

Sudo ,pwd,cd,ls,cat

```
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ ls
add1.c Desktop Downloads DTL_assignment Pictures sum1.c Videos
add.c Documents dtl_assignment Music Public Templates
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ sudo apt
[sudo] password for vaishnavi:
apt 2.0.9 (amd64)
Usage: apt [options] command

apt is a commandline package manager and provides commands for
searching and managing as well as querying information about packages.
It provides the same functionality as the specialized APT tools,
like apt-get and apt-cache, but enables options more suitable for
interactive use by default.

Most used commands:
list - list packages based on package names
search - search in package descriptions
show - show package details
install - install packages
reinstall - reinstall packages
remove - remove packages
autoremove - Remove automatically all unused packages
update - update list of available packages
upgrade - upgrade the system by installing/upgrading packages
full-upgrade - upgrade the system by removing/installing/upgrading packages
edit-sources - edit the source information file
satisfy - satisfy dependency strings

See apt(8) for more information about the available commands.
Configuration options and syntax is detailed in apt.conf(5).
Information about how to configure sources can be found in sources.list(5).
Package and version choices can be expressed via apt_preferences(5).
Security details are available in apt-secure(8).

This APT has Super Cow Powers.

vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ ls
add1.c add.c Desktop Documents Downloads dtl_assignment DTL_assignment Music Pictures Public sum1.c Templates Videos
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ cd dtl_assignment
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/dtl_assignment$ pwd
/home/vaishnavi/dtl_assignment
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/dtl_assignment$ cat print.c sum1.c
#include<stdio.h>
int main()
{
    printf("Hello World");
    return 0;
}
#include<stdio.h>
int main()
{
    int a,b,c;
    a=2;
    b=3;
    c=a+b;
    return c;
}
```

Cp,cd

```
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/dtl_assignment$ cp print.c /home/vaishnavi/Downloads
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/dtl_assignment$ cd
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/dtl_assignment$ cd Downloads
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ ls
112103018 112103018.zip print.c
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ cp -R /home/vaishnavi/Downloads
cp: missing destination file operand after '/home/vaishnavi/Downloads'
Try 'cp --help' for more information.
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ cp -R /home/vaishnavi/Downloads /home/vaishnavi/dtl_assignment
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ cd
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/dtl_assignment$ cd dtl_assignment
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/dtl_assignment$ ls
Downloads print.c sum1.c
```

Mkdir,rmdir

```
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/dtl_assignment$ mv print.c /home/vaishnavi/Downloads  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/dtl_assignment$ cd  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ cd Downloads  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ ls  
112103018 112103018.zip print.c  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ mv print.c printt.c  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ ls  
112103018 112103018.zip printt.c  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ mkdir -m777 dtl  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ rmdir -p /home/vaishnavi/Downloads/dtl  
rmdir: failed to remove directory '/home/vaishnavi/Downloads': Directory not empty
```

touch

```
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ cd  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ touch /home/vaishnavi/dtl_assignment/web.html  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ cd dtl_assignment  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/dtl_assignment$ ls  
Downloads sum1.c web.html
```

grep,df

```
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:$ grep return sum1.c  
    return c;  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:$ grep -i "return" *.c  
sum1.c: return c;  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:$ grep -i "return" *.c  
sum1.c: return c;  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:$ grep -i "return" *.c  
printt.c:     return 0;  
sum1.c: return c;  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:$ df -h sum1.c  
Filesystem      Size  Used Avail Use% Mounted on  
/dev/nvme0n1p10  52G   49G   146M  1% /home  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:$ df -m sum1.c  
Filesystem      1M-blocks  Used Available Use% Mounted on  
/dev/nvme0n1p10      52425    146      49584   1% /home  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:$ df -k sum1.c  
Filesystem      1K-blocks  Used Available Use% Mounted on  
/dev/nvme0n1p10  53682504  149128  50774004   1% /home  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:$ df -T sum1.c  
Filesystem      Type 1K-blocks  Used Available Use% Mounted on  
/dev/nvme0n1p10  ext4  53682504  149128  50774004   1% /home
```

du,head,tail

```
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ du -m printt.c  
1  printt.c  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ du -h printt.c  
4.0K  printt.c  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ du -k printt.c  
4  printt.c  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ du -s printt.c  
4  printt.c  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ head -7 sum1.c  
#include<stdio.h>  
int main()  
{  
    int a,b,c;  
    a=2;  
    b=3;  
    c=a+b;  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:$ head -c sum1.c  
head: invalid number of bytes: 'sum1.c'  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ head -q sum1.c  
#include<stdio.h>  
int main()  
{  
    int a,b,c;  
    a=2;  
    b=3;  
    c=a+b;  
    return c;  
}  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ tail -n 5*.c  
tail: invalid number of lines: '5*.c'  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ tail -5 sum1.c  
    a=2;  
    b=3;  
    c=a+b;  
    return c;  
}  
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads$ diff -c sum1.c printt.c
```

