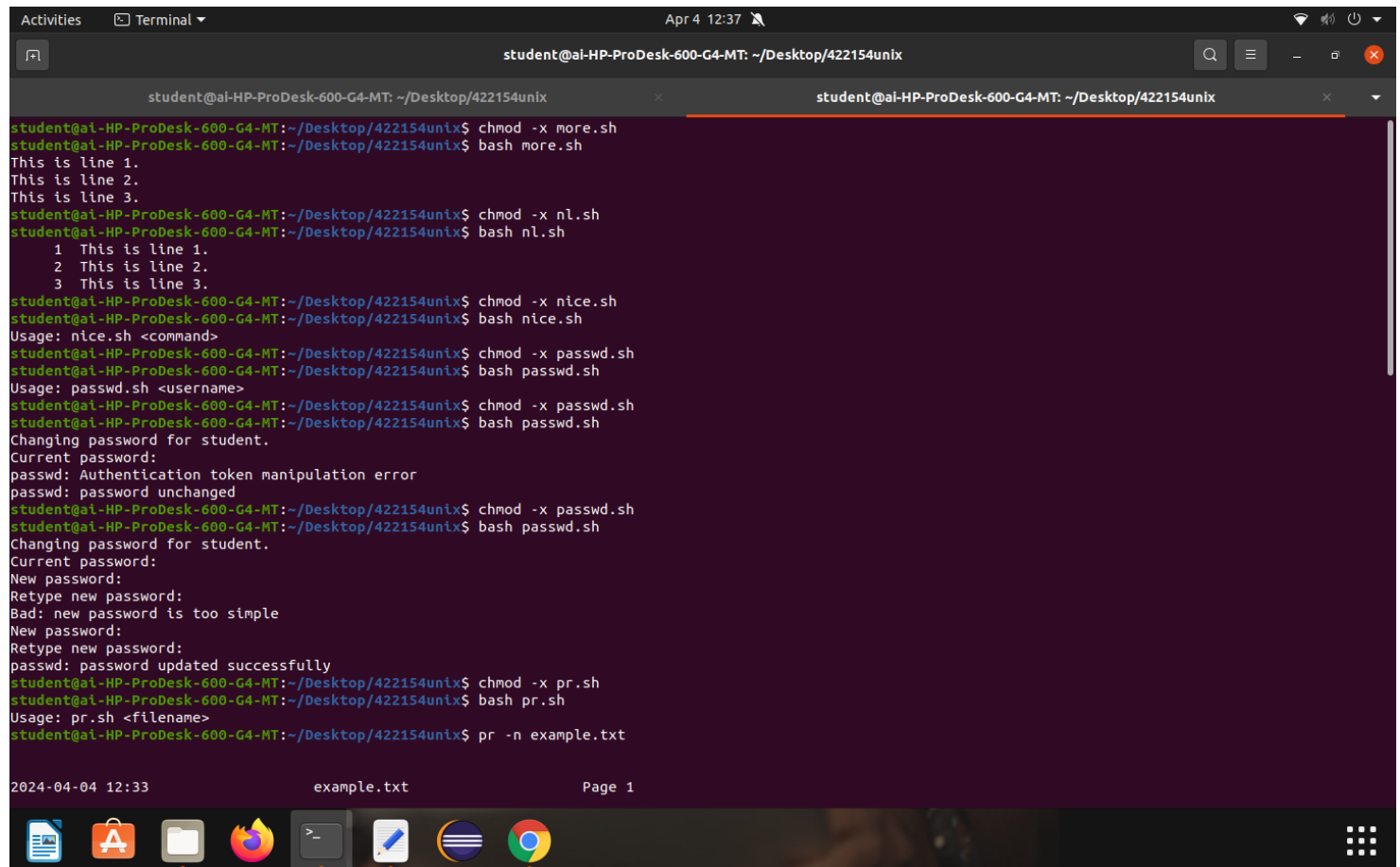


Assignment-7

1. Write shell script for

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

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



The screenshot shows a terminal window titled "student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix". The terminal displays the following commands and their outputs:

```
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x more.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash more.sh
This is line 1.
This is line 2.
This is line 3.
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x nl.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash nl.sh
 1 This is line 1.
 2 This is line 2.
 3 This is line 3.
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x nice.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash nice.sh
Usage: nice.sh <command>
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x passwd.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash passwd.sh
Usage: passwd.sh <username>
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x passwd.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash passwd.sh
Changing password for student.
Current password:
passwd: Authentication token manipulation error
passwd: password unchanged
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x passwd.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash passwd.sh
Changing password for student.
Current password:
New password:
Retype new password:
Bad: new password is too simple
New password:
Retype new password:
passwd: password updated successfully
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x pr.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash pr.sh
Usage: pr.sh <filename>
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ pr -n example.txt
```

The terminal window also shows the date and time "2024-04-04 12:33" and the filename "example.txt". The bottom of the window displays a taskbar with various application icons.

