

UNIX-LAB

Assignment-07

Name:G Kalyan Ram

Roll no:422150

Sec-A

- Q. 1. Write shell script for
commands: more,nl,nice,passwd,pr,rlogin,rcp,rsh,t
alk,telnet,tput,tty,uname,wc,who,write
2. Write a shell script that list the memory usage
and cpu usage of multiple machines

Q1)

```
#!/bin/bash
```

```
# more command
```

```
cat sample.txt
```

```
echo " "  
echo " more -d sample.txt"  
more -d sample.txt  
echo " "  
echo "more -f sample.txt"  
more -f sample.txt  
# more -p sample.txt  
# more -c sample.txt  
echo " "  
echo "more -u sample.txt"  
more -u sample.txt  
echo " "  
echo "more -s sample.txt"  
more -s sample.txt  
echo " "  
echo "more +5 sample.txt"  
more +5 sample.txt  
echo " "  
echo "mmore +/Lorem sample.txt"  
more +/Lorem sample.txt  
echo " "
```

```
# nl command
nl file1.txt
echo ""
nl -b a file1.txt
echo ""
nl -l 1 file1.txt
echo ""
nl -i3 file1.txt
echo ""
nl -v4 file1.txt
echo ""
nl -s "..." file1.txt
echo ""
nl -w2 file1.txt
nl -w4 file1.txt
nl -w6 file1.txt
echo ""
nl -n ln file1.txt
nl -n rn file1.txt
nl -n rz file1.txt
echo ""
```

#nice command

ps -el | grep terminal

echo ""

nice -10 gnome-terminal

echo ""

nice --10 gnome-terminal

echo ""

sudo renice -n 15 -p 2732

echo ""

#renice -n 10 -g 1

echo ""

#sudo renice -n 10 -u 1

echo ""

passwd command

sudo passwd root

echo ""

passwd kalyan422150

echo ""

#pr command

cat file1.txt

echo ""

pr -3 file1.txt

echo ""

pr -t file1.txt

echo ""

pr -d file1.txt

echo ""

pr -n file1.txt

echo ""

pr -h "header" file1.txt

echo ""

pr --version

echo ""

#rlogin command

rlogin -l kalyan422150 kalyan422150

echo ""

rlogin -T terminal_type kalyan422150

echo ""

#rcp command

rcp kalyan422150:file1.txt

echo ""

rcp -p kalyan422150:one/file1.txt

echo ""

#telnet command

telnet localhost

logout

echo ""

#tput command

tput init

echo ""

tput reset

echo ""

tput longname

echo ""

tput -V

echo ""

#tty command

tty

tty -s

tty --version

#uname command

echo ""

uname -a

echo ""

uname -s

echo ""

uname -n

echo ""

uname -r

echo ""

uname -v

echo ""

uname -m

echo ""

uname -p

echo ""

uname -i

echo ""

uname -o

#wc command

wc file1.txt

echo ""

wc file2.txt

echo ""

wc file1.txt file2.txt

echo ""

wc -l file1.txt

echo ""

wc -l file1.txt file2.txt

echo ""

wc -w file1.txt

echo ""

wc -w file1.txt file2.txt

echo ""

wc -c file1.txt

echo ""

wc -c file1.txt file2.txt

echo ""

wc -m file1.txt

echo ""

wc -m file1.txt file2.txt

echo ""

wc -L file1.txt

echo ""

wc -L file1.txt file2.txt

echo ""

#who command

who -a

echo ""

who -b

echo ""

who -d

echo ""

who -H

echo ""

who -l

echo ""

who -m

echo ""

who -p

echo ""

who -q

echo ""

who -r

echo ""

who -s

echo ""

who -t

echo ""

who -u

echo ""

#write command

write -V

Output:

```
simhadri@simhadri-VirtualBox:~$ ./assign.sh
zxcvbnm
ertyui
123456
```

```
more -d sample.txt
zxcvbnm
ertyui
123456
```

```
more -f sample.txt
zxcvbnm
ertyui
123456
```

```
more -u sample.txt
zxcvbnm
ertyui
123456
```

```
more -s sample.txt
zxcvbnm
ertyui
123456
```

```
more +5 sample.txt
```

```
mmore +/Lorem sample.txt
Pattern not foundzxcvbnm
ertyui
123456
```

```
1 hello
2 hi
3 good morning

1 hello
2 hi
3 good morning

1 hello
2 hi
3 good morning

1 hello
4 hi
7 good morning

4 hello
5 hi
6 good morning

1...hello
2...hi
3...good morning

1      hello
2      hi
3      good morning
  1      hello
  2      hi
  3      good morning
    1      hello
    2      hi
    3      good morning
1      hello
2      hi
3      good morning
  1      hello
```

```
1 hello
2 hi
3 good morning
000001 hello
000002 hi
000003 good morning

0 S 1000 4449 2646 0 80 0 - 146687 do_pol ? 00:00:34 gnome-terminal-
0 S 1000 21015 20393 0 80 0 - 11138 do_wai ? 00:00:00 gnome-terminal
0 S 1000 21016 21015 0 80 0 - 97956 do_pol ? 00:00:00 gnome-terminal.
```