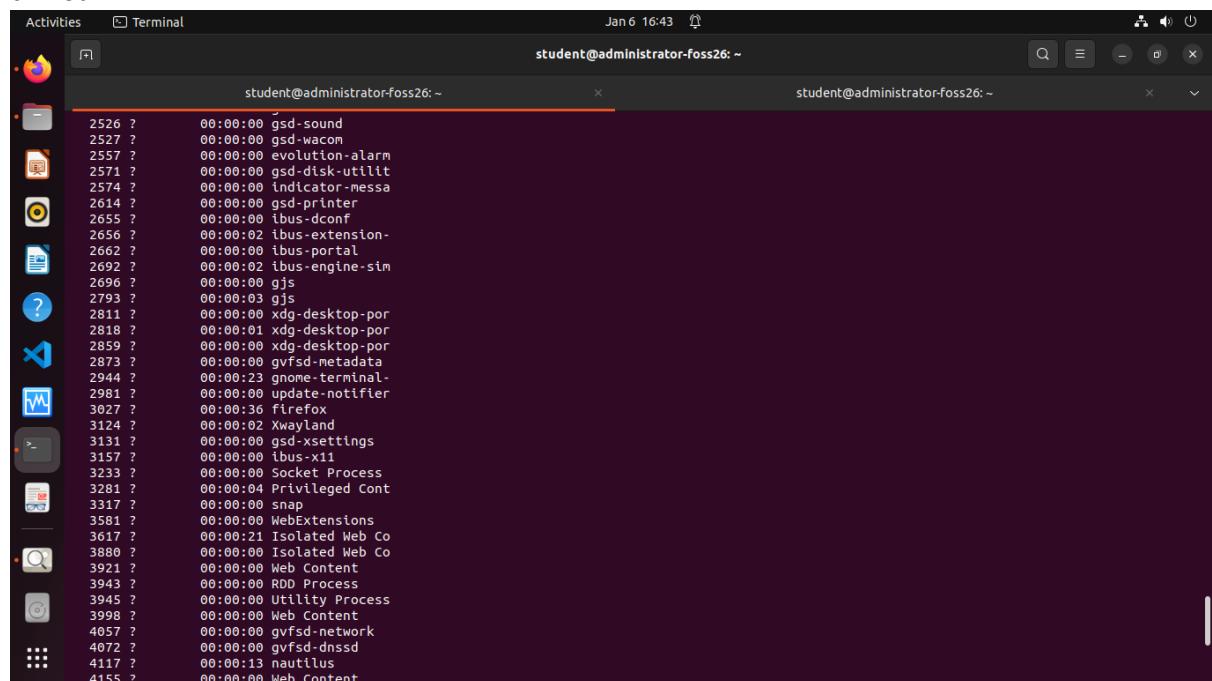
diff

```
valishnavi@valishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx: ~/Downloads
!     b=3;
!     c=a+b;
!     return c;
}
--- 1,6 ----
#include<stdio.h>
int main()
{
    printf("Hello World");
    return 0;
}
valishnavi@valishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ diff -u sum1.c printt.c
--- sum1.c      2022-12-30 21:25:26.000217563 +0530
+++ printt.c   2023-01-03 22:45:28.488404000 +0530
@@ -1,9 +1,6 @@
#include<stdio.h>
int main()
{
    int a,b,c;
    a=2;
    b=3;
    c=a+b;
    return c;
    printf("Hello World");
    return 0;
}
valishnavi@valishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ diff -i sum1.c printt.c
4,8c4,5
<     int a,b,c;
<     a=2;
<     b=3;
<     c=a+b;
<     return c;
---
>     printf("Hello World");
>     return 0;
valishnavi@valishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ 
valishnavi@valishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~/Downloads
valishnavi@valishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ diff -c sum1.c printt.c
diff: printt.c: No such file or directory
valishnavi@valishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ diff -c sum1.c printt.c
*** sum1.c      2022-12-30 21:25:26.000217563 +0530
--- printt.c   2023-01-03 22:45:28.488404000 +0530
*****
*** 1,9 ****
#include<stdio.h>
int main()
{
    int a,b,c;
    a=2;
    b=3;
    c=a+b;
    return c;
}
--- 1,6 ----
#include<stdio.h>
int main()
{
    printf("Hello World");
    return 0;
}
valishnavi@valishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ diff -u sum1.c printt.c
--- sum1.c      2022-12-30 21:25:26.000217563 +0530
+++ printt.c   2023-01-03 22:45:28.488404000 +0530
@@ -1,9 +1,6 @@
#include<stdio.h>
int main()
{
    int a,b,c;
    a=2;
    b=3;
    c=a+b;
    return c;
    printf("Hello World");
    return 0;
}
```

tar

```
vaishnavi@vaishnavi-HP-Pavilion-Gaming-Laptop-15-ec2xxx:~$ tar -cvf sum.tar /home/vaishnavi/dtl_assignment
tar: Removing leading '/' from member names
/home/vaishnavi/dtl_assignment/
/home/vaishnavi/dtl_assignment/Downloads/
/home/vaishnavi/dtl_assignment/Downloads/print.c
/home/vaishnavi/dtl_assignment/Downloads/112103018/
/home/vaishnavi/dtl_assignment/Downloads/112103018/sum.o
/home/vaishnavi/dtl_assignment/Downloads/112103018/sum.s
/home/vaishnavi/dtl_assignment/Downloads/112103018/sum.c
/home/vaishnavi/dtl_assignment/Downloads/112103018/sum.i
/home/vaishnavi/dtl_assignment/Downloads/112103018/a.out
/home/vaishnavi/dtl_assignment/Downloads/112103018.zip
/home/vaishnavi/dtl_assignment/sum1.c
/home/vaishnavi/dtl_assignment/web.html
/home/vaishnavi/dtl_assignment/printt.c
```

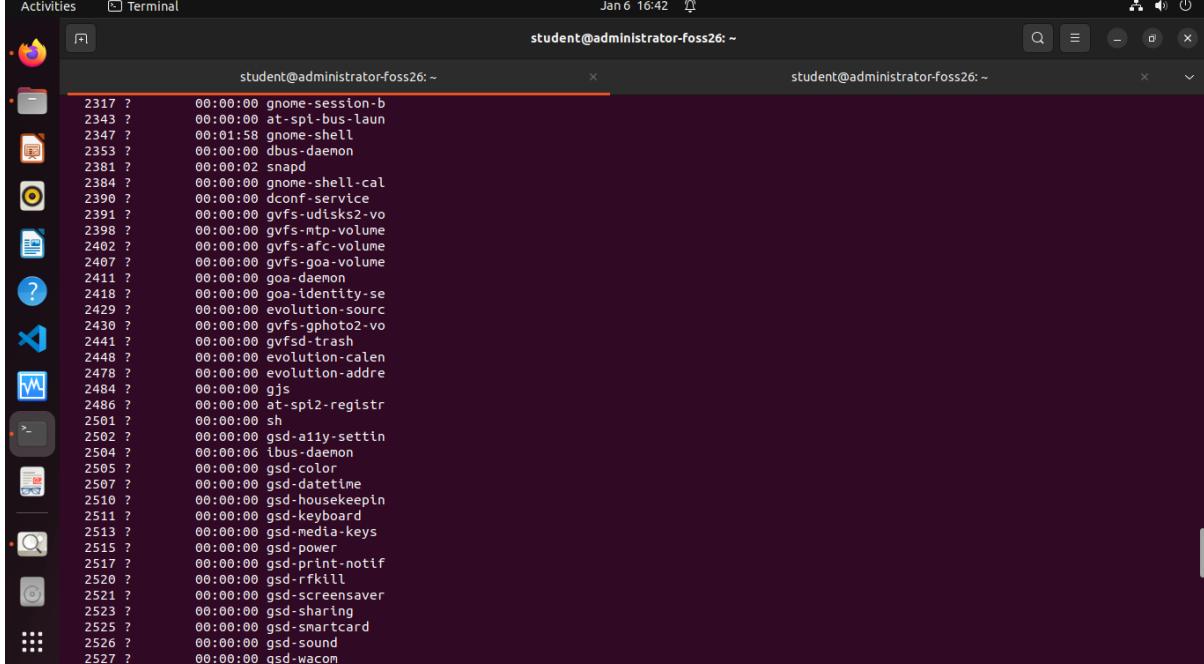
chmod



```

student 2430 0.0 0.1 240412 7096 ? Ssl 15:25 0:00 /usr/libexec/
student 2441 0.0 0.2 318072 8352 ? Sl 15:25 0:00 /usr/libexec/
student 2448 0.0 0.7 843392 29788 ? Ssl 15:25 0:00 /usr/libexec/
student 2478 0.0 0.7 748892 28252 ? Ssl 15:25 0:00 /usr/libexec/
student 2484 0.0 0.7 2876792 27596 ? Sl 15:25 0:00 /usr/bin/gjs
student 2486 0.0 0.1 162676 7368 ? Sl 15:25 0:00 /usr/libexec/
student 2501 0.0 0.0 2888 976 ? Ss 15:25 0:00 sh -c /usr/bi
student 2502 0.0 0.1 313360 6752 ? Ssl 15:25 0:00 /usr/libexec/
student 2504 0.1 0.3 317724 11960 ? Sl 15:25 0:02 /usr/bin/ibus
student 2505 0.0 0.6 465592 27068 ? Ssl 15:25 0:00 /usr/libexec/
student 2507 0.0 0.4 378396 16456 ? Ssl 15:25 0:00 /usr/libexec/
student 2510 0.0 0.1 314864 7352 ? Ssl 15:25 0:00 /usr/libexec/
student 2511 0.0 0.5 343492 21916 ? Ssl 15:25 0:00 /usr/libexec/
student 2513 0.0 0.6 867128 26824 ? Ssl 15:25 0:00 /usr/libexec/
student 2515 0.0 0.6 453492 26016 ? Ssl 15:25 0:00 /usr/libexec/
student 2517 0.0 0.2 326332 10424 ? Ssl 15:25 0:00 /usr/libexec/
student 2520 0.0 0.1 460732 6628 ? Ssl 15:25 0:00 /usr/libexec/
student 2521 0.0 0.1 239164 6536 ? Ssl 15:25 0:00 /usr/libexec/
student 2523 0.0 0.2 395148 9340 ? Ssl 15:25 0:00 /usr/libexec/
student 2525 0.0 0.2 315240 7936 ? Ssl 15:25 0:00 /usr/libexec/
student 2526 0.0 0.2 322276 9340 ? Ssl 15:25 0:00 /usr/libexec/
student 2527 0.0 0.5 344036 22460 ? Ssl 15:25 0:00 /usr/libexec/
student 2557 0.0 1.7 812912 68092 ? Sl 15:25 0:00 /usr/libexec/
student 2571 0.0 0.1 232260 6148 ? Sl 15:25 0:00 /usr/libexec/
student 2574 0.0 0.1 317120 7796 ? Sl 15:25 0:00 /usr/lib/x86_
student 2614 0.0 0.3 345232 13740 ? Sl 15:25 0:00 /usr/libexec/
student 2655 0.0 0.1 240200 7580 ? Sl 15:25 0:00 /usr/libexec/
student 2656 0.0 0.7 350752 28864 ? Sl 15:25 0:01 /usr/libexec/
student 2662 0.0 0.1 240136 6584 ? Sl 15:25 0:00 /usr/libexec/
student 2692 0.0 0.1 166356 7208 ? Sl 15:25 0:00 /usr/libexec/
student 2696 0.0 0.6 2934128 27016 ? Sl 15:25 0:00 /usr/bin/gjs
student 2793 0.0 1.9 3285980 77384 ? Sl 15:25 0:01 gjs /usr/shar
student 2811 0.0 0.3 626748 12528 ? Ssl 15:25 0:00 /usr/libexec/
student 2818 0.0 2.6 1495708 102276 ? Ssl 15:25 0:01 /usr/libexec/
student 2859 0.0 0.7 352204 30276 ? Ssl 15:25 0:00 /usr/libexec/
student 2873 0.0 0.1 165988 6656 ? Ssl 15:25 0:00 /usr/libexec/

