**Quiz 7**

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All Shell scripts should display usage function, they should also validate input arguments to be correct, use fuctions and recursion as much as possible.

1. Write a shell script to find the number of lines in a list of files using sed.

You should write a for loop to go through all files in a directory and then count the number of lines in each file, display it as:

./script <Full path to directory>

File1 has 45 lines

File2 has 20 lines

2 Files in total, 65 lines in total

2. Write a shell script to substitute one pattern for another in a text file.

./script.sh oldpatternnewpattern

Ans: #!/bin/bash

# subst1

ARGS=3

E\_BADARGS=65

if [ $# -ne "$ARGS" ]

then

echo "Usage: `basename $0` old-pattern new-pattern filename"

exit $E\_BADARGS

fi

old\_pattern=$1

new\_pattern=$2

if [ -f "$3" ]

then

file\_name=$3

else

echo "File \"$3\" does not exist."

exit $E\_BADARGS

fi

mv $file\_name $file\_name.bak

sed -e "s/$old\_pattern/$new\_pattern/g" $file\_name.bak > $file\_name

exit 0

3. Write a shell script to print complete pathname associated with pid. User has to pass the PID from command line.

./script.sh PID

4. Write a shell script to print all users on system using awk.

Hint: Learn what is /etc/passwd file in Linux

Ans: #!/bin/bash

awk -F: '{print $1}' /etc/passwd

5. Write a shell script to list the frequency of words used in a file.

Hint: Sort and uniq commands will help

Ans: I’m writeing for 10 more common words

#!/bin/bash

tr -c '[:alnum:]' '[\n\*]' < test.txt | sort | uniq -c | sort -nr | head -10

6. Write a script to take backup of files changed in last 24 hours and archive them.

Hint: Read the Find command tutorial in Linux folder. We typically take backups of a folder by “tar”-ring the entire folders.

Ans:find / backup/logs \! -type d -print > /tmp/filelist.daily

7. Write a shell script to determine if a particular service is active or not. For eg: if SSH service is active it should display yes and vice versa. Use netstat ,ps commands etc

8. Write a shell script to remove spaces from filenames and replace it with underscore

Hint: you can use mv command to re-name files

**Ans: #!/bin/bash**

**ls | while read -r FILE**

**do**

**mv -v "$FILE" `echo $FILE | tr ' ' '\_' | tr -d '[{}(),\!]' | tr -d "\'" | tr '[A-Z]' '[a-z]' | sed 's/\_-\_/\_/g'`**

**done**

9. Write a shell script which prints the df output in more formatted way as below

Filesystem Size Used Avail Capacity Mounted

/dev/sda1 446.71G 18.11G 405.88G 5% /

udev 10M 0 10M 0% /dev

tmpfs 1.14G 9.16M 1.13G 1% /run

10. Write a shell script to summarize available disk space and present in a logical and readable fashion

Ans: #!/bin/sh

# diskspace - Summarizes available disk space and presents it in a logical

# and readable fashion.

tempfile="/tmp/available.$$" trap "rm -f $tempfile" EXIT

cat << 'EOF' > $tempfile

{ sum += }

END { mb = sum / 1024

gb = mb / 1024

printf "%.0f MB (%.2fGB) of available disk space\n", mb, gb

}

EOF df -k awk -f $tempfile exit 0

11. Write a shell function to rename .txt files to .text