Activities Terminal Apr 4 12:37

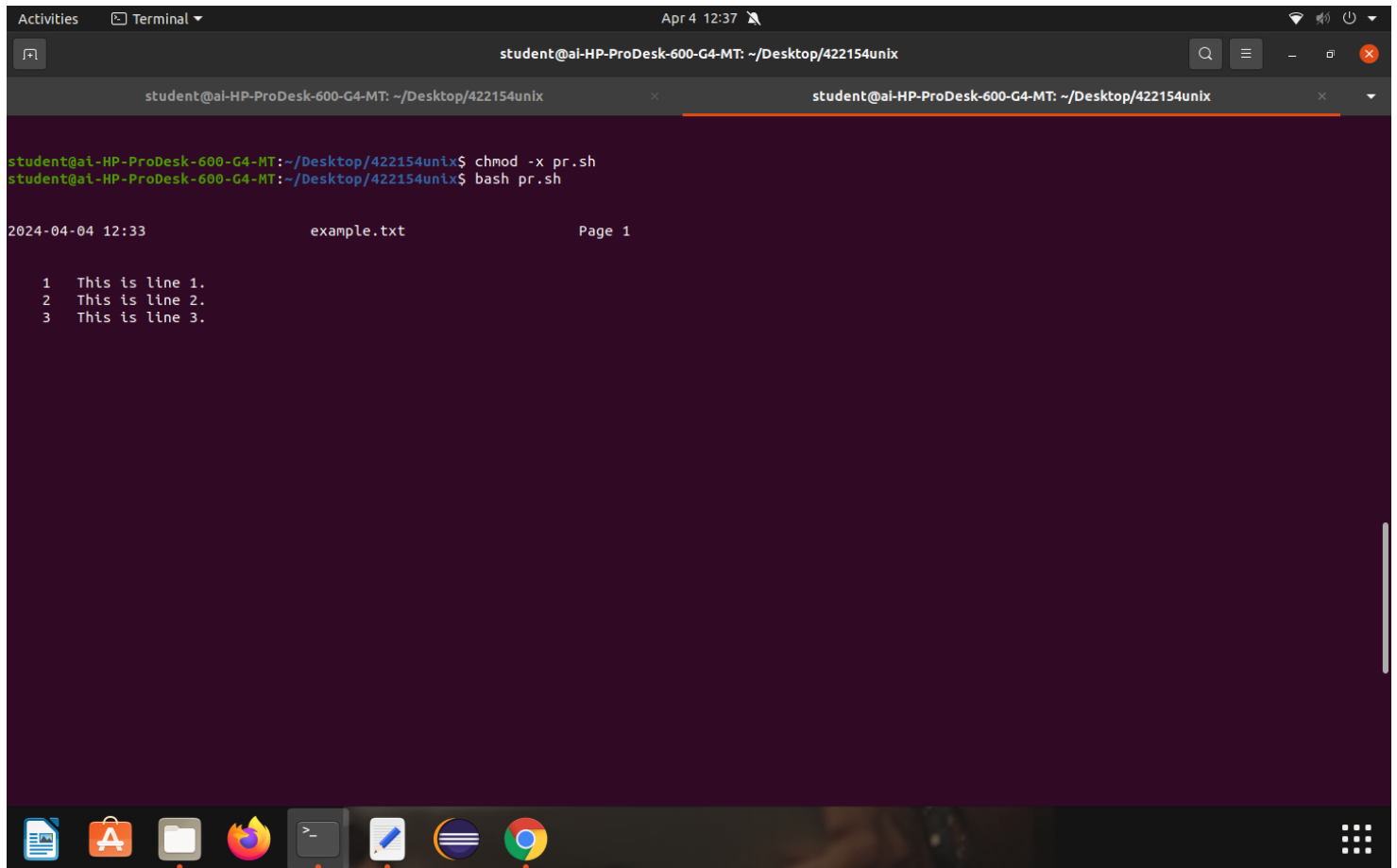
student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix

student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix

```
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x pr.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash pr.sh
```

2024-04-04 12:33 example.txt Page 1

```
1 This is line 1.
2 This is line 2.
3 This is line 3.
```