```



```
student@administrator-foss26:~$ ps ux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START  TIME COMMAND
student    2161  0.0  0.2 18040 10808 ?
student    2162  0.0  0.1 179456 5208 ?
student    2171  0.0  0.1 42448 4872 ?
student    2172  0.0  0.1 26336 4368 ?
student    2173  0.0  0.7 2215420 30764 ?
student    2174  0.0  0.2 76120 11632 ?
student    2184  0.0  0.1 9912 5760 ?
student    2191  0.0  0.2 243512 8080 ?
student    2203  0.0  0.1 380884 5584 ?
student    2218  0.0  0.1 466056 7152 ?
student    2222  0.0  0.1 239024 5340 ?
student    2240  0.0  0.1 243792 7024 ?
student    2251  0.0  0.1 165264 6208 tty2
student    2255  0.0  0.3 225912 15412 tty2
student    2256  0.0  0.6 638476 26316 ?
student    2299  0.0  1.6 726652 63952 ?
student    2302  0.0  0.1 94784 5092 ?
student    2317  0.0  0.4 595976 18116 ?
student    2343  0.0  0.1 309676 7768 ?
student    2347  2.6  6.7 5173616 265156 ?
student    2353  0.0  0.1 8560 4300 ?
student    2384  0.0  0.4 582720 17776 ?
student    2390  0.0  0.1 157092 5944 ?
student    2391  0.0  0.2 318988 9180 ?
student    2398  0.0  0.1 239332 6528 ?
student    2402  0.0  0.2 318072 7816 ?
student    2407  0.0  0.1 239508 6352 ?
student    2411  0.0  0.9 567524 38848 ?
student    2418  0.0  0.3 341276 14340 ?
student    2429  0.0  0.6 395108 24716 ?
student    2430  0.0  0.1 240412 7096 ?
```

chown,jobs

```
student@administrator-foss26:~$ chown student add.c
student@administrator-foss26:~$ jobs -l running
bash: jobs: running: no such job
student@administrator-foss26:~$ jobs -l jobID
bash: jobs: jobID: no such job
student@administrator-foss26:~$ jobs -n jobID
bash: jobs: jobID: no such job
student@administrator-foss26:~$ jobs -p jobID
bash: jobs: jobID: no such job
```

