**Quiz 4**

1. Write a script to delete blank lines in a file. Use cat and awk

[osboxes@osboxes Documents]$ cat Lahiru.txt

#!/bin/bash

echo "Hello"

echo "This is Lahiru"

echo "What's up?"

[osboxes@osboxes Documents]$ awk 'NF > 0' Lahiru.txt > Out.txt

[osboxes@osboxes Documents]$ cat Out.txt

#!/bin/bash

echo "Hello"

echo "This is Lahiru"

echo "What's up?"

2. Write a script to delete duplicate lines

[osboxes@osboxes Documents]$ vi Lahiru.txt

[osboxes@osboxes Documents]$ cat Lahiru.txt

#!/bin/bash

"Hello"

"Hello"

"This is Lahiru"

"This is Lahiru"

"What's up?"

"What's up?"

1234|1234

1234|1234

[osboxes@osboxes Documents]$ awk '!seen[$0]++' Lahiru.txt

#!/bin/bash

"Hello"

"This is Lahiru"

"What's up?"

1234|1234

3. Write a shell script to delete a directory tree.

./script.sh <directory>

[osboxes@osboxes Linux\_Stellar]$ vi newfile.sh

[osboxes@osboxes Linux\_Stellar]$ ls

2.py ls\_output newfile.sh NewFile.txt Test\_1 Test\_2

[osboxes@osboxes Linux\_Stellar]$ bash newfile.sh

Please type the name of the directory you wish to remove!

Linux\_Stellar

There are files in this directory!

newfile.sh: line 16: syntax error near unexpected token `;;'

newfile.sh: line 16: `;;'

Shell Script

#!/bin/bash

echo "Please type the name of the directory you wish to remove!"

read dName

shopt -s nullglob

shopt -s dotglob

directory=$Dname

if [ ${#directory[@]} -gt 0 ];

then

echo "There are files in this directory! ";

else

echo "This directory is ready to be deleted! "

fi

;;

4. Write a shell script to see if a process is running.

Hint: Parse output of ps command

[osboxes@osboxes Linux\_Stellar]$ vi newfile1.sh

[osboxes@osboxes Linux\_Stellar]$ bash newfile1.sh

PID TTY TIME CMD

PID TTY TIME CMD

PID TTY TIME CMD

osboxes 22440 0.0 0.0 112712 940 pts/0 R+ 15:13 0:00 grep nginx

osboxes 22442 0.0 0.0 112712 980 pts/0 R+ 15:13 0:00 grep -E -i (nginx|httpd)

Shell Script

#!/bin/bash

ps -C daemon

ps -C nginx

ps -C httpd

ps aux | grep nginx

ps aux | egrep -i "(nginx|httpd)"

5. Write a shell script to display the following:

Hostname, disk space usage, free & used memory, uptime and logged in users.

[osboxes@osboxes Documents]$ vi systeminfo.sh

[osboxes@osboxes Documents]$ chmod +x systeminfo.sh

[osboxes@osboxes Documents]$ ./systeminfo.sh

\*\*\*\*\* HOSTNAME INFORMATION \*\*\*\*\*

Static hostname: osboxes

Icon name: computer-vm

Chassis: vm

Machine ID: 5bd1513401ee49449329603b92b4bc5c

Boot ID: bfac79a375af45cbb6055fe03f5b86a8

Virtualization: kvm

Operating System: CentOS Linux 7 (Core)

CPE OS Name: cpe:/o:centos:centos:7

Kernel: Linux 3.10.0-1062.9.1.el7.x86\_64

Architecture: x86-64

\*\*\*\*\* FILE SYSTEM DISK SPACE USAGE \*\*\*\*\*

./systeminfo.sh: line 8: df-h: command not found

\*\*\*\*\* FREE AND USED MEMORY \*\*\*\*\*

total used free shared buff/cache available

Mem: 1882136 676960 308776 25392 896400 1015016

Swap: 8388604 0 8388604

\*\*\*\*\* SYSTEM UPTIME AND LOAD \*\*\*\*\*

16:00:36 up 6:14, 2 users, load average: 0.04, 0.05, 0.05

\*\*\*\*\* CURRENTLY LOGGED-IN USERS \*\*\*\*\*

osboxes :0 2020-02-06 09:47 (:0)

osboxes pts/0 2020-02-06 15:27 (:0)

\[1;32mDone.