nice: cannot set niceness: Permission denied

renice: failed to get priority for 2732 (process ID): No such process

New password: █

```
xterm with 256 colors
ncurses 6.3.20211021

/dev/pts/3
tty (GNU coreutils) 8.32
Copyright (C) 2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by David MacKenzie.

Linux sinhadri-VirtualBox 6.5.0-27-generic #28-22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Fri Mar 15 10:51:06 UTC 2 x86_64 x86_64 x86_64 GNU/Linux
Linux
sinhadri-VirtualBox
6.5.0-27-generic
#28-22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Fri Mar 15 10:51:06 UTC 2
x86_64
x86_64
x86_64
GNU/Linux
3 4 24 file1.txt
3 3 24 file2.txt
3 4 24 file1.txt
3 3 24 file2.txt
6 7 48 total
```

```
6 7 48 total
3 file1.txt
3 file1.txt
3 file2.txt
6 total
4 file1.txt
4 file1.txt
3 file2.txt
7 total
24 file1.txt
24 file1.txt
24 file2.txt
48 total
24 file1.txt
24 file1.txt
24 file2.txt
48 total
12 file1.txt
12 file1.txt
12 file2.txt
12 total
system boot 2024-04-10 15:17
run-level 5 2024-04-10 15:18
sinhadri + tty2 2024-04-10 15:19 03:35 2712 (tty2)
pts/1 2024-04-10 15:43 11840 id=ts/1 term=0 exit=0
pts/0 2024-04-10 18:52 14229 id=ts/0 term=0 exit=0
pts/3 2024-04-10 16:09 19101 id=ts/3 term=0 exit=5
pts/6 2024-04-10 18:50 22703 id=ts/6 term=0 exit=0
```

```

sinhadri + tty2      2024-04-10 15:19 03:35      2712 (tty2)
pts/1                2024-04-10 15:43      11849 id=ts/1 term=0 exit=0
pts/0                2024-04-10 18:52      14229 id=ts/0 term=0 exit=0
pts/3                2024-04-10 16:09      19101 id=ts/3 term=0 exit=5
pts/6                2024-04-10 18:50      22703 id=ts/6 term=0 exit=0
pts/2                2024-04-10 18:53      23399 id=ts/2 term=0 exit=0

system boot 2024-04-10 15:17

pts/1                2024-04-10 15:43      11849 id=ts/1 term=0 exit=0
pts/0                2024-04-10 18:52      14229 id=ts/0 term=0 exit=0
pts/3                2024-04-10 16:09      19101 id=ts/3 term=0 exit=5
pts/6                2024-04-10 18:50      22703 id=ts/6 term=0 exit=0
pts/2                2024-04-10 18:53      23399 id=ts/2 term=0 exit=0

NAME  LINE  TIME  COMMENT
sinhadri tty2      2024-04-10 15:19 (tty2)

sinhadri
# users=1

run-level 5 2024-04-10 15:18

sinhadri tty2      2024-04-10 15:19 (tty2)

sinhadri tty2      2024-04-10 15:19 03:35      2712 (tty2)

write from util-linux 2.37.2
sinhadri@sinhadri-VirtualBox: $

```

Q2)

```
#!/bin/bash
```

```
# Define the list of remote machines
```

```
machines=("student@192.168.148.27"
"student@192.168.148.31")
```

```
# Iterate over each machine and retrieve memory and CPU
usage
```

```
for machine in "${machines[@]}; do
```

```
    echo "Memory and CPU usage for $machine:"
```

```
    # SSH into the remote machine and retrieve memory usage
```

```
    echo "Memory Usage:"
```

```
ssh "$machine" 'free -m'
```

```
# SSH into the remote machine and retrieve CPU usage
```

```
echo "CPU Usage:"
```

```
ssh "$machine" 'mpstat'
```

```
echo
```

```
done
```

Output:

```
simhadri@simhadri-VirtualBox:~$ ./second.sh
Memory and CPU usage for simhadri@10.0.2.15:
Memory Usage:
      total        used        free      shared  buff/cache   available
Mem:      7741        1022        4954         50       1764        6415
Swap:      2047           0        2047
CPU Usage:
Linux 6.5.0-27-generic (simhadri-VirtualBox) 10/04/24      _x86_64_      (8 CPU)

03:31:06 PM IST  CPU    %usr   %nice    %sys %iowait    %irq   %soft  %steal   %guest   %gnice   %idle
03:31:06 PM IST  all     1.04    0.05    2.96    1.00    0.00    1.07    0.00    0.00    0.00    93.87

Memory and CPU usage for naruto@10.0.2.15:
Memory Usage:
      total        used        free      shared  buff/cache   available
Mem:      7741        1034        4942         51       1764        6402
Swap:      2047           0        2047
CPU Usage:
Linux 6.5.0-27-generic (simhadri-VirtualBox) 10/04/24      _x86_64_      (8 CPU)

03:31:08 PM IST  CPU    %usr   %nice    %sys %iowait    %irq   %soft  %steal   %guest   %gnice   %idle
03:31:08 PM IST  all     1.05    0.05    3.01    1.00    0.00    1.08    0.00    0.00    0.00    93.80
```