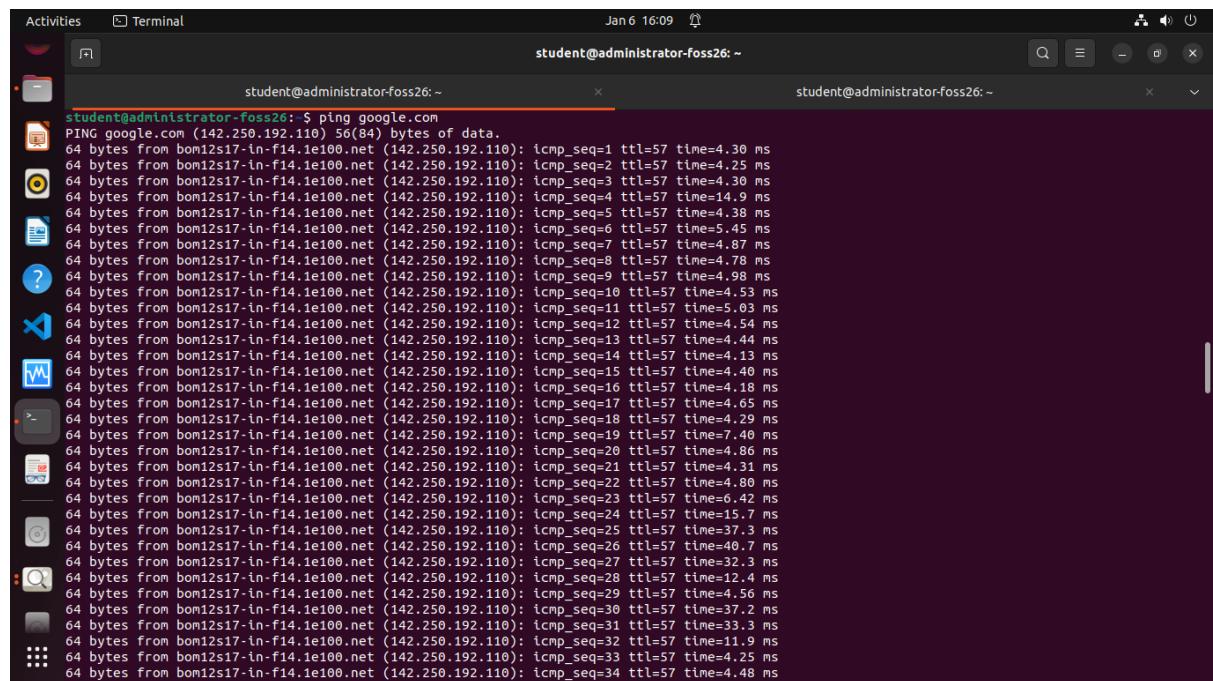
ps

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
student	2161	0.0	0.2	18040	10808	?	Ss	15:25	0:00	/lib/systemd/
student	2162	0.0	0.1	179456	5208	?	S	15:25	0:00	(sd-pam)
student	2171	0.0	0.1	42448	4872	?	S<sl	15:25	0:00	/usr/bin/pipe
student	2172	0.0	0.1	26336	4368	?	Ssl	15:25	0:00	/usr/bin/pipe
student	2173	0.0	0.7	2215420	30764	?	S<sl	15:25	0:00	/usr/bin/puls
student	2174	0.0	0.2	76120	11632	?	Ss	15:25	0:00	/snap/snapd-d
student	2184	0.0	0.1	9912	5760	?	Ss	15:25	0:00	/usr/bin/dbus
student	2191	0.0	0.2	243512	8080	?	Ssl	15:25	0:00	/usr/libexec/
student	2203	0.0	0.1	380884	5584	?	Sl	15:25	0:00	/usr/libexec/
student	2218	0.0	0.1	466056	7152	?	Ssl	15:25	0:00	/usr/libexec/
student	2222	0.0	0.1	239024	5340	?	Ssl	15:25	0:00	/usr/libexec/
student	2240	0.0	0.1	243792	7024	?	Sl	15:25	0:00	/usr/bin/gnom
student	2251	0.0	0.1	165264	6208	tty2	Ssl+	15:25	0:00	/usr/libexec/
student	2255	0.0	0.3	225912	15412	tty2	Sl+	15:25	0:00	/usr/libexec/
student	2256	0.0	0.6	638476	26316	?	SNSl	15:25	0:00	/usr/libexec/
student	2299	0.0	1.6	726652	63952	?	Ssl	15:25	0:00	/usr/libexec/
student	2302	0.0	0.1	94784	5092	?	Ssl	15:25	0:00	/usr/libexec/
student	2317	0.0	0.4	595976	18116	?	Ssl	15:25	0:00	/usr/libexec/
student	2343	0.0	0.1	309676	7768	?	Sl	15:25	0:00	/usr/libexec/
student	2347	2.6	6.7	5173616	265156	?	Rsl	15:25	0:55	/usr/bin/gnom
student	2353	0.0	0.1	8560	4300	?	S	15:25	0:00	/usr/bin/dbus
student	2384	0.0	0.4	582720	17776	?	Sl	15:25	0:00	/usr/libexec/
student	2390	0.0	0.1	157092	5944	?	Ssl	15:25	0:00	/usr/libexec/
student	2391	0.0	0.2	318988	9180	?	Ssl	15:25	0:00	/usr/libexec/
student	2398	0.0	0.1	239332	6528	?	Ssl	15:25	0:00	/usr/libexec/
student	2402	0.0	0.2	318072	7816	?	Ssl	15:25	0:00	/usr/libexec/
student	2407	0.0	0.1	239508	6352	?	Ssl	15:25	0:00	/usr/libexec/
student	2411	0.0	0.9	567524	38848	?	Sl	15:25	0:00	/usr/libexec/
student	2418	0.0	0.3	341276	14340	?	Sl	15:25	0:00	/usr/libexec/
student	2429	0.0	0.6	395108	24716	?	Ssl	15:25	0:00	/usr/libexec/
student	2430	0.0	0.1	240412	7096	?	Ssl	15:25	0:00	/usr/libexec/

student	2430	0.0	0.1	240412	7096	?	Ssl	15:25	0:00	'/usr/libexec/
student	2441	0.0	0.2	318072	8352	?	Sl	15:25	0:00	/usr/libexec/
student	2448	0.0	0.7	843392	29788	?	Ssl	15:25	0:00	/usr/libexec/
student	2478	0.0	0.7	748892	28252	?	Ssl	15:25	0:00	/usr/libexec/
student	2484	0.0	0.7	2876792	27596	?	Sl	15:25	0:00	/usr/bin/gjs
student	2486	0.0	0.1	162676	7368	?	Sl	15:25	0:00	/usr/libexec/
student	2501	0.0	0.0	2888	976	?	Ss	15:25	0:00	sh -c /usr/bi
student	2502	0.0	0.1	313360	6752	?	Ssl	15:25	0:00	/usr/libexec/
student	2504	0.1	0.3	317724	11960	?	Sl	15:25	0:02	/usr/bin/ibus
student	2505	0.0	0.6	465592	27068	?	Ssl	15:25	0:00	/usr/libexec/
student	2507	0.0	0.4	378396	16456	?	Ssl	15:25	0:00	/usr/libexec/
student	2510	0.0	0.1	314864	7352	?	Ssl	15:25	0:00	/usr/libexec/
student	2511	0.0	0.5	343492	21916	?	Ssl	15:25	0:00	/usr/libexec/
student	2513	0.0	0.6	867128	26824	?	Ssl	15:25	0:00	/usr/libexec/
student	2515	0.0	0.6	453492	26016	?	Ssl	15:25	0:00	/usr/libexec/
student	2517	0.0	0.2	326332	10424	?	Ssl	15:25	0:00	/usr/libexec/
student	2520	0.0	0.1	460732	6628	?	Ssl	15:25	0:00	/usr/libexec/
student	2521	0.0	0.1	239164	6536	?	Ssl	15:25	0:00	/usr/libexec/
student	2523	0.0	0.2	395148	9340	?	Ssl	15:25	0:00	/usr/libexec/
student	2525	0.0	0.2	315240	7936	?	Ssl	15:25	0:00	/usr/libexec/
student	2526	0.0	0.2	322276	9340	?	Ssl	15:25	0:00	/usr/libexec/
student	2527	0.0	0.5	344036	22460	?	Ssl	15:25	0:00	/usr/libexec/
student	2557	0.0	1.7	812912	68092	?	Sl	15:25	0:00	/usr/libexec/
student	2571	0.0	0.1	232260	6148	?	Sl	15:25	0:00	/usr/libexec/
student	2574	0.0	0.1	317120	7796	?	Sl	15:25	0:00	/usr/lib/x86_
student	2614	0.0	0.3	345232	13740	?	Sl	15:25	0:00	/usr/libexec/
student	2655	0.0	0.1	240200	7580	?	Sl	15:25	0:00	/usr/libexec/
student	2656	0.0	0.7	350752	28864	?	Sl	15:25	0:01	/usr/libexec/
student	2662	0.0	0.1	240136	6584	?	Sl	15:25	0:00	/usr/libexec/
student	2692	0.0	0.1	166356	7208	?	Sl	15:25	0:00	/usr/libexec/
student	2696	0.0	0.6	2934128	27016	?	Sl	15:25	0:00	/usr/bin/gjs
student	2793	0.0	1.9	3285980	77384	?	Sl	15:25	0:01	gjs /usr/shar
student	2811	0.0	0.3	626748	12528	?	Ssl	15:25	0:00	/usr/libexec/
student	2818	0.0	2.6	1495708	102276	?	Ssl	15:25	0:01	/usr/libexec/
student	2859	0.0	0.7	352204	30276	?	Ssl	15:25	0:00	/usr/libexec/
student	2873	0.0	0.1	165988	6656	?	Ssl	15:25	0:00	/usr/libexec/