Shell Script

#!/bin/bash

echo -e "\e[31;43m\*\*\*\*\* HOSTNAME INFORMATION \*\*\*\*\*\e[0m"

hostnamectl

echo""

echo -e "\e[31;43m\*\*\*\*\* FILE SYSTEM DISK SPACE USAGE \*\*\*\*\*\e[0m"

df-h

echo""

echo -e "\e[31;43m\*\*\*\*\* FREE AND USED MEMORY \*\*\*\*\*\e[0m"

free

echo""

echo -e "\e[31;43m\*\*\*\*\* SYSTEM UPTIME AND LOAD \*\*\*\*\*\e[0m"

uptime

echo""

echo -e "\e[31;43m\*\*\*\*\* CURRENTLY LOGGED-IN USERS \*\*\*\*\*\e[0m"

who

echo""

echo -e "\[1;32mDone.\e[0m"

6. Write a shell script to display syntax of a given command

[osboxes@osboxes Documents]$ man pwd

7. Write a shell to check if a command is in PATH directory list

[osboxes@osboxes Documents]$ vi Lahiru.sh

[osboxes@osboxes Documents]$ bash Lahiru.sh

Shell Script

#!/bin/bash

man pwd

8. Write a shell script to transfer a file using ftp and scp.

Read about how to use ftp and scp commands in scripts. Come up with your own example.

[osboxes@osboxes ~]$ vi ftotrans.sh

[osboxes@osboxes ~]$ bash ftotrans.sh

Connected to ftp.osboxes.org (108.167.143.64).

220---------- Welcome to Pure-FTPd [privsep] [TLS] ----------

220-You are user number 6 of 150 allowed.

220-Local time is now 16:35. Server port: 21.

220-IPv6 connections are also welcome on this server.

220 You will be disconnected after 15 minutes of inactivity.

Remote system type is UNIX.

Using binary mode to transfer files.

221-Goodbye. You uploaded 18 and downloaded 97 kbytes.

221 Logout.

Shell Script

FTP

#!/bin/bash

HOST=osboxes

USER=osboxes

PASSWORD=osboxes.org

ftp -inv $HOST <<EOF

osboxes $USER $PASSWORD

cd /Documents

mput \*.txt

bye

EOF

SCP

[osboxes@osboxes Documents]$ scp /home/osboxes/Documents/Output1.txt osboxes@osboxes://home/osboxes/Documents/SCP

9. Write a shell script to delete files older than a week.

[osboxes@osboxes Documents]$ vi delete.sh

[osboxes@osboxes Documents]$ bash delete.sh

Shell Script

#!bin/bash

find . -mtime +7 -name '\*.txt' -type f -delete

#finds and deletes 7 days old files with TXT extension

11. Write a shell script that Searches down the directory tree from current directory, change the group owner of files in a directory to another group.

You should also check if new group exists, else, error out.

./script.sh oldgroup newgroup

[osboxes@osboxes ~]$ tree Documents

Documents

├── Classnotes3

├── delete.sh

├── Feb\ 3rd\ 2020

├── file.txt

├── Half1

├── Lahiru.sh

├── Lahiru.txt

├── listorder.sh

├── ls

├── Newfile.txt

├── osboxes@osboxes

├── Output1.txt

├── out.txt

├── Out.txt

├── SCP

├── searchtree.sh

└── systeminfo.sh

1 directory, 16 files

[osboxes@osboxes ~]$ tree Documents | grep delete.sh

├── delete.sh

12. Write a shell script to list files in size order, smallest first.

#!/bin/bash

ls -s | sort -n > file.txt