Activities Terminal Apr 4 12:41

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

student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix

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

```
option requires an argument -- I
usage: ssh [-46AaCfGgKkMNnqsTtVvXxYy] [-B bind_interface]
[-b bind_address] [-c cipher_spec] [-D [bind_address:]port]
[-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]
[-i identity_file] [-J [user@]host[:port]] [-L address]
[-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]
[-Q query_option] [-R address] [-S ctl_path] [-W host:port]
[-w local_tun[:remote_tun]] destination [command]
```

```
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ rlogin 172.50.10.182
The authenticity of host '172.50.10.182 (172.50.10.182)' can't be established.
ECDSA key fingerprint is SHA256:VOgReXghL/TDwL0b9LggtCeSJN7dTtyW0FDBZh6U16Gc.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.50.10.182' (ECDSA) to the list of known hosts.
student@172.50.10.182's password:
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-84-generic x86_64)

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

1 device has a firmware upgrade available.
Run 'fwupdmgtr get-upgrades' for more information.

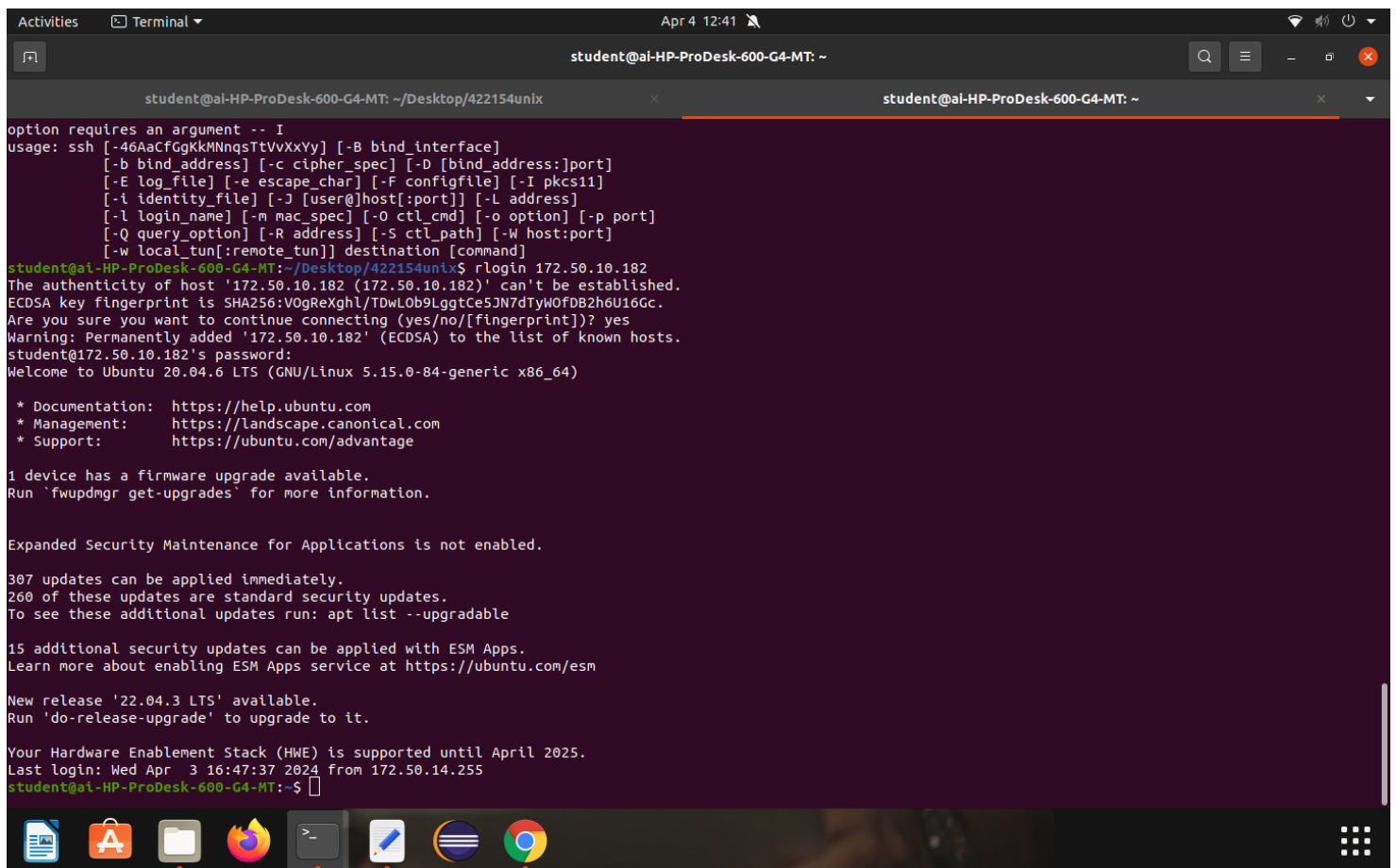
Expanded Security Maintenance for Applications is not enabled.

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

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

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: Wed Apr  3 16:47:37 2024 from 172.50.14.255
student@ai-HP-ProDesk-600-G4-MT:~$
```

