

ROLL NO 422160

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Assignment 07:

1. Write shell script for commands :

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

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

```
# Display the contents of file1.txt
cat file1.txt
```

```
# Display the contents of file1.txt with line numbers
nl file1.txt
```

```
# Run a command with a specified priority (modify 'your_command' accordingly)
nice -n 10 ls -l
```

```
# Change the password for the current user (might not work in a script)
passwd
```

```
# Prepare file1.txt for printing (commented out as it may not be necessary)
pr file1.txt
```

```
# Remote login to 127.0.0.1 (may not work, consider using ssh instead)
rlogin 127.0.0.1
```

```
# Copy file1.txt to file2.txt using rcp (may not be enabled or recommended)
rcp file1.txt file2.txt
```

```
# Execute a command remotely on 127.0.0.1 with specified priority (modify 'your_command'
accordingly)
rsh 127.0.0.1 -n 10 your_command
```

```
# Initiate a talk session with the user 'student' (may not work, consider using other communication
tools)
talk student
```

```
# Initiate a telnet session to 127.0.0.1 (may not be enabled or recommended)
telnet 127.0.0.1
```

```
# Get the number of columns in the terminal
```

tput cols

Print the file name of the terminal connected to standard input
tty

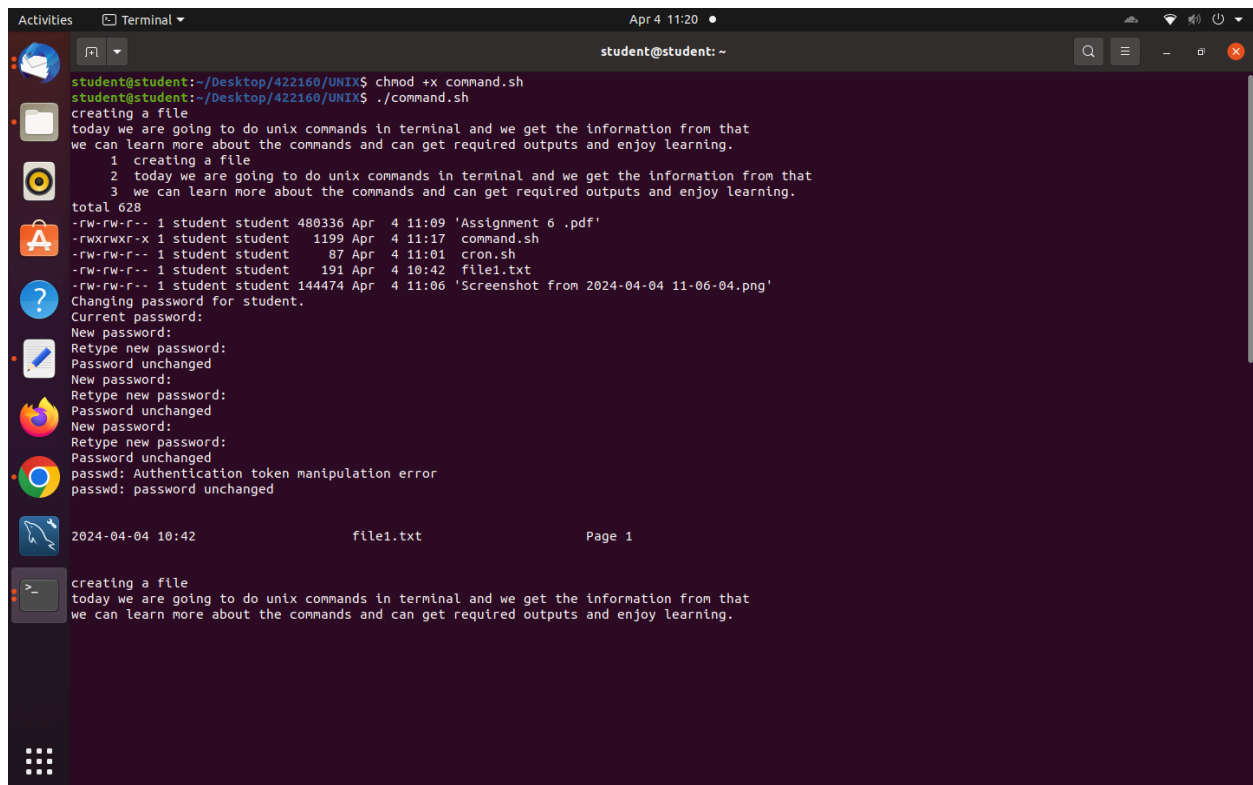
Print system information
uname -a

Count lines, words, and characters in file1.txt
wc file1.txt

Display who is logged in
who

write student

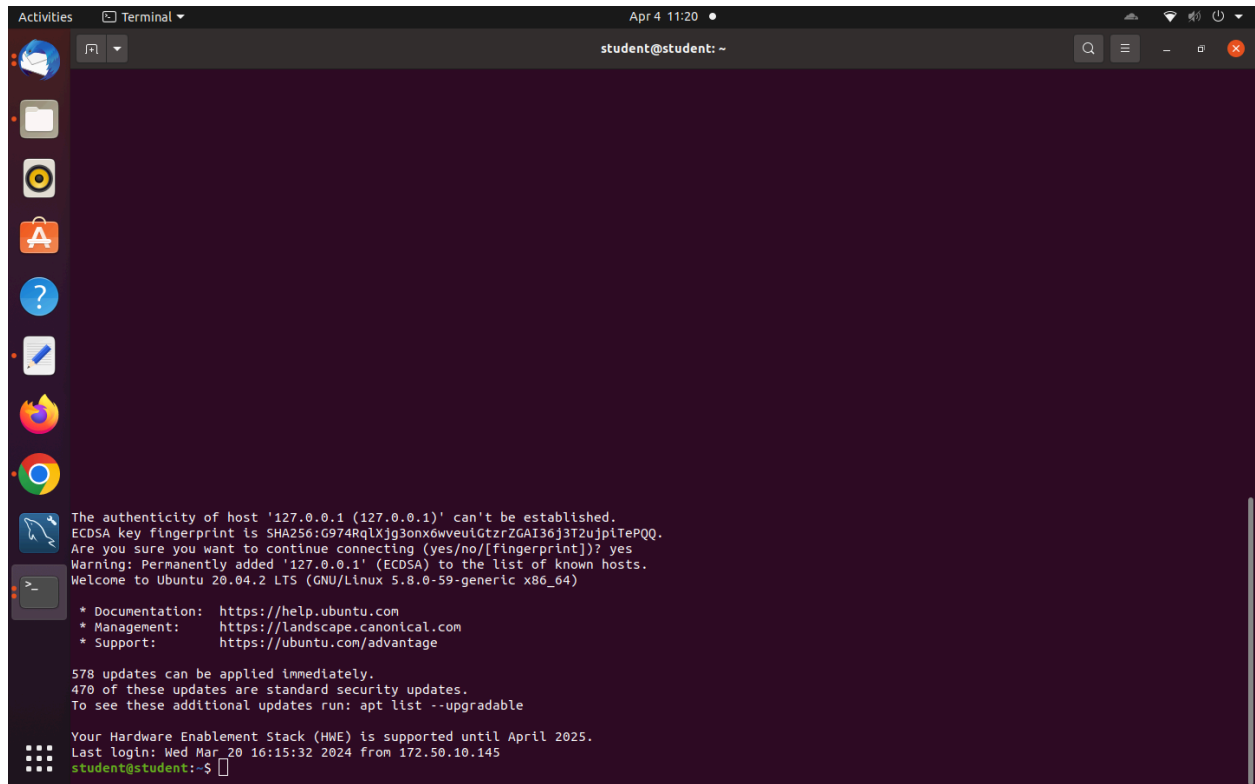
OUTPUT:



```
student@student:~/Desktop/422160/UNIX$ chmod +x command.sh
student@student:~/Desktop/422160/UNIX$ ./command.sh
creating a file
today we are going to do unix commands in terminal and we get the information from that
we can learn more about the commands and can get required outputs and enjoy learning.
1 creating a file
2 today we are going to do unix commands in terminal and we get the information from that
3 we can learn more about the commands and can get required outputs and enjoy learning.
total 628
-rw-rw-r-- 1 student student 480336 Apr  4 11:09 'Assignment 6 .pdf'
-rwxrwxr-x 1 student student 1199 Apr  4 11:17 command.sh
-rw-rw-r-- 1 student student  87 Apr  4 11:01 cron.sh
-rw-rw-r-- 1 student student  191 Apr  4 10:42 file1.txt