Kill, ping

```
student 2859 0.0 0.7 352204 30276 ? Ssl 15:25 0:00 /usr/libexec/
student 2873 0.0 0.1 165988 6656 ? Ssl 15:25 0:00 /usr/libexec/
student 2876 0.0 0.5 308732 22060 ? Sl 15:25 0:00 /snap/snapd-d
student 2944 0.3 1.5 827624 61072 ? Ssl 15:25 0:06 /usr/libexec/
student 2964 0.0 0.1 14156 5216 pts/0 Ss 15:25 0:00 bash
student 2981 0.0 0.6 421832 26616 ? Sl 15:26 0:00 update-notifi
student 3027 1.7 9.1 3682752 356852 ? Sl 15:28 0:33 /snap/firefox
student 3124 0.1 2.0 356436 79212 ? Sl 15:28 0:02 /usr/bin/Xway
student 3131 0.0 1.8 589944 73356 ? Ssl 15:28 0:00 /usr/libexec/
student 3157 0.0 0.6 196896 25152 ? Sl 15:28 0:00 /usr/libexec/
student 3233 0.0 0.9 221416 37120 ? Sl 15:28 0:00 /snap/firefox
student 3281 0.2 3.2 2473764 126692 ? Sl 15:28 0:04 /snap/firefox
student 3317 0.0 0.6 1015420 26084 ? Sl 15:28 0:00 /usr/bin/snap
student 3581 0.0 2.4 2460468 94528 ? Sl 15:28 0:00 /snap/firefox
student 3617 1.1 5.0 2954764 197336 ? Sl 15:28 0:21 /snap/firefox
student 3880 0.0 2.2 2439092 88348 ? Sl 15:28 0:00 /snap/firefox
student 3921 0.0 1.7 2426484 69240 ? Sl 15:28 0:00 /snap/firefox
student 3943 0.0 1.0 339392 41340 ? Sl 15:29 0:00 /snap/firefox
student 3945 0.0 0.8 224488 33188 ? Sl 15:29 0:00 /snap/firefox
student 3998 0.0 1.7 2426484 69728 ? Sl 15:29 0:00 /snap/firefox
student 4057 0.0 0.2 391660 8492 ? Sl 15:29 0:00 /usr/libexec/
student 4072 0.0 0.2 319832 8668 ? Sl 15:29 0:00 /usr/libexec/
student 4117 0.5 2.2 770808 89660 ? Sl 15:30 0:10 /usr/bin/naut
student 4155 0.0 1.7 2426476 69524 ? Sl 15:30 0:00 /snap/firefox
student 4344 1.0 2.6 728532 103420 ? Sl 15:31 0:16 eog /home/stu
student 4529 0.0 0.2 318972 10204 ? Sl 15:44 0:00 /usr/libexec/
student 4546 0.0 0.1 14156 5428 pts/1 Ss+ 15:44 0:00 bash
student 4804 0.0 0.0 15552 1608 pts/0 R+ 15:59 0:00 ps ux
student@administrator-foss26:~$ ^C
student@administrator-foss26:~$ kill SIGKILL 2876
bash: kill: SIGKILL: arguments must be process or job IDs
student@administrator-foss26:~$ kill SIGTERM 4529
bash: kill: SIGTERM: arguments must be process or job IDs
student@administrator-foss26:~$ ping google.com
PING google.com (142.250.192.110) 56(84) bytes of data.
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=1 ttl=57 time=4.30 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=2 ttl=57 time=4.25 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=3 ttl=57 time=4.30 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=4 ttl=57 time=14.9 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=5 ttl=57 time=4.38 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=6 ttl=57 time=5.45 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=7 ttl=57 time=4.87 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=8 ttl=57 time=4.78 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=9 ttl=57 time=4.98 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=10 ttl=57 time=4.53 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=11 ttl=57 time=5.03 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=12 ttl=57 time=4.54 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=13 ttl=57 time=4.44 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=14 ttl=57 time=4.13 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=15 ttl=57 time=4.40 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=16 ttl=57 time=4.18 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=17 ttl=57 time=4.65 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=18 ttl=57 time=4.29 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=19 ttl=57 time=7.40 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=20 ttl=57 time=4.86 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=21 ttl=57 time=4.31 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=22 ttl=57 time=4.80 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=23 ttl=57 time=6.42 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=24 ttl=57 time=15.7 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=25 ttl=57 time=37.3 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=26 ttl=57 time=40.7 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=27 ttl=57 time=32.3 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=28 ttl=57 time=12.4 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=29 ttl=57 time=4.56 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=30 ttl=57 time=37.2 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=31 ttl=57 time=33.3 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=32 ttl=57 time=11.9 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=33 ttl=57 time=4.25 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=34 ttl=57 time=4.48 ms
```



Activities Terminal Jan 6 16:10 student@student@administrator-foss26: ~

```
student@student@foss26: ~
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=34 ttl=57 time=4.48 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=35 ttl=57 time=4.75 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=36 ttl=57 time=4.66 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=37 ttl=57 time=10.9 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=38 ttl=57 time=4.33 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=39 ttl=57 time=9.00 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=40 ttl=57 time=4.77 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=41 ttl=57 time=5.34 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=42 ttl=57 time=5.49 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=43 ttl=57 time=7.43 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=44 ttl=57 time=4.31 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=45 ttl=57 time=8.70 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=46 ttl=57 time=4.32 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=47 ttl=57 time=5.17 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=48 ttl=57 time=4.73 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=49 ttl=57 time=4.41 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=50 ttl=57 time=4.23 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=51 ttl=57 time=4.23 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=52 ttl=57 time=4.18 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=53 ttl=57 time=4.22 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=54 ttl=57 time=19.7 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=55 ttl=57 time=4.27 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=56 ttl=57 time=4.50 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=57 ttl=57 time=4.63 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=58 ttl=57 time=4.21 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=59 ttl=57 time=4.20 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=60 ttl=57 time=7.60 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=61 ttl=57 time=4.37 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=62 ttl=57 time=4.28 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=63 ttl=57 time=4.18 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=64 ttl=57 time=4.51 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=65 ttl=57 time=4.70 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=66 ttl=57 time=4.35 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=67 ttl=57 time=4.29 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=68 ttl=57 time=4.66 ms
64 bytes from bom12s17-in-f14.1e100.net (142.250.192.110): icmp_seq=69 ttl=57 time=4.73 ms
```