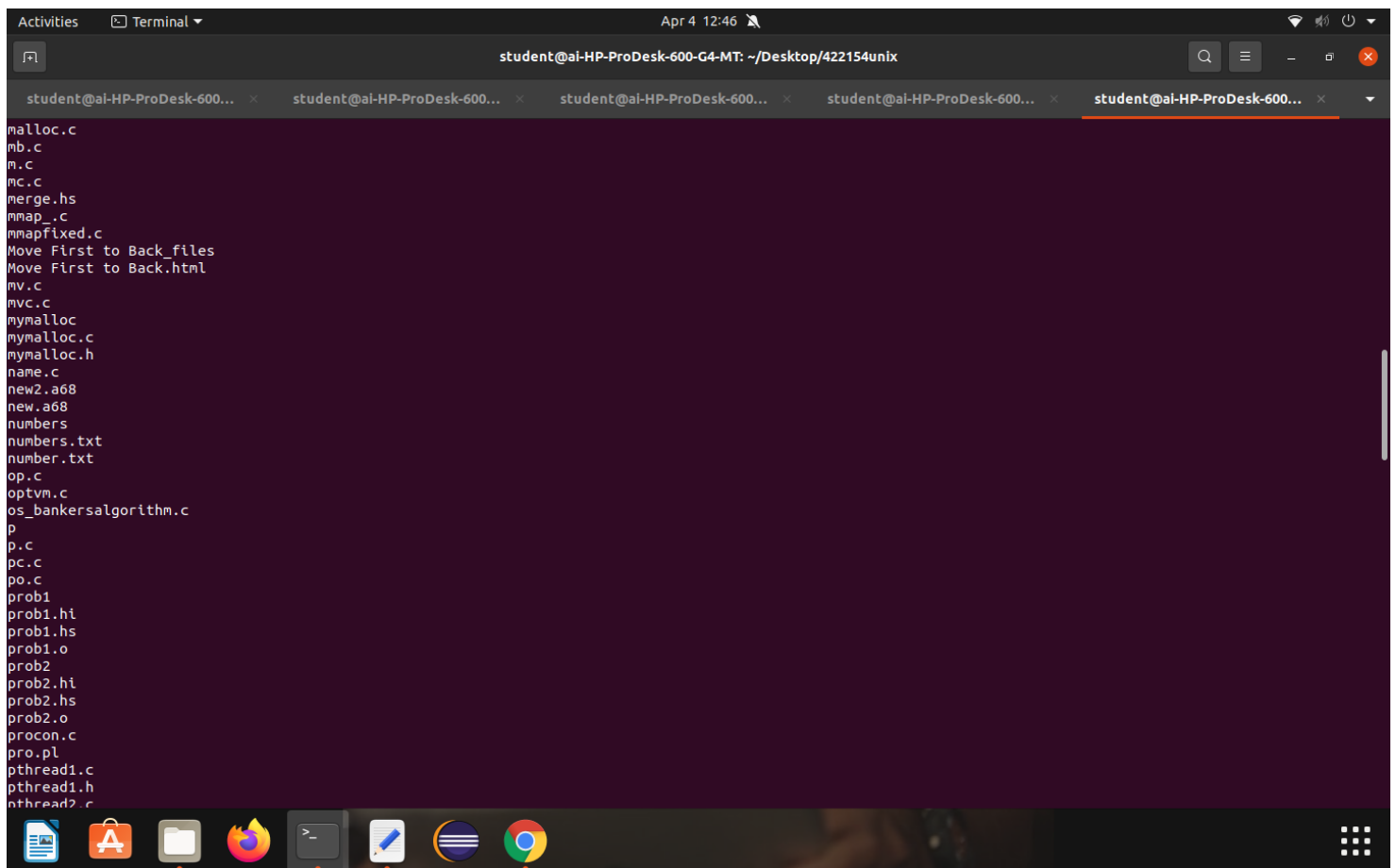
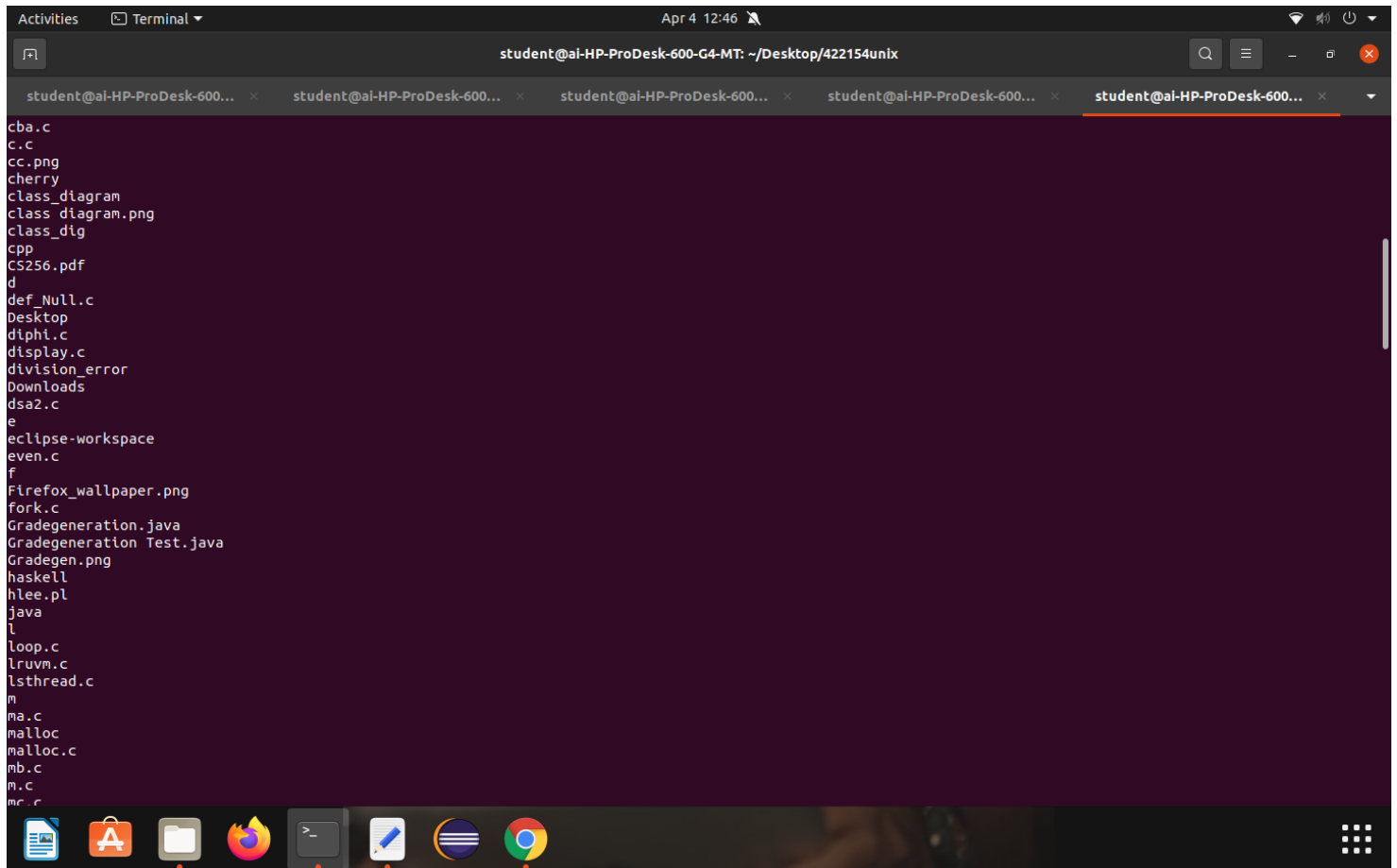


