

ASSIGNMENT 7

ROLL NO: 422180

Name: VEERAJA V

SEC: A

Q) Write shell script for

commands : more,nl,nice,passwd,pr,rlogin,rcp,rsh,talk,telnet,tput,ty,uname,wc,who,write

Individual command screenshots:

MORE COMMAND

```
veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x v
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ ls
commandsexec.sh dummytext.txt
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ head -n 5 dummytext.txt
country,name,postalZip
Spain,Cleo Gallegos,74874
United States,Noelle Dodson,181984
Nigeria,Barbara Avery,34972-85676
Netherlands,Lars Blankenship,5255-6843
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ more dummytext.txt
country,name,postalZip
Spain,Cleo Gallegos,74874
United States,Noelle Dodson,181984
Nigeria,Barbara Avery,34972-85676
Netherlands,Lars Blankenship,5255-6843
Nigeria,Chelsea McFarland,4107
Vietnam,Caleb Golden,21304
Colombia,Basia Thompson,311312
South Korea,Lester Gordon,61827
Colombia,Chandler Finch,308152
Mexico,Knox Vaughn,32283
Costa Rica,Ila McKay,237768
United Kingdom,Erasmus Collier,4374
Peru,Florence Tyler,65318-536
United States,Rogan Phelps,734427
Mexico,Zoe Parsons,9943-4438
Ukraine,Shayne Owens,63748
France,Holmes Byrd,255684
Chile,Wang Lane,B8H 3H8
Peru,Chastity Bates,C8D 5WC
South Africa,Kevyn Wilkins,3747 BE
United States,Vladimir Wallace,188358
Sweden,Olympia Blake,755814
Vietnam,Ainsley Sexton,54760
Canada,Randall Harper,44636
Philippines,Chaim Arnold,84643
Singapore,Robert Vasquez,7756
Singapore,Ferdinand Logan,1022
Turkey,Kameko Vargas,35131
Belgium,Melissa Atkins,B2V 8V3
Brazil,Raphael Cortez,647326
South Africa,Zephania Bailey,18846
Belgium,Acton Kirby,96-73
Norway,Chaney Faulkner,7856 CR
Pakistan,Adara Sanders,11476
```

```
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ more -d dummytext.txt
country,name,postalZip
Spain,Cleo Gallegos,74874
United States,Noelle Dodson,181984
Nigeria,Barbara Avery,34972-85676
Netherlands,Lars Blankenship,5255-6843
Nigeria,Chelsea McFarland,4107
Vietnam,Caleb Golden,21304
Colombia,Basia Thompson,311312
South Korea,Lester Gordon,61827
Colombia,Chandler Finch,308152
Mexico,Knox Vaughn,32283
Costa Rica,Ila McKay,237768
United Kingdom,Erasmus Collier,4374
Peru,Florence Tyler,65318-536
United States,Rogan Phelps,734427
Mexico,Zoe Parsons,9943-4438
Ukraine,Shayne Owens,63748
France,Holmes Byrd,255684
Chile,Wang Lane,B8H 3H8
Peru,Chastity Bates,C8D 5WC
South Africa,Kevyn Wilkins,3747 BE
United States,Vladimir Wallace,188358
Sweden,Olympia Blake,755814
Vietnam,Ainsley Sexton,54760
Canada,Randall Harper,44636
Philippines,Chaim Arnold,84643
Singapore,Robert Vasquez,7756
Singapore,Ferdinand Logan,1022
Turkey,Kameko Vargas,35131
Belgium,Melissa Atkins,B2V 8V3
Brazil,Raphael Cortez,647326
South Africa,Zephania Bailey,18846
Belgium,Acton Kirby,96-73
Norway,Chaney Faulkner,7856 CR
Pakistan,Adara Sanders,11476
Mexico,Tarik Hardin,41685-375
Germany,Kyra Mendoza,30701
France,Anaya Kelly,497811
Netherlands,Melvin Soto,24848-10322
Ukraine,Brock Blair,3413
Netherlands,Patricia Holmes,652413
Netherlands,Reed Boone,669017
```