Uname, getit

Activities Terminal Jan 6 16:22 student@student@administrator-foss26: ~

```
student@student@foss26: ~
Student user can run following commands with sudo: systemctl apt dpkg docker mount
student@student@foss26: $ wget https://www.loggly.com/wp-content/uploads/2015/05/Linux-Cheat-Sheet-Sponsored-By-Loggly.pdf
--2023-01-06 16:20:35-- https://www.loggly.com/wp-content/uploads/2015/05/Linux-Cheat-Sheet-Sponsored-By-Loggly.pdf
Resolving www.loggly.com (www.loggly.com)... 23.212.5.40, 23.212.5.48
Connecting to www.loggly.com (www.loggly.com) 23.212.5.40:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 987562 (964K) [application/pdf]
Saving to: 'Linux-Cheat-Sheet-Sponsored-By-Loggly.pdf.1'

Linux-Cheat-Sheet-Sponsored-By-Logg 100%[=====] 964.42K 3.73MB/s in 0.3s
2023-01-06 16:20:36 (3.73 MB/s) - 'Linux-Cheat-Sheet-Sponsored-By-Loggly.pdf.1' saved [987562/987562]

student@student@foss26: $ uname -a
Linux administrator-foss26 5.15.0-56-generic #62-Ubuntu SMP Tue Nov 22 19:54:14 UTC 2022 x86_64 x86_64 x86_64 GNU/Linux
student@student@foss26: $ uname -s
Linux
student@student@foss26: $ uname -n
administrator-foss26
student@student@foss26: $ getit
Command 'getit' not found, did you mean:
  command 'gedit' from snap gedit (42.2)
  command 'gitit' from deb gitit (0.13.0.0+dfsg-2build5)
  command 'gedit' from deb gedit (41.0-3)
See 'snap info <snapname>' for additional versions.
student@student@foss26: $ gedit
```

top

Activities Terminal Jan 6 16:23 student@student@administrator-foss26: ~

```
student@student@administrator-foss26:~$ top
top - 16:23:10 up 59 min, 1 user, load average: 0.20, 0.22, 0.19
Tasks: 295 total, 1 running, 294 sleeping, 0 stopped, 0 zombie
%CPU(s): 2.8 us, 0.3 sy, 0.0 ni, 96.8 id, 0.1 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 3811.0 total, 171.2 free, 1523.3 used, 2116.4 buff/cache
MiB Swap: 11628.0 total, 11625.5 free, 2.5 used, 1698.9 avail Mem

PID USER      PR  NI    VIRT    RES    SHR S %CPU %MEM     TIME+ COMMAND
4117 student   20   0  771660  98608 59292 S 11.3  2.3  0:13.18 nautilus
2347 student   20   0 5197272 270852 125524 S  8.9  6.9  1:37.47 gnome-shell
2944 student   20   0  832480  66344 48856 S  4.6  1.7  0:18.38 gnome-terminal-
1210 root      20   0  38868  25144  4028 S  0.3  0.6  0:09.81 collectl
2504 student   20   0 317724 11960  7180 S  0.3  0.3  0:05.08 ibus-daemon
2656 student   20   0 350752 28864 18084 S  0.3  0.7  0:01.99 ibus-extension-
4731 root      20   0       0       0       0 I  0.3  0.0  0:00.15 kworker/4:0-events
5363 student   20   0 16220  4308  3364 S  0.3  0.1  0:01.25 top
5487 student   20   0 16108  4180  3312 R  0.3  0.1  0:00.19 top
  1 root      20   0 167224 12456  8248 S  0.0  0.3  0:02.13 systemd
  2 root      20   0       0       0       0 S  0.0  0.0  0:00.00 kthreadd
  3 root      0 -20       0       0       0 I  0.0  0.0  0:00.00 rcu_gp
  4 root      0 -20       0       0       0 I  0.0  0.0  0:00.00 rcu_par_gp
  5 root      0 -20       0       0       0 I  0.0  0.0  0:00.00 netns
  7 root      0 -20       0       0       0 I  0.0  0.0  0:00.00 kworker/0:0H-events_highpri
  9 root      0 -20       0       0       0 I  0.0  0.0  0:00.07 kworker/0:1H-events_highpri
 10 root     -51   0       0       0       0 I  0.0  0.0  0:00.00 mm_percpu_wq
 11 root     -51   0       0       0       0 S  0.0  0.0  0:00.00 rcu_tasks_rude_
 12 root     -51   0       0       0       0 S  0.0  0.0  0:00.00 rcu_tasks_trace
 13 root     -51   0       0       0       0 S  0.0  0.0  0:00.02 ksoftirqd/0
 14 root     -51   0       0       0       0 I  0.0  0.0  0:01.44 rcu_sched
 15 root      rt   0       0       0       0 S  0.0  0.0  0:00.02 migration/0
 16 root     -51   0       0       0       0 S  0.0  0.0  0:00.00 idle_inject/0
 18 root     -51   0       0       0       0 S  0.0  0.0  0:00.00 cpuhp/0
 19 root     -51   0       0       0       0 S  0.0  0.0  0:00.00 cpuhp/1
 20 root     -51   0       0       0       0 S  0.0  0.0  0:00.00 idle_inject/1
 21 root      rt   0       0       0       0 S  0.0  0.0  0:00.04 migration/1
```

history

Activities Terminal Jan 6 16:24 student@student@administrator-foss26: ~

```
Student user can run following commands with sudo: systemctl apt dpkg docker mount
student@student@administrator-foss26:~$ history
  1 ping 10.1.101.163
  2 dmesg
  3 ifconfig
  4 passwd
  5 ls
  6 sudo docker ps
  7 sudo apt install xyz
  8 sudo service apache2 restart
  9 sudo systemctl apache2 status
 10 sudo systemctl status apache2
 11 sudo systemctl restart apache2
 12 cd /bin
 13 ls
 14 su administrator
 15 ifconfig
 16 sudo docker images
 17 su
 18 atom
 19 su administrator
 20 sudo apt update
 21 sudo apt install texlive-full -y
 22 sudo apt install texlive -y
 23 sudo apt update
 24 sudo apt install texmaker -y
 25 sudo systemctl enable snapd
 26 ls -a .Xauthority
 27 cat .Xauthority
 28 startx
 29 su - abhijit.comp
 30 su - administrator
 31 vim abhishek.c
 32 gcc abhishek.c
 33 vim abhishek.c
 34 gcc abhishek.c
 35 vim 1.c
 36 gcc hello.c
 37 /etc
```

Activities Terminal Jan 6 16:24 student@administrator-foss26: ~

```
37 ./a.out
38 gcc --save-temps hello.c
39 gcc -g hello.c
40 gdb a.out
41 mkdir SHR
42 cd SHR
43 touch PPL Assignment1.c
44 gedit PPL Assignment1.c
45 vi PPL
46 gcc-g PPL
47 ls
48 gedit Assignment1.c
49 gcc-g Assignment1.c
50 gcc-g Assignment1.c
51 clear
52 ls
53 gcc -g Assignment1.c
54 ls
55 gdb a.out
56 cd shr
57 cd SHR
58 SHR
59 cd/ SHR
60 clear
61 SHR
62 CLEAR
63 clear
64 cd-SHR
65 cd~ SHR
66 CLEAR
67 cd desktop
68 cd SHR
69 CLEAR
70 clear
71 cd ~ SHR
72 cd ~ Desktop
73 clear
74 run cd Desktop
75
```