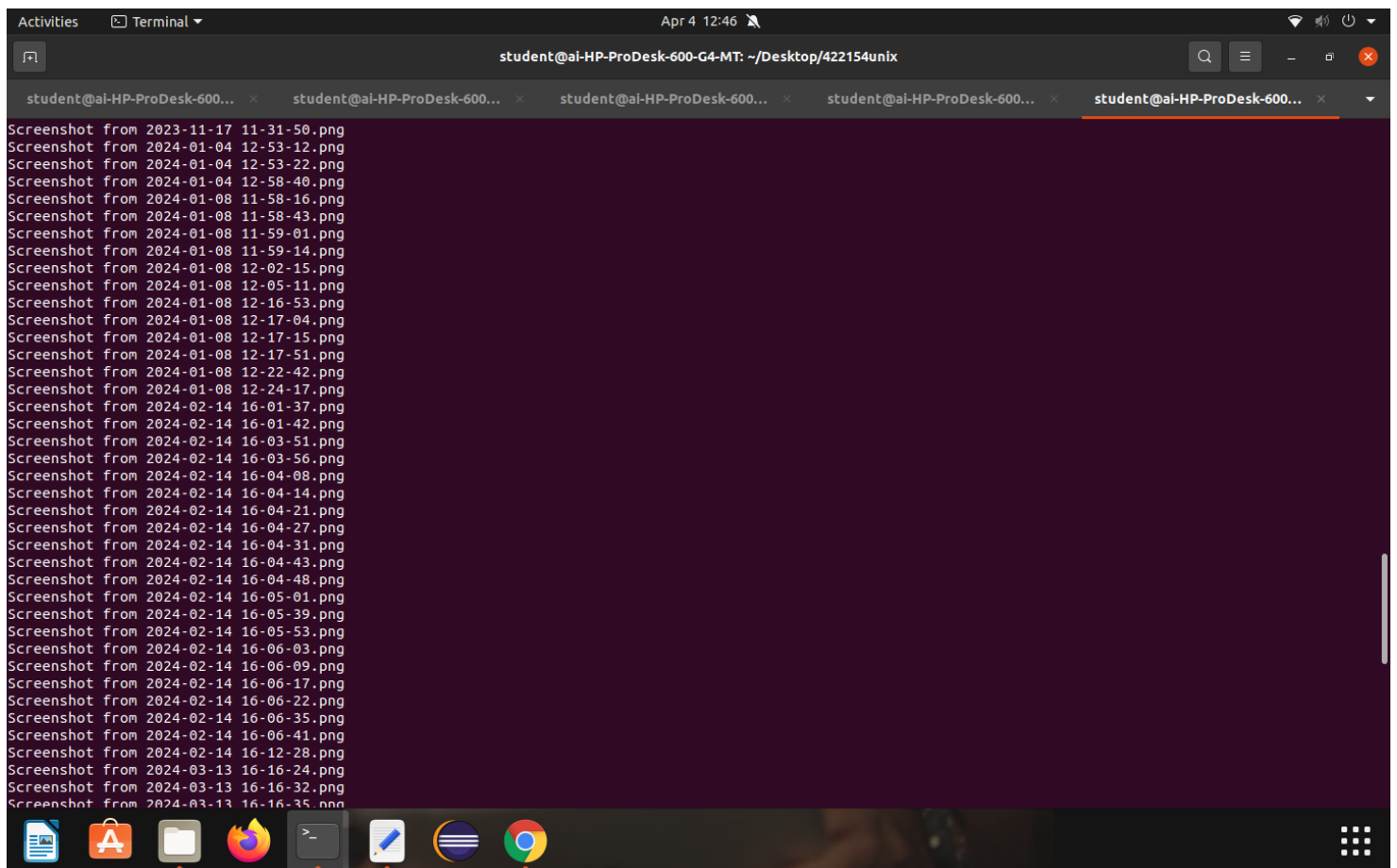
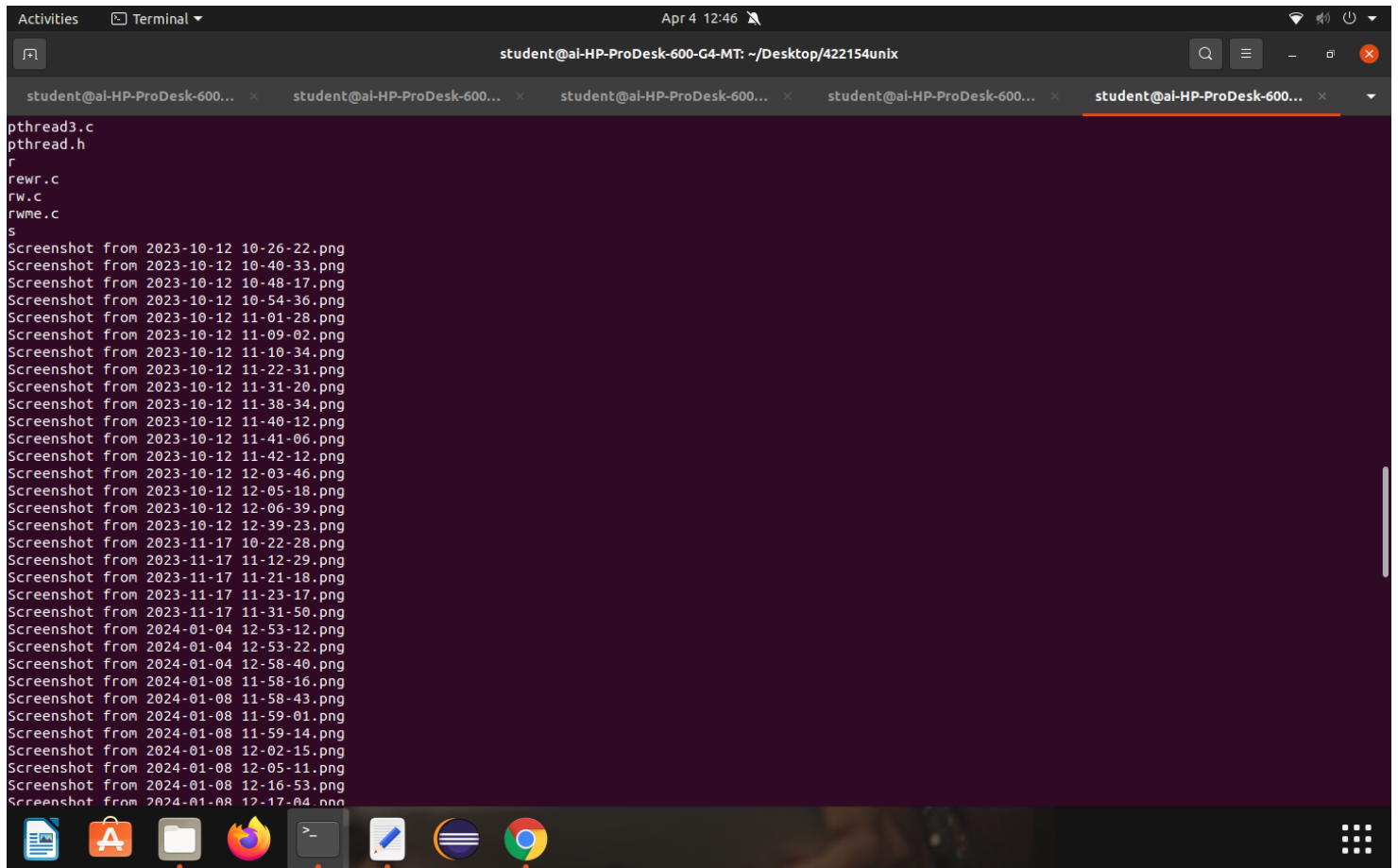
```
Activities Terminal Apr 4 12:43
student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix

student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x rcp.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash rcp.sh
mkdir: cannot create directory 'example_directory': File exists
Directory contents:
total 0
-rw-rw-r-- 1 student student 0 Apr 4 12:43 file1.txt
-rw-rw-r-- 1 student student 0 Apr 4 12:43 file2.txt
Updated directory contents:
total 0
-rw-rw-r-- 1 student student 0 Apr 4 12:43 copied_file.txt
-rw-rw-r-- 1 student student 0 Apr 4 12:43 file1.txt
-rw-rw-r-- 1 student student 0 Apr 4 12:43 file2.txt
Updated directory contents after moving file2.txt:
total 0
-rw-rw-r-- 1 student student 0 Apr 4 12:43 copied_file.txt
-rw-rw-r-- 1 student student 0 Apr 4 12:43 file1.txt
-rw-rw-r-- 1 student student 0 Apr 4 12:43 moved_file.txt
Copying file1.txt to a remote host...
ssh: could not resolve hostname remote.example.com: Name or service not known
lost connection
rmdir: failed to remove 'example_directory': Directory not empty
Files and directory removed.
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$
```

```
Activities Terminal Apr 4 12:45
student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix

student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x rsh.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash rsh.sh
mkdir: cannot create directory 'example_directory': File exists
Directory contents:
total 0
-rw-rw-r-- 1 student student 0 Apr 4 12:45 file1.txt
-rw-rw-r-- 1 student student 0 Apr 4 12:45 file2.txt
