     **Videos**

**Desktop**     **Downloads**  **Pictures**  **Templates**  **week4**

**andrew@andrew-VirtualBox**:**~**$ cd ./Documents/

**andrew@andrew-VirtualBox**:**~/Documents**$ ls

**afolder**  a.out  morerandom  random  **week2**

**andrew@andrew-VirtualBox**:**~/Documents**$ mkdir week6

**andrew@andrew-VirtualBox**:**~/Documents**$ ls

**afolder**  a.out  morerandom  random  **week2**  **week6**

**andrew@andrew-VirtualBox**:**~/Documents**$ cd ./week6

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ touch test1.txt

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ ls

test1.txt

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ nano test1.txt

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ cat test1.txt

12

100

34

56

123

4

0

145

67

89

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ cat test1.txt | -r sort

-r: command not found

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ cat test1.txt | sort -r

89

67

56

4

34

145

123

12

100

0

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ cat test1.txt | sort -nr

145

123

100

89

67

56

34

12

4

0

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ touch koenigfile.txt

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ nano koenigfile.txt

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ cat koenigfile.txt

Hello, my name is Andrew and I like to work with computers and play video

games. My current computer has a Ryzen 7 5800x, and an RTX 3070ti.

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ cat koenigfile.txt | wc -c

141

**andrew@andrew-VirtualBox**:**~/Documents/week6**$ ps -ef | grep bash

andrew      1291    1282  0 18:44 pts/0    00:00:00 **bash**

andrew      2078    1291  0 19:01 pts/0    00:00:00 grep --color=auto **bash**

**andrew@andrew-VirtualBox**:**~/Documents/week6**$

<<<<< Paste your terminal capture above this line <<<<<

# Part 3: Chapter 12, Selection Statements

*NB. This homework will not guide you step-by-step as in prior assignments, but will give general goals and allow you to accomplish them on your own, with terminal captures only at the end.*

Create a script (in your $HOME/script directory) called test-conditions. In the script, initialize two variables varA and varB, and set them to different integer (whole number) values of your choice. Your script will then test the values and output one of these messages as appropriate:

“varA, with a value of <<>>, is greater than varB, with a value of <<>>”

“varB, with a value of <<>>, is greater than varA, with a value of <<>>”

“varA and varB have the same value, which is <<>>”

Of course, <<>> is a placeholder for the appropriate number (don’t “hard code” the numbers in your echo statement, use the variables once you have assigned values to them).

* In this script use the square bracket notation for testing conditions, and use the if-elif-else structured command to control the flow.
* cat test-conditions, then run test-conditions, and capture that part of the terminal interactions below.

>>>>>Paste your terminal capture below this line >>>>>

**andrew@andrew-VirtualBox**:**/home**$ sudo mkdir scriptdirectory

[sudo] password for andrew:

**andrew@andrew-VirtualBox**:**/home**$ ls

**andrew**  **koenigtest**  **scriptdirectory**  **scripts\_hw**

**andrew@andrew-VirtualBox**:**/home**$ touch test-conditions.txt

touch: cannot touch 'test-conditions.txt': Permission denied

**andrew@andrew-VirtualBox**:**/home**$ sudo touch test-conditions.txt

**andrew@andrew-VirtualBox**:**/home**$ sudo nano test-conditions.txt

**andrew@andrew-VirtualBox**:**/home**$ test-conditions.txt

test-conditions.txt: command not found

**andrew@andrew-VirtualBox**:**/home**$ /home/.

bash: /home/.: Is a directory

**andrew@andrew-VirtualBox**:**/home**$ nano test-conditions.txt

**andrew@andrew-VirtualBox**:**/home**$ touch test-conditions.sh

touch: cannot touch 'test-conditions.sh': Permission denied

**andrew@andrew-VirtualBox**:**/home**$ nano touch test-conditions.sh

**andrew@andrew-VirtualBox**:**/home**$ ls

**andrew**  **koenigtest**  **scriptdirectory**  **scripts\_hw**  test-conditions.txt

**andrew@andrew-VirtualBox**:**/home**$ chmod 777 /home/

chmod: changing permissions of '/home/': Operation not permitted

**andrew@andrew-VirtualBox**:**/home**$ sudo chmod 777 /home/

**andrew@andrew-VirtualBox**:**/home**$ rm test-conditions.txt

rm: remove write-protected regular file 'test-conditions.txt'? y

**andrew@andrew-VirtualBox**:**/home**$ ls

**andrew**  **koenigtest**  **scriptdirectory**  **scripts\_hw**

**andrew@andrew-VirtualBox**:**/home**$ touch test-conditions.sh

**andrew@andrew-VirtualBox**:**/home**$ nano test-conditions.sh

**andrew@andrew-VirtualBox**:**/home**$ ./test-conditions.sh

bash: ./test-conditions.sh: Permission denied

**andrew@andrew-VirtualBox**:**/home**$ sudo ./test-conditions.sh

sudo: ./test-conditions.sh: command not found

**andrew@andrew-VirtualBox**:**/home**$ cat test-conditions.sh

#!/bin/bash

varA=22

varB=13

if varA > varB

then

    echo "varA, with a value of $varA, is greater than varB, with a value of $varB"

elif

then

    echo "varB, with a value of $varB, is greater than varA, wit ha value of $varA"

fi

**andrew@andrew-VirtualBox**:**/home**$ nano test-conditions.sh

**andrew@andrew-VirtualBox**:**/home**$ chmod 777 test-conditions.sh

**andrew@andrew-VirtualBox**:**/home**$ chmod u+x test-conditions.sh

**andrew@andrew-VirtualBox**:**/home**$ ./test-conditions.sh

varA, with a value of 22, is greater than varB, with a value of 13

**andrew@andrew-VirtualBox**:**/home**$

<<<<< Paste your terminal capture above this line <<<<<

# Part 3: Submit your assignment to Blackboard

***NB. There is no quiz for this week!***

# Rubric: 50 points

Part 2: The Pipe Command, 21 points (3 points per each step instruction)

Part 3: test-conditions script, 29 points

* + Accurate output, 15 points;
  + Follows instructions, 14 points.