Activities Terminal Jan 6 16:25 student@administrator-foss26: ~

```
75 clear
76 ls
77 cd Desktop
78 cd SH
79 touch assignment2.c
80 gedit assignment2.c
81 ls
82 cd Desktop
83 cd SHR
84 ls
85 gedit assignment2.c
86 cd Desktop
87 cd SHR
88 ls
89 gcc -g assignment2.c
90 ls
91 gdb a.out
92 mkdir ppl
93 vi hello.c
94 gcc -g hello.c
95 gdb a.out
96 gdb ppl
97 hello.c
98 vi hello.c
99 cd ..
100 hello.c
101 vi hello.c
102 cd ppl
103 vi hello.c
104 gcc -g hello.c
105 gdb a.out
106 vi hello.c
107 man nmap
108 man nmap
109 perf
110 exit
111 mkdir abhinav assignment
112 ls
113 cd .....
```

Activities Terminal Jan 6 16:25 student@administrator-foss26: ~

```
151 latex
152 dpkg -l | grep -i beam
153 sudo apt install beamer
154 du -ks * | sort -n
155 ls -lt *iso
156 ls ..
157 find .. | grep iso
158 find -L .. | grep iso
159 passwd
160 sudo apt
161 sudo ls
162 sudo apt update
163 cd os
164 gcc main.c -o new
165 ./new
166 code
167 cd Desktop
168 cd os
169 cd 112003050
170 cd os
171 ls
172 gcc main.c -o new2
173 ./new2
174 gcc strdup help
175 mkdir dtl
176 cd dtl
177 vi add.c
178 gcc add.c
179 vi add.c
180 gcc add.c
181 ./a.exe
182 ./a.exe
183 ./a.out
184 chmod +x main.c
185 chmod add.c
186 chmod -x add.c
187 chmod +x add.c
188 clear
189 chmod +x add.c
```

Activities Terminal Jan 6 16:25 student@administrator-foss26: ~

```
182 ./a.exe
183 ./a.out
184 chmod +x main.c
185 chmod add.c
186 chmod -x add.c
187 chmod +x add.c
188 clear
189 chmod -x add.c
190 chmod +x add.c
191 ls -la
192 chown vaishnavi add.c
193 chown linuxuser add.c
194 chown student add.c
195 jobs -l running
196 jobs -l jobID
197 jobs -n jobID
198 jobs -p jobID
199 ps ux
200 kill SIGKILL 2876
201 kill SIGTERM 4529
202 ping google.com
203 wget https://www.loggly.com/wp-content/uploads/2015/05/Linux-cheat-Sheet-Sponsored-By-Loggly.pdf
204 uname -a
205 uname -s
206 uname -n
207 gedit
208 top
209 wget https://www.loggly.com/wp-content/uploads/2015/05/Linux-Cheat-Sheet-Sponsored-By-Loggly.pdf
210 uname -a
211 uname -s
212 uname -n
213 gett
214 gedit
215 top
216 vi add.c
217 mkdir dtl
218 history
```

student@administrator-foss26:~\$

nano

A screenshot of the nano text editor window. The title bar shows "Activities Terminal" and the date "Jan 6 16:38". The status bar shows "student@administrator-foss26: ~". The main area contains the following C code:

```
GNU nano 6.2
#include<stdio.h>
int main()
{
    int a,b,c;
    a=3;
    b=2;
    c=a+b;
    printf("Sum is %d",c);
    return 0;
}
```

The bottom menu bar includes standard nano key bindings such as Help, Write Out, Read File, Where Is, Replace, Cut, Paste, Execute, Justify, Location, Go To Line, Undo, Redo, Set Mark, Copy, and Where Was.

Echo, zip, unzip, hostname, useradd

A screenshot of a terminal window showing a series of Linux commands run by the user "student". The title bar shows "Activities Terminal" and the date "Jan 6 16:41". The status bar shows "student@administrator-foss26: ~" twice. The terminal output is as follows:

```
student@administrator-foss26:~$ man ls
student@administrator-foss26:~$ echo -n hello
hello
student@administrator-foss26:~$ echo -e hello
hello world
student@administrator-foss26:~$ zip archive.zip add.c
  adding: add.c (deflated 7%)
student@administrator-foss26:~$ unzip archive.zip add.zip
Archive:  archive.zip
caution: filename not matched: add.zip
student@administrator-foss26:~$ unzip archive.zip
Archive:  archive.zip
replace add.c? [y]es, [n]o, [A]ll, [N]one, [r]ename: n
student@administrator-foss26:~$ hostname
adminInistrator-foss26
student@administrator-foss26:~$ hostname -a
student@administrator-foss26:~$ hostname -A
adminInistrator-foss26 administrator-foss26
student@administrator-foss26:~$ hostname -i
127.0.1.1
student@administrator-foss26:~$ hostname -i
127.0.1.1
student@administrator-foss26:~$ hostname -I
10.1.99.111 172.17.0.1
student@administrator-foss26:~$ useradd Vaishnavi
useradd: Permission denied.
student@administrator-foss26:~$ useradd Vaishnavi passwd 123
Usage: useradd [options] LOGIN
      useradd -D
      useradd -D [options]
Options:
      --badnames          do not check for bad names
```

Activities Terminal Jan 6 16:41 student@student@administrator-foss26: ~

```
student@student@administrator-foss26: ~
```

Options:

- b, --badnames do not check for bad names
- base-dir BASE_DIR base directory for the home directory of the new account
- btrfs-subvolume-home use BTRFS subvolume for home directory
- c, --comment COMMENT GECOS field of the new account
- d, --home-dir HOME_DIR home directory of the new account
- D, --defaults print or change default useradd configuration
- e, --expiredate EXPIRE_DATE expiration date of the new account
- f, --inactive INACTIVE password inactivity period of the new account
- g, --gid GROUP name or ID of the primary group of the new account
- G, --groups GROUPS list of supplementary groups of the new account
- h, --help display this help message and exit
- k, --skel SKEL_DIR use this alternative skeleton directory
- K, --key KEY=VALUE override /etc/login.defs defaults
- l, --no-log-init do not add the user to the lastlog and faillog databases
- m, --create-home create the user's home directory
- M, --no-create-home do not create the user's home directory
- N, --no-user-group do not create a group with the same name as the user
- o, --non-unique allow to create users with duplicate (non-unique) UID
- p, --password PASSWORD encrypted password of the new account
- r, --system create a system account
- R, --root CHROOT_DIR directory to chroot into
- P, --prefix PREFIX_DIR prefix directory where are located the /etc/* files
- s, --shell SHELL login shell of the new account
- u, --uid UID user ID of the new account
- U, --user-group create a group with the same name as the user
- Z, --selinux-user SEUSER use a specific SEUSER for the SELinux user mapping
- extrausers Use the extra users database