-rw-rw-r-- 1 student student 144474 Apr  4 11:06 'Screenshot from 2024-04-04 11-06-04.png'
Changing password for student.
Current password:
New password:
Retype new password:
Password unchanged
New password:
Retype new password:
Password unchanged
New password:
Retype new password:
Password unchanged
passwd: Authentication token manipulation error
passwd: password unchanged

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>_
creating a file
today we are going to do unix commands in terminal and we get the information from that
we can learn more about the commands and can get required outputs and enjoy learning.
```



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

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

```
# List of remote machines
```

```
machines=("127.0.0.1" "172.50.9.213" "172.50.11.106")
```

```
# SSH into each machine and retrieve memory and CPU usage
```

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

```
    echo "Machine: $machine"
```

```
    ssh "$machine" "echo 'Memory Usage:;' free -m; echo "; echo 'CPU Usage:;' top -bn1 | grep 'Cpu(s)'"
```

```
    echo ""
```

```
done
```

OUTPUT:

```
Activities Terminal Apr 4 11:31 student@student: ~/Desktop/422160/UNIX
student@student:~/Desktop/422160/UNIX$ chmod +x machines.sh
student@student:~/Desktop/422160/UNIX$ ./machines.sh
Machine: 127.0.0.1
Memory Usage:
Mem:      total      used      free      shared  buff/cache  available
Swap:     2047        0       2047        76       1798       13282
CPU Usage:
%Cpu(s):  0.9 us,  2.2 sy,  0.0 ni, 96.9 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
Machine: 172.50.9.213
ssh: connect to host 172.50.9.213 port 22: Connection timed out
Machine: 172.50.11.106
The authenticity of host '172.50.11.106 (172.50.11.106)' can't be established.
ECDSA key fingerprint is SHA256:rkcYEK8XGC4kyq0sItz80BHaWazp8IGuWaoRUK9hulU.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.50.11.106' (ECDSA) to the list of known hosts.
student@172.50.11.106's password:
Memory Usage:
Mem:      total      used      free      shared  buff/cache  available
Swap:     2047        0       2047        259       3722       13074
CPU Usage:
%Cpu(s):  0.5 us,  0.5 sy,  7.9 ni, 91.1 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
student@student:~/Desktop/422160/UNIX$
```