Updated directory contents:
total 0
-rw-rw-r-- 1 student student 0 Apr 4 12:45 copied_file.txt
-rw-rw-r-- 1 student student 0 Apr 4 12:45 file1.txt
-rw-rw-r-- 1 student student 0 Apr 4 12:45 file2.txt
Updated directory contents after moving file2.txt:
total 0
-rw-rw-r-- 1 student student 0 Apr 4 12:45 copied_file.txt
-rw-rw-r-- 1 student student 0 Apr 4 12:45 file1.txt
-rw-rw-r-- 1 student student 0 Apr 4 12:45 moved_file.txt
Executing 'ls' command remotely...
student@localhost's password:
1021966175-input.txt
421163
422123.pdf
622259.py
a
abc.c
a.c
anm.c
AnyDesk
a.out
armstrong.c
array.c
assignment2dsa.c
autosave.xml
b
bank.c
bst.py
c
capital
cat.c
cha
```





```
Activities Terminal Apr 4 12:46
student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix

Screenshot from 2024-03-13 16-58-34.png
Screenshot from 2024-03-13 16-58-42.png
Screenshot from 2024-03-13 16-58-47.png
Screenshot from 2024-03-20 16-00-25.png
Screenshot from 2024-03-20 16-00-33.png
Screenshot from 2024-03-20 16-00-39.png
Screenshot from 2024-03-20 16-45-43.png
Screenshot from 2024-04-04 12-18-10.png
Screenshot from 2024-04-04 12-37-41.png
Screenshot from 2024-04-04 12-37-52.png
Screenshot from 2024-04-04 12-41-01.png
Screenshot from 2024-04-04 12-43-30.png
Screenshot from 2024-04-04 12-44-13.png
script.sh
seg_error.c
seg_fault2.c
selfm.c
si
sml
snap
ss
states
strace.c
sum.c
swap.c
t
typo
Untitled.iICtll
Untitled.KPZbCI
Untitled.TwiOpY
uuo
uuo.hi
uuo.hs
uuo.o
w
X.c
rmdir: failed to remove 'example_directory': Directory not empty
Files and directory removed.
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$
```

```
