Jitendra Pachar
roll no. : 422161

Assignment 7

QUESTION 1 :

```bash
#!/bin/bash
echo ""

echo "1. more: Command used to display the contents of a file page by page."
echo ""
more demo.txt
echo ""

echo "2. nl: Command used to add line numbers to a file."
echo ""
nl demo.txt
echo ""

echo "3. nice: Command used to run a process with modified scheduling priority."
echo ""
nice -n 0 date     # Run 'command' with the default priority
nice -n -5 echo "hello"   # Run 'command' with a higher priority
nice -n 10 ls     # Run 'command' with a lower priority
echo ""

echo "4. passwd: Command used to change or set a users password."
echo ""
passwd
echo ""

echo "5. pr: Command used to format files for printing"
echo ""
pr -l 60 demo.txt
echo ""

echo "6. rlogin: Command used to login to a remote system."
echo ""
rlogin 172.50.10.227
echo ""

echo "7. rcp: Command used to copy files between machines."
echo ""
rcp  asdfqwerty.txt 172.50.10.227:/home/student/422162
echo ""

echo "8. rsh: Command used to execute commands on a remote system."
echo ""
rsh 172.50.10.227 ls -l

echo "9. talk: Command used to communicate with another user logged into the same system."
echo ""
talk jitendra
echo ""
```

echo "10. telnet: Command used to establish a connection to a remote system."
echo ""
telnet 172.50.10.227

echo "11. tput: Command used to query or set terminal-dependent capabilities."
echo ""
echo "number of columns are : "
tput cols
echo ""
echo "Number of lines are : "
tput lines
echo ""

echo "12. tty: Command used to print the file name of the terminal connected to standard input."
echo ""
tty
echo ""

echo "13. uname: Command used to print system information."
echo ""
uname -a
echo ""

echo "14. wc:Command used to count the number of lines, words, and characters in files."
echo ""
wc demo.txt

echo "15. who: Command used to display information about currently logged in users."
echo ""
who
echo ""

echo "16. write: Command used to send messages to another user."
echo ""
write jitendra
Echo ""

Question 2:
#!/bin/bash

# List of machines to monitor (replace with your own)
machines=("machine1" "machine2" "machine3")

# SSH username
username="your_username"

# Function to get memory and CPU usage
get_usage() {
    local machine=$1
    echo "=== $machine ==="
    echo "Memory Usage:"
    ssh $username@$machine "free -m"
    echo "CPU Usage:"
    ssh $username@$machine "top -bn1 | grep 'Cpu(s)'"
    echo
}

# Iterate over machines and get usage
for machine in "${machines[@]}"; do
    get_usage $machine
done

OUTPUT:

student@ai-HP-ProDesk-600-G4-MT: ~

```
student@j-hp:~/422161/unix/week13$ ./1.sh

1. more: Command used to display the contents of a file page by page.

jitendra pachar
422161
This is an example text file.
It contains multiple lines of text.
Each line demonstrates a different aspect of the content.

2. nl: Command used to add line numbers to a file.

     1  jitendra pachar
     2  422161
     3  This is an example text file.
     4  It contains multiple lines of text.
     5  Each line demonstrates a different aspect of the content.

3. nice: Command used to run a process with modified scheduling priority.

Wednesday 10 April 2024 03:47:00 PM IST
nice: cannot set niceness: Permission denied
hello
1.sh  asdfqwerty.txt  demo.txt

4. passwd: Command used to change or set a users password.

Changing password for student.
Current password:
New password:
Password change aborted.
passwd: Authentication token manipulation error
passwd: password unchanged

5. pr: Command used to format files for printing


2024-04-10 14:18                    demo.txt                    Page 1


jitendra pachar
422161
This is an example text file.
It contains multiple lines of text.
Each line demonstrates a different aspect of the content.
```

