CS256 ASSIGNMENT-7

UNIX AND SHELL SCRIPTING LAB

ROLL NO -422151

SEC-A

1. Write shell script for commands : more,nl,nice,passwd,pr,rlogin,rcp,rsh,talk,telnet,tput,tty,uname,wc,who,write

file1.txt

hello

hi

good morning

good n8

command1.sh

more command

echo "Displaying contents of a file using 'more':"

more file1.txt

```
echo ""

# nl command
echo "Displaying contents of a file with line numbers
using 'nl':"
nl file1.txt
echo ""

# nice command
echo "Displaying process priority using 'nice':"
nice
echo ""

# wc command
echo "Counting lines, words, and characters in a file
using 'wc':"
wc file1.txt
echo ""

# who command
```

```
echo "Displaying currently logged in users using 'who':"
who
echo ""

# pr command
echo "Paginating contents of a file using 'pr':"
pr file1.txt
echo ""

# uname command
echo "Displaying system information using 'uname':"
uname -a
echo ""

# tput command
echo "Getting terminal capabilities using 'tput':"
tput cols
echo ""
```

```
# tty command
echo "Displaying terminal name using 'tty':"
tty
echo ""

# rlogin command
echo "Logging into a remote system using 'rlogin':"
rlogin student@172.50.7.192
echo ""
```

Output:

```
nikesh_reddy@NIKESHREDDY:~/422151$ bash command1.sh
Displaying contents of a file using 'more':
hello
hi
good morning
good n8

Displaying contents of a file with line numbers using 'nl':
     1  hello
     2  hi
     3  good morning
     4  good n8

Displaying process priority using 'nice':
0

Counting lines, words, and characters in a file using 'wc':
 4  6 30 file1.txt

Displaying currently logged in users using 'who':
nikesh_reddy pts/1        2024-04-11 21:52

Paginating contents of a file using 'pr':


2024-04-11 21:56                    file1.txt                          Page 1


hello
hi
good morning
good n8
```

Paginating contents of a file using 'pr':

2024-04-11 21:56   file1.txt   Page 1

hello
hi
good morning
good n8

Displaying system information using 'uname':
Linux NIKESHREDDY 5.15.146.1-microsoft-standard-WSL2 #1 SMP Thu Jan 11 04:09:03 UTC 2024 x86_64 x86_64 x86_64 GNU/Linux

Getting terminal capabilities using 'tput':

```
Displaying system information using 'uname':
Linux NIKESHREDDY 5.15.146.1-microsoft-standard-WSL2 #1 SMP Thu Jan 11 04:09:03 UTC 2024 x86_64 x86_64 x86_64 GNU/Linux

Getting terminal capabilities using 'tput':
144

Displaying terminal name using 'tty':
/dev/pts/0

Logging into a remote system using 'rlogin':
The authenticity of host '172.50.7.192 (172.50.7.192)' can't be established.
ED25519 key fingerprint is SHA256:DvO+53agAJJASmTt9aQF+2eyzZEziOknrsFp+4upcnM.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.50.7.192' (ED25519) to the list of known hosts.
student@172.50.7.192's password:
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.11.0-43-generic x86_64)

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

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

New release '22.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Thu Apr 11 21:56:29 2024 from 172.180.6.98
(base) student@ai-lab-system02:~$ █
```
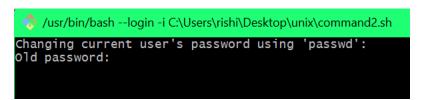
command2.sh

passwd command

echo "Changing current user's password using 'passwd':"

passwd

echo ""

Output:


```
/usr/bin/bash --login -i C:\Users\rishi\Desktop\unix\command2.sh
Changing current user's password using 'passwd':
Old password:
```

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

command3.sh:

remote_address="student@172.50.7.192"

echo "Monitoring $remote_address:"

echo "Memory Usage:"
ssh $remote_address "free -m"

echo "CPU Usage:"
ssh $remote_address "top -bn1 | grep 'Cpu(s)'"

Output:

```
nikesh_reddy@NIKESHREDDY:~/422151$ bash command3.sh
Monitoring student@172.50.7.192:
Memory Usage:
student@172.50.7.192's password:
              total        used        free      shared  buff/cache   available
Mem:          15788        2129       10785          64        2873       13276
Swap:          2047           0        2047
CPU Usage:
student@172.50.7.192's password:
%Cpu(s):  6.2 us,  6.2 sy,  0.0 ni, 87.5 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
nikesh_reddy@NIKESHREDDY:~/422151$
```