Activities Terminal Apr 4 12:54
student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix

w
X.c
rmdir: failed to remove 'example_directory': Directory not empty
Files and directory removed.
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ talk student @ 172.50.10.182

Command 'talk' not found, but can be installed with:

sudo apt install inetutils-talk # version 2:1.9.4-11ubuntu0.2, or
sudo apt install talk # version 0.17-16

student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ sudo apt install talk
[sudo] password for student:
Sorry, try again.
[sudo] password for student:
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
talkd
The following NEW packages will be installed:
talk
0 upgraded, 1 newly installed, 0 to remove and 603 not upgraded.
Need to get 19.2 kB of archives.
After this operation, 56.3 kB of additional disk space will be used.
Get:1 http://in.archive.ubuntu.com/ubuntu focal/universe amd64 talk amd64 0.17-16 [19.2 kB]
Fetched 19.2 kB in 1s (14.2 kB/s)
Selecting previously unselected package talk.
(Reading database ... 314617 files and directories currently installed.)
Preparing to unpack .../talk_0.17-16_amd64.deb ...
Unpacking talk (0.17-16) ...
Setting up talk (0.17-16) ...
update-alternatives: using /usr/bin/netkit-ntalk to provide /usr/bin/talk (talk) in auto mode
Processing triggers for man-db (2.9.1-1) ...
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ talk student @ 172.50.10.182
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ talk student @ 172.50.10.182
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ telnet 172.50.10.182
Trying 172.50.10.182...