NL COMMAND

```
veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x v
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ nl -b a dummytext.txt
1 country,name,postalZip
2 Spain,Cleo Gallegos,74874
3 United States,Noelle Dodson,181984
4 Nigeria,Barbara Avery,34972-85676
5 Netherlands,Lars Blankenship,5255-6843
6 Nigeria,Chelsea McFarland,4107
7 Vietnam,Caleb Golden,21304
8 Colombia,Basia Thompson,311312
9 South Korea,Lester Gordon,61827
10 Colombia,Chandler Finch,308152
11 Mexico,Knox Vaughn,32283
12 Costa Rica,Ila McKay,237768
13 United Kingdom,Erasmus Collier,4374
14 Peru,Florence Tyler,65318-536
15 United States,Rogan Phelps,734427
16 Mexico,Zoe Parsons,9943-4438
17 Ukraine,Shaine Owens,63748
18 France,Holmes Byrd,255684
19 Chile,Wang Lane,BBH 3H8
20 Peru,Chastity Bates,CBD SWC
21 South Africa,Kevyn Wilkins,3747 BE
22 United States,Vladimir Wallace,188358
23 Sweden,Olympia Blake,755814
24 Vietnam,Ainsley Sexton,54760
25 Canada,Randall Harper,44636
26 Philippines,Chain Arnold,84643
27 Singapore,Robert Vasquez,7756
28 Singapore,Ferdinand Logan,1022
29 Turkey,Kameko Vargas,35131
30 Belgium,Melissa Atkins,B2V 8V3
31 Brazil,Raphael Cortez,647326
32 South Africa,Zephania Bailey,18846
33 Belgium,Acton Kirby,96-73
34 Norway,Chaney Faulkner,7856 CR
35 Pakistan,Adara Sanders,11476
36 Mexico,Tarik Hardin,41685-375
37 Germany,Kyra Mendoza,30701
38 France,Amaya Kelly,497811
39 Netherlands,Melvin Soto,24848-10322
40 Ukraine,Brock Blair,3413
41 Netherlands,Patricia Holmes,652413
42 Netherlands,Reed Boone,669017
43 Vietnam,Salvador Shepherd,527563
```

```
veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x v
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ nl -n rz dummytext.txt
000001 country,name,postalZip
000002 Spain,Cleo Gallegos,74874
000003 United States,Noelle Dodson,181984
000004 Nigeria,Barbara Avery,34972-85676
000005 Netherlands,Lars Blankenship,5255-6843
000006 Nigeria,Chelsea McFarland,4107
000007 Vietnam,Caleb Golden,21304
000008 Colombia,Basia Thompson,311312
000009 South Korea,Lester Gordon,61827
000010 Colombia,Chandler Finch,308152
000011 Mexico,Knox Vaughn,32283
000012 Costa Rica,Ila McKay,237768
000013 United Kingdom,Erasmus Collier,4374
000014 Peru,Florence Tyler,65318-536
000015 United States,Rogan Phelps,734427
000016 Mexico,Zoe Parsons,9943-4438
000017 Ukraine,Shaine Owens,63748
000018 France,Holmes Byrd,255684
000019 Chile,Wang Lane,BBH 3H8
000020 Peru,Chastity Bates,CBD SWC
000021 South Africa,Kevyn Wilkins,3747 BE
000022 United States,Vladimir Wallace,188358
000023 Sweden,Olympia Blake,755814
000024 Vietnam,Ainsley Sexton,54760
000025 Canada,Randall Harper,44636
000026 Philippines,Chain Arnold,84643
000027 Singapore,Robert Vasquez,7756
000028 Singapore,Ferdinand Logan,1022
000029 Turkey,Kameko Vargas,35131
000030 Belgium,Melissa Atkins,B2V 8V3
000031 Brazil,Raphael Cortez,647326
000032 South Africa,Zephania Bailey,18846
000033 Belgium,Acton Kirby,96-73
000034 Norway,Chaney Faulkner,7856 CR
000035 Pakistan,Adara Sanders,11476
000036 Mexico,Tarik Hardin,41685-375
000037 Germany,Kyra Mendoza,30701
000038 France,Amaya Kelly,497811
000039 Netherlands,Melvin Soto,24848-10322
000040 Ukraine,Brock Blair,3413
000041 Netherlands,Patricia Holmes,652413
000042 Netherlands,Reed Boone,669017
000043 Vietnam,Salvador Shepherd,527563
```

```
veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x v
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ nl -l 10 dummytext.txt
1 country,name,postalZip
11 Spain,Cleo Gallegos,74874
21 United States,Noelle Dodson,181984
31 Nigeria,Barbara Avery,34972-85676
41 Netherlands,Lars Blankenship,5255-6843
51 Nigeria,Chelsea McFarland,4107
61 Vietnam,Caleb Golden,21304
71 Colombia,Basia Thompson,311312
81 South Korea,Lester Gordon,61827
91 Colombia,Chandler Finch,308152
101 Mexico,Knox Vaughn,32283
111 Costa Rica,Ila McKay,237768
121 United Kingdom,Erasmus Collier,4374
131 Peru,Florence Tyler,65318-536
141 United States,Rogan Phelps,734427
```

