# CS2750 MidTerm

## Name:

#### True/False 1 point each (10 Questions)

1. True / False If a user has no read permissions for a particular directory, they will not be able to access the files within the directory or any files in any subdirectories.
2. True / False The tr command is used for enforcing line width within a file.
3. True / False The | operator redirects a program's standard output to overwrite the contents of a file.
4. True / False The pwd command prints the path to the working directory.
5. True / False. The commands fgrep and egrep are both accessible as flags from grep.
6. True / False The i-node is a list of mounted i/o devices.
7. True / False It is impossible to assign a value to a bash variable outside of a bash script.
8. True / False . refers to a directory's parent directory.
9. True / False. All positional parameters can be accessed by using $@
10. True / False tar allows for a user to remotely transfer data to and from a remote server.

#### Multiple Choice 4 points each (10 questions)

1. Given the a directory with the files:

* file\_1 file\_2 file\_3 file\_a file\_b file\_c
* Which of the following commands will list only: file\_3, file\_a, file\_b:
  + ls file\_[0-9]
  + ls file\_[ab3]
  + ls file\_[12ab]
  + ls file\_\*

1. Which of the following code snippets will result in the output:

* Neato Mosquito
* #!/bin/bash  
    
  someString="Neato|Mosquito"  
    
  #### CODE SNIPPET GOES HERE  
    
  for something in $someList  
  do  
   echo $something  
  done
  + IFS='|'  
    read -ra someList <<< "$someString"
  + someList=$(split someString)
  + someList=$(split someString ',')
  + IFS=','  
    read -ra someList <<< "$someString"

1. Which of the following commands will take the shell script takeforever.sh from the background into the foreground?

* ./takeforever.sh &  
  [1] 15828
  + ./takeforever.sh &
  + fg takeforever.sh
  + ./teakforever.sh
  + fg 1

1. Given that the most recent command in the shells is ls -la cs2750, which of the following commands would change and update the command to be ls -la cs3010
   * $2750!3010
   * ^cs3010^cs2750
   * [2750]3010
   * ^2750^3010
2. Given the file: faculty\_summer\_2020.csv

* firstName, lastName, email, phone, currentClass, className  
  Shawna, Climer, climersh@umsl.edu, , 1250, Introduction to Computing  
  Fadi, Wedyan, wedyanf@umsl.edu, , 1250, Introduction to Computing  
  Nazire, Koc, kocn@umsl.edu, 314-516-6356, 2250, Programming andDatastructures  
  Steve, Riegerix, riegerixs@umsl.edu, , 2261, Object Oriented Programming  
  Ankit, Chaudhary, chaudharya@umsl.edu, 314-516-4984, 2700, Computer Organization and Hardware  
  Matthew, Lane, mjlny2@umsl.edu, 314-282-7563, 2750, System Programming and Tools  
  Steve, Reigerix, riegerixs@umsl.edu, , 3010, Web Programming  
  Gregory, Hommert, gmhz7b@umsl.edu, , 4220, Introduction to iOS Programming and Apps  
  Galina, Piatnitskaia, piatnitskaiag@umsl.edu, 314-516-5239, 4250, Programming Languages  
  Mark, Hauschild, hauschildm@umsl.edu, 314-516-6426, 4732, Introduction to Cryptography for Computer Security
* Which of the following commands will sort the file by course number?
  + sort -k5 -t, faculty\_summer\_2020.csv
  + sort -k6 -t, faculty\_summer\_2020.csv
  + sort -t, faculty\_summer\_ssoid\_2020.csv
  + sort -k1 faculty\_summer\_ssoid\_2020.csv

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* Which of the following commands will update the the field currentClass to courseNumber?
  + sed '/currentClass/d' faculty\_summer\_2020.csv
  + sed '/currentClass/courseNumber/G' faculty\_summer\_2020.csv
  + sed 's/currentClass/d' faculty\_summer\_2020.csv
  + sed 's/currentClass/courseNumber/' faculty\_summer\_2020.csv

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* Which of the following grep commands will retrieve only users with phone numbers in the previous data:
  + grep [a-z] faculty\_summer\_2020.csv
  + grep [a-z]\*@ faculty\_summer\_2020.csv
  + grep (a-z)\* faculty\_summer\_2020.csv
  + grep {a-z}\*5 faculty\_summer\_2020.csv

1. Given the code:

* #!/bin/bash  
    
  continue="no"  
  count=1  
  ############# CODE HERE #########  
  do  
   if [[ count -ge "3" ]]  
   then  
   continue="yes"  
   fi  
    
   echo Hello $((count++))  
     
  done  
    
  echo The program is over
* Which of the following lines of code is required at line 5 in order to have the output:
* Hello 1
* Hello 2
* The program is over
  + until [[ $continue = "no" ]]
  + while [[ $continue = "no" ]]
  + for [[ i=0; i < $count; i++ ]]
  + for (( i=0; i < count; i++))

1. Which of the following commands will find all shell files, and add read and write permissions for all users?
   * find . -name '\*.sh' < chmod 700 {}
   * find . -name '\*.sh' -exec chmod a+rw {} \;
   * find . -name '\*.txt' -exec chmod a-rw {} \;
   * find \*.txt
2. Given a file, twoHundredLines.txt that is 200 lines long, which of the following commands would you need to use to read lines 100 through 125?
   * head -n 125 twoHundredLines.txt | tail -n 50
   * head -n 75 twoHundredLines.txt | tail -n 125
   * head -n 125 twoHundredLines.txt | tail -n 25
   * head -n 50 twoHundredLines.txt | tail -n 50

#### Short Answer 5 points each (8 questions) (be sure to read the questions carefully)

1. List the directories and files created from the following command:

* mkdir some{Dir,dir}ectory\_{a,b} && touch some{Dir,dir}ectory\_a/file1\_{one,two}

1. Write a short bash script that reads input from standard in, and changes all input to **lower** case.



1. Write a short bash script that throws an error "Error, undefined variable" if a variable is undefined.



1. Write a grep command that will search history for all previous commands that used a substitution script and redirect the output to a file called substitution.txt



1. Write a command or script that displays only files that have less than 400 bytes



1. Write a sed command that changes all tilde delimited data of a file tildes.csv to tilde delimited data, and save it to a file pipes.csv



1. Write a short bash script that takes in command line arguments, compares them, and returns whether or not the first argument string is greater, less than, or equal to the second argument string.



1. Write a brief script that will loop retrieve only directories in the working directory, and then store those directories into a single variable



#### Long Answer 10 pts

1. Write a bash script that prompts a user with a menu of choices:
   1. Get the total number of files from the current directory
   2. Get the total size of all the c files from the current directory
   3. Get the total number of empty files in the system from the current directory

* Each option must be its own specific function.