```

```
Activities Terminal Apr 4 12:57
student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix

Terminal size: 39 rows x 158 columns
This text is in red color
This text is bold

This text is at row 10, column 20
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x tty.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash tty.sh
/dev/pts/3
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x uname.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash uname.sh
Operating system name:
Linux
Kernel name:
ai-HP-ProDesk-600-G4-MT
Kernel release:
5.11.0-43-generic
Kernel version:
#47~20.04.2-Ubuntu SMP Mon Dec 13 11:06:56 UTC 2021
Machine hardware name:
x86_64
Processor architecture:
x86_64
Operating system version:
GNU/Linux
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$
```

```
Activities Terminal Apr 4 13:09
student@ai-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix

student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash wc.sh
Usage: wc.sh <filename>
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x who.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash who.sh
student :0 2024-04-03 16:01 (:0)
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x write.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash write.sh
Usage: write.sh <username>
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x write.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash write.sh
example_directory more.sh nl.sh pr.sh rlogin.sh script.sh telnet.sh tty.sh wc.sh write.sh
example.txt nice.sh passwd.sh rcp.sh rsh.sh talk.sh tput.sh uname.sh who.sh
/home/student/Desktop/422154unix
cat: filename.txt: No such file or directory
gcc: error: program.c: No such file or directory
gcc: fatal error: no input files
compilation terminated.
write.sh: line 16: ./program: No such file or directory
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x write.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash write.sh
example_directory more.sh nl.sh pr.sh rlogin.sh script.sh telnet.sh tty.sh wc.sh write.sh
example.txt nice.sh passwd.sh rcp.sh rsh.sh talk.sh tput.sh uname.sh who.sh
/home/student/Desktop/422154unix
This is line 1.
This is line 2.
This is line 3.
gcc: error: hello.c: No such file or directory
gcc: fatal error: no input files
compilation terminated.
write.sh: line 16: ./hello: No such file or directory
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x write.sh
student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash write.sh
example_directory hello.c nice.sh passwd.sh rcp.sh rsh.sh talk.sh tput.sh uname.sh who.sh
example.txt more.sh nl.sh pr.sh rlogin.sh script.sh telnet.sh tty.sh wc.sh write.sh
/home/student/Desktop/422154unix
This is line 1.
This is line 2.
This is line 3.
hello , world!!!!student@ai-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$
```

```
Activities Terminal Apr 5 15:30 student@da-HP-ProDesk-600-G4-MT: ~/Desktop/422154unix
student@da-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ chmod -x multiple.sh
student@da-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$ bash multiple.sh
Memory usage on 172.50.4.179:
student@172.50.4.179's password:
      total      used      free   shared  buff/cache   available
Mem:    15781     2215    10560       174       3004     13083
Swap:     2047         0       2047
CPU usage on 172.50.4.179:
student@172.50.4.179's password:
%Cpu(s):  0.0 us,  1.4 sy,  0.0 ni, 98.1 id,  0.0 wa,  0.0 hi,  0.5 si,  0.0 st
-----
Memory usage on ,172.50.2.188:
ssh: Could not resolve hostname ,172.50.2.188: Name or service not known
CPU usage on ,172.50.2.188:
ssh: Could not resolve hostname ,172.50.2.188: Name or service not known
-----
student@da-HP-ProDesk-600-G4-MT:~/Desktop/422154unix$
```