PR COMMAND

```
veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7 x v
(base) veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7$ pr -h "Header" dummytext.txt

2024-04-10 22:43 Header Page 1

country,name,postalZip
Spain,Cleo Gallegos,74874
United States,Noelle Dodson,181984
Nigeria,Barbara Avery,34972-85676
Netherlands,Lars Blankenship,5255-6843
Nigeria,Chelsea McFarland,4107
Vietnam,Caleb Golden,21304
Colombia,Basia Thompson,311312
South Korea,Lester Gordon,61827
Colombia,Chandler Finch,308152
Mexico,Knox Vaughn,32283
Costa Rica,Ila McKay,237768
```

```
2024-04-10 22:43 Header Page 2

Colombia,Hillary Osborne,9140-8874
Austria,Griffin Foley,236640
Spain,Alexander Rogers,17252
United Kingdom,Allen Baird,487668
India,Kennedy Wood,7590-8265
Netherlands,Basil Bowen,17147
United States,Inga Moore,297722
Italy,Allen Powell,654738
Spain,Madelaine Fischer,54312
Norway,Jermaine Goodman,6708
Australia,Nerea Barnes,543614
Chile,Buckminster Petty,63147
Sweden,Xanthus Valentine,66E 8L0
Russian Federation,Robert Wynn,2164
Mexico,Lyle Koch,8726
United Kingdom,Keely Short,554583
Spain,Thane May,01-587
Germany,Grace Ellison,622849
Sweden,Shelly Schmidt,7528-7857
Ukraine,Quyn Scott,3251
Pakistan,Virginia Butler,4897
Indonesia,Audrey Holden,679068
```

```
(base) veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7$ pr -o 10 dummytext.txt

2024-04-10 22:43 dummytext.txt Page 1

country,name,postalZip
Spain,Cleo Gallegos,74874
United States,Noelle Dodson,181984
Nigeria,Barbara Avery,34972-85676
Netherlands,Lars Blankenship,5255-6843
Nigeria,Chelsea McFarland,4107
Vietnam,Caleb Golden,21304
Colombia,Basia Thompson,311312
South Korea,Lester Gordon,61827
Colombia,Chandler Finch,308152
Mexico,Knox Vaughn,32283
Costa Rica,Ila McKay,237768
United Kingdom,Erasmus Collier,4374
Peru,Florence Tyler,65318-536
United States,Rogan Phelps,734427
Mexico,Zoe Parsons,9943-4438
Ukraine,Shaine Owens,63748
France,Holmes Byrd,255684
Chile,Wang Lane,BBH 3H8
Peru,Chastity Bates,CBD 5MC
South Africa,Kevyn Wilkins,3747 BE
United States,Vladimir Wallace,188358
Sweden,Olympia Blake,755814
Vietnam,Ainsley Sexton,54760
Canada,Randall Harper,44636
Philippines,Chain Arnold,84643
Singapore,Robert Vasquez,7756
Singapore,Ferdinand Logan,1022
Turkey,Kaneko Vargas,35131
Belgium,Melissa Atkins,B2V 8V3
Brazil,Raphael Cortez,647326
South Africa,Zephania Bailey,18846
Costa Rica,Ila McKay,237768
```