student@ai-HP-ProDesk-600-G4-MT: ~

```
6. rlogin: Command used to login to a remote system.

student@172.50.10.227's password:
Last login: Wed Apr 10 15:44:26 2024 from 172.50.15.227
-bash: export: `=/usr/lib/jvm/jdk1.8.0_261': not a valid identifier
(base) student@ai-HP-ProDesk-600-G4-MT:~$ logout
Connection to 172.50.10.227 closed.

7. rcp: Command used to copy files between machines.

student@172.50.10.227's password:
asdfqwerty.txt                        100%   12     0.1KB/s   00:00

8. rsh: Command used to execute commands on a remote system.

student@172.50.10.227's password:
total 6436
drwxrwxr-x  2 student student   4096 Jan 25  2023 420
drwxrwxr-x  2 student student   4096 Jan  1 12:46 421131
drwxrwxr-x  8 student student   4096 Apr 10 15:10 422162
drwxrwxr-x  2 student student   4096 Aug  4  2023 422163
drwxrwxr-x  3 student student   4096 Feb 27 14:25 622107
-rw-rw-r--  1 student student   2410 Jan 11 15:46  622107.ipynb
-rw-rw-r--  1 student student   2866 Jan 11 16:25 622107.ipynb
-rw-rw-r--  1 student student 112014 Feb 27 14:36 622107_lab
drwxr-xr-x  3 student student   4096 Feb 27 14:45 622107_lab_files
drwxrwxr-x  2 student student   4096 Jun  1  2023 9222632(lab mid)
drwxrwxr-x 27 student student   4096 Nov 15  2022 anaconda3
-rw-rw-r--  1 student student   1299 Feb 13 11:29 Arp_1.java
-rw-rw-r--  1 student student   1084 Feb 13 11:29 Arp.java
-rw-rw-r--  1 student student 104371 Feb 27 11:42 bandhan.odt
-rw-rw-r--  1 student student   1415 Feb 27 11:29 carp.class
-rw-rw-r--  1 student student    645 Feb 27 11:28 carp.java
-rw-rw-r--  1 student student  22068 Feb 27 11:32 cas.png
-rw-rw-r--  1 student student    983 Feb 12 15:50 checksum.py
drwxrwxr-x 13 student student   4096 Aug  4  2023 clean desktop
-rw-rw-r--  1 student student   1303 Feb 26 15:16 client.class
-rw-rw-r--  1 student student   1298 Feb 26 15:28 Client.class
-rwxrwxr-x  1 student student  17024 Jan  8 11:48 client_fifo
-rwxrwxr-x  1 student student  17144 Jan  8 11:12 CLIENT_FIFO
-rw-rw-r--  1 student student    661 Jan  8 11:46 client_fifo.c
-rw-rw-r--  1 student student    825 Jan  8 11:04 CLIENT_FIFO.c
-rw-rw-r--  1 student student    825 Jan  8 11:01 CLIENT_FIFO.C
-rw-rw-r--  1 student student    862 Feb 26 15:25 Client.java
```

```
-rw-rw-r-- 1 student student    72 Jan 23 15:58 Untitled7.ipynb
-rw-rw-r-- 1 student student    72 Jan 23 15:59 Untitled8.ipynb
-rw-rw-r-- 1 student student    72 Jan 23 15:59 Untitled9.ipynb
drwxrwxr-x 3 student student  4096 Jan 30  2023 Untitled Folder
-rw-rw-r-- 1 student student    72 Jan 11 14:27 Untitled.ipynb
-rw-rw-r-- 1 student student     0 Feb 27 14:51 untitled.txt
drwxrwxr-x 6 student student  4096 Sep 14  2023 Videos
drwxrwxr-x 2 student student  4096 Jan  6  2023 Wallpapers
drwxrwxr-x 2 student student  4096 Jan 31  2023 WEEK4
drwxrwxr-x 2 student student  4096 Jan 18  2023 +x
9. talk: Command used to communicate with another user logged into the same system.


10. telnet: Command used to establish a connection to a remote system.

Trying 172.50.10.227...
telnet: Unable to connect to remote host: Connection refused
11. tput: Command used to query or set terminal-dependent capabilities.

number of columns are :
80

Number of lines are :
24

12. tty: Command used to print the file name of the terminal connected to standard input.

/dev/pts/0

13. uname: Command used to print system information.

Linux j-hp 5.15.0-46-generic #49~20.04.1-Ubuntu SMP Thu Aug 4 19:15:44 UTC 2022 x86_64 x86_64 x86_64 GNU/Linux

14. wc:Command used to count the number of lines, words, and characters in files.

  5  24 147 demo.txt
15. who: Command used to display information about currently logged in users.

student  :0          2024-04-10 14:28 (:0)

16. write: Command used to send messages to another user.

write: jitendra is not logged in

student@j-hp:~/422161/unix/week13$
```

```
student@j-hp:~/422161/unix/week13$ ./2.sh
bash: ./2.sh: Permission denied
student@j-hp:~/422161/unix/week13$ chmod +rwx 2.sh
student@j-hp:~/422161/unix/week13$ ls -l 2.sh
-rwxrwxr-x 1 student student 508 Apr 10 15:59 2.sh
student@j-hp:~/422161/unix/week13$ ./2.sh
=== machine1 ===
Memory Usage:
ssh: Could not resolve hostname machine1: Temporary failure in name resolution
CPU Usage:
ssh: Could not resolve hostname machine1: Temporary failure in name resolution

=== machine2 ===
Memory Usage:
ssh: Could not resolve hostname machine2: Temporary failure in name resolution
CPU Usage:
ssh: Could not resolve hostname machine2: Temporary failure in name resolution

=== machine3 ===
Memory Usage:
ssh: Could not resolve hostname machine3: Temporary failure in name resolution
CPU Usage:
ssh: Could not resolve hostname machine3: Temporary failure in name resolution

student@j-hp:~/422161/unix/week13$
```