TTY, uname, wc and who Commands

```
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ tty
/dev/pts/0
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ uname
Linux
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ uname -s
Linux
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ uname -r
6.5.0-21-generic
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ uname -m
x86_64
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ wc dummytext.txt
 102  227 3006 dummytext.txt
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ wc -l dummytext.txt
102 dummytext.txt
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ wc -w dummytext.txt
227 dummytext.txt
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ wc -c dummytext.txt
3006 dummytext.txt
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who
veeraja    tty2            2024-04-10 22:26 (tty2)
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who -q
veeraja
# users=1
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who -a
      system boot  2024-04-10 22:25
      run-level 5  2024-04-10 22:26
veeraja  +  tty2            2024-04-10 22:26 00:22          2871 (tty2)
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who -b
      system boot  2024-04-10 22:25
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who -d
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who --ips
veeraja  tty2            2024-04-10 22:26 (tty2)
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who -l
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who -p
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who -q
veeraja
# users=1
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who -r
      run-level 5  2024-04-10 22:26
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who -t
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ who -u
veeraja  tty2            2024-04-10 22:26 00:23          2871 (tty2)
```

TPUT COMMAND

```
veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7  x  veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7  x  veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7  x  veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7  x  v
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ tput init
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ tput cup 0 0
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ tput cols
177
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ tput cup 23 4

(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ tput cup
%p1kd;%p2kdH(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ tput cup
%p1kd;%p2kdH(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ tput longname
xterm with 256 colors(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ tput setaf 2 && echo "Colored Text" && tput sgr0
Colored Text
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$
```

rlogin and rsh commands

```
veeraja@veeraja-VirtualBox ~/Des... x veeraja@veeraja-VirtualBox ~/Des... x veeraja@veeraja-VirtualBox ~ x veeraja@veeraja-VirtualBox ~/Des... x veeraja@veeraja-VirtualBox ~/Des... x
(base) veeraja@veeraja-VirtualBox:~$ rlogin -l veeraja 10.0.2.15
veeraja@10.0.2.15's password:
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.5.0-21-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

Expanded Security Maintenance for Applications is not enabled.

159 updates can be applied immediately.
45 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

6 additional security updates can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

Last login: Wed Apr 10 23:31:12 2024 from 10.0.2.15
(base) veeraja@veeraja-VirtualBox:~$ echo 'hello'
hello
(base) veeraja@veeraja-VirtualBox:~$ rsh 10.0.2.15 -l veeraja ls -l
veeraja@10.0.2.15's password:
total 44
drwxrwxr-x 28 veeraja veeraja 4096 Dec 22 2022 anaconda3
drwxr-xr-x 6 veeraja veeraja 4096 Apr 6 17:20 Desktop
drwxr-xr-x 2 veeraja veeraja 4096 Dec 20 2022 Documents
drwxr-xr-x 2 veeraja veeraja 4096 Apr 10 22:59 Downloads
drwxrwxr-x 3 veeraja veeraja 4096 Jan 4 18:53 IdeaProjects
drwxr-xr-x 2 veeraja veeraja 4096 Dec 20 2022 Music
drwxr-xr-x 3 veeraja veeraja 4096 Aug 15 2023 Pictures
drwxr-xr-x 2 veeraja veeraja 4096 Dec 20 2022 Public
drwx----- 6 veeraja veeraja 4096 Dec 22 2022 snap
drwxr-xr-x 2 veeraja veeraja 4096 Dec 20 2022 Templates
drwxr-xr-x 2 veeraja veeraja 4096 Dec 20 2022 Videos
(base) veeraja@veeraja-VirtualBox:~$
```

Bash script with all commands(CONTAINS ONLY SOME OPTIONS as compared to screenshots)

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

```
more -d dummytext.txt
```

```
more -c dummytext.txt
```

```
more -s dummytext.txt
```

```
more -u dummytext.txt
```

```
nl -b a dummytext.txt
```

```
nl -b t dummytext.txt
```

```
nl -n rz dummytext.txt
```

```
nl -i 10 dummytext.txt
```

```
echo "Passwd Command:"
```

```
passwd
```

```
echo "PR Command:"
```

```
pr -h "Header" dummytext.txt
```

```
pr -l 50 dummytext.txt
```

```
pr -o 10 dummytext.txt
```

```
pr -w 80 dummytext.txt
```

```
echo "Rlogin Command:"
```

```
rlogin -l veeraja 10.0.2.15
```

```
echo "Rsh Command:"
```

```
rsh 10.0.2.15 -l veeraja ls -l
```

```
echo "Tput Command:"
```

```
tput setaf 2 && echo "Colored Text" && tput sgr0
```

```
echo "Tty Command:"
```

```
tty
```

```
echo "Uname Command:"
```

```
uname -s
```

```
uname -r
```

```
uname -m
```

```
echo "Wc Command:"
```

```
wc -l /path/to/file
```

```
wc -w /path/to/file
```

```
echo "Who Command:"
```

```
who -q
```

Q2) 2. Write a shell script that list the memory usage and cpu usage of multiple machines.

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

```
echo "Free and Used Memory: "
```

```
free
```

```
echo
```

```
echo "Free and Used Memory in Megabytes: "
```

```
free -m
```

```
echo
```

```
echo "CPU usage:"
```

```
mpstat
```

```
echo
```

```
echo "CPU usage on each CPU CORE:"
```

```
mpstat -P ALL
```

```
echo
```

OUTPUT:

```
veeraja@veeraja-VirtualBox: ~/Desktop/unix_lab/assignment7
(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$ ./commands2.sh
Free and Used Memory:
total      used      free      shared  buff/cache   available
Mem:      5913568    1673732    1877412    76160    2362424    3899688
Swap:      2097148         0      2097148

Free and Used Memory in Megabytes:
total      used      free      shared  buff/cache   available
Mem:         5774      1634      1833         74      2307      3808
Swap:        2047         0      2047

CPU usage:
Linux 6.5.0-21-generic (veeraja-VirtualBox)  10/04/24    _x86_64_    (3 CPU)
11:49:53 PM IST  CPU    %usr    %nice    %sys %iowait    %irq    %soft  %steal    %guest    %gnice   %idle
11:49:53 PM IST  all     2.34     0.16     2.41    0.24    0.00    0.50    0.00    0.00    0.00   94.34

CPU usage on each CPU CORE:
Linux 6.5.0-21-generic (veeraja-VirtualBox)  10/04/24    _x86_64_    (3 CPU)
11:49:53 PM IST  CPU    %usr    %nice    %sys %iowait    %irq    %soft  %steal    %guest    %gnice   %idle
11:49:53 PM IST  all     2.34     0.16     2.41    0.24    0.00    0.50    0.00    0.00    0.00   94.34
11:49:53 PM IST  0       2.90     0.27     2.11    0.22    0.00    0.55    0.00    0.00    0.00   93.96
11:49:53 PM IST  1       2.85     0.17     2.22    0.30    0.00    0.36    0.00    0.00    0.00   94.10
11:49:53 PM IST  2       1.28     0.05     2.90    0.21    0.00    0.60    0.00    0.00    0.00   94.96

(base) veeraja@veeraja-VirtualBox:~/Desktop/unix_lab/assignment7$
```