Alias, htop, ps

Activities Terminal Jan 6 16:41 student@student@administrator-foss26: ~

```
student@student@administrator-foss26: ~
```

```
student@student@administrator-foss26: $ alias k*kill
student@student@administrator-foss26: $ unalias k
student@student@administrator-foss26: $ htop -d
Command 'htop' not found, but can be installed with:
snap install htop # version 3.2.1, or
apt install htop # version 3.0.5-7build2
See 'snap info htop' for additional versions.
student@student@administrator-foss26: $ ps -T
  PID  SPID TTY      TIME CMD
 5571  5571 pts/1    00:00:00 bash
 5849  5849 pts/1    00:00:00 ps
student@student@administrator-foss26: $ ps -A
  PID TTY      TIME CMD
  1 ?    00:00:02 systemd
  2 ?    00:00:00 kthreadd
  3 ?    00:00:00 rcu_gp
  4 ?    00:00:00 rcu_par_gp
  5 ?    00:00:00 netns
  7 ?    00:00:00 kworker/0:0H-events_highpri
  9 ?    00:00:00 kworker/0:1H-events_hlghpri
 10 ?   00:00:00 mm_percpu_wq
 11 ?   00:00:00 rcu_tasks_rude_
 12 ?   00:00:00 rcu_tasks_trace
 13 ?   00:00:00 ksoftirqd/0
 14 ?   00:00:01 rcu_sched
 15 ?   00:00:00 migration/0
 16 ?   00:00:00 idle_inject/0
 18 ?   00:00:00 cpuhp/0
 19 ?   00:00:00 cpuhp/1
 20 ?   00:00:00 idle_inject/1
 21 ?   00:00:00 migration/1
 22 ?   00:00:00 ksoftirqd/1
 24 ?   00:00:00 kworker/1:0H-events_highpri
 25 ?   00:00:00 cpuhp/2
 26 ?   00:00:00 idle_inject/2
```

Activities Terminal Jan 6 16:42 student@student@administrator-foss26: ~

```
student@student@administrator-foss26: ~
```

26 ?	00:00:00 idle_inject/2
27 ?	00:00:00 migration/2
28 ?	00:00:00 ksoftirqd/2
30 ?	00:00:00 kworker/2:0H-events_highpri
31 ?	00:00:00 cpuhp/3
32 ?	00:00:00 idle_inject/3
33 ?	00:00:00 migration/3
34 ?	00:00:00 ksoftirqd/3
36 ?	00:00:00 kworker/3:0H-events_highpri
37 ?	00:00:00 cpuhp/4
38 ?	00:00:00 idle_inject/4
39 ?	00:00:00 migration/4
40 ?	00:00:00 ksoftirqd/4
42 ?	00:00:00 kworker/4:0H-kblockd
43 ?	00:00:00 cpuhp/5
44 ?	00:00:00 idle_inject/5
45 ?	00:00:00 migration/5
46 ?	00:00:00 ksoftirqd/5
48 ?	00:00:00 kworker/5:0H-events_highpri
49 ?	00:00:00 cpuhp/6
50 ?	00:00:00 idle_inject/6
51 ?	00:00:00 migration/6
52 ?	00:00:00 ksoftirqd/6
54 ?	00:00:00 kworker/6:0H-events_highpri
55 ?	00:00:00 cpuhp/7
56 ?	00:00:00 idle_inject/7
57 ?	00:00:00 migration/7
58 ?	00:00:00 ksoftirqd/7
60 ?	00:00:00 kworker/7:0H-events_highpri
61 ?	00:00:00 kdevtmpfs
62 ?	00:00:00 inet_frag_wq
63 ?	00:00:00 kauditd
64 ?	00:00:00 khungtaskd
65 ?	00:00:00 oom_reaper
66 ?	00:00:00 writeback
67 ?	00:00:00 kcompactd0

Activities Terminal Jan 6 16:42 student@student@administrator-foss26: ~

```
student@student@administrator-foss26: ~
```

67 ?	00:00:00 kcompactd0
68 ?	00:00:00 ksmd
69 ?	00:00:00 khugepaged
75 ?	00:00:00 kworker/2:1-events
116 ?	00:00:00 kintegrityd
117 ?	00:00:00 kblockd
118 ?	00:00:00 blkcg_punt_blo
119 ?	00:00:00 tpm_dev_wq
120 ?	00:00:00 ata_sff
121 ?	00:00:00 md
122 ?	00:00:00 edac-poller
123 ?	00:00:00 devfreq_wq
124 ?	00:00:00 watchdogd
127 ?	00:00:00 kswapd0
128 ?	00:00:00 encryptfs-kthrea
130 ?	00:00:00 kthrotld
137 ?	00:00:00 acpi_thermal_pm
139 ?	00:00:00 vfio-irqfd-clea
140 ?	00:00:00 kworker/6:1H-events_highpri
141 ?	00:00:00 kworker/7:1H-events_highpri
142 ?	00:00:00 kworker/1:1H-kblockd
146 ?	00:00:00 kworker/2:1H-events_highpri
147 ?	00:00:00 mld
148 ?	00:00:00 ipv6_addrconf
149 ?	00:00:00 kworker/3:1H-kblockd
160 ?	00:00:00 kstrp
164 ?	00:00:00 zswap-shrink
165 ?	00:00:02 kworker/u17:0-i915_flip
172 ?	00:00:00 charger_manager
219 ?	00:00:00 kworker/5:1H-events_highpri
226 ?	00:00:00 cryptd
252 ?	00:00:00 scsi_eh_0
253 ?	00:00:00 scsi_tmf_0
254 ?	00:00:00 scsi_eh_1
255 ?	00:00:00 scsi_tmf_1
256 ?	00:00:00 scsi_eh_2

Activities Terminal Jan 6 16:42 student@student@administrator-foss26: ~

```
student@student@administrator-foss26: ~
```

256 ?	00:00:00 scsi_eh_2	
257 ?	00:00:00 scsi_tmfc_2	
258 ?	00:00:00 scsi_eh_3	
259 ?	00:00:00 scsi_tmfc_3	
260 ?	00:00:00 scsi_eh_4	
261 ?	00:00:00 scsi_tmfc_4	
262 ?	00:00:00 scsi_eh_5	
263 ?	00:00:00 scsi_tmfc_5	
268 ?	00:00:00 kworker/4:1H-kblockd	
269 ?	00:00:00 kworker/3:2-rCU_gp	
271 ?	00:00:00 card0-crtc0	
272 ?	00:00:00 card0-crtc1	
355 ?	00:00:00 raid5wq	
411 ?	00:00:00 jbd2/sda2-8	
412 ?	00:00:00 ext4-rsv-conver	
471 ?	00:00:00 systemd-journal	
506 ?	00:00:00 rpciod	
507 ?	00:00:00 xpriod	
527 ?	00:00:00 systemd-udevd	
653 ?	00:00:00 irq/33-mei_me	
752 ?	00:00:00 jbd2/sda5-8	
753 ?	00:00:00 ext4-rsv-conver	
764 ?	00:00:00 jbd2/sda4-8	
765 ?	00:00:00 ext4-rsv-conver	
827 ?	00:00:00 rpcbind	
828 ?	00:00:04 systemd-oomd	
829 ?	00:00:00 systemd-resolve	
830 ?	00:00:00 systemd-timesync	
841 ?	00:00:00 blkmapd	
851 ?	00:00:00 rpc.idmapd	
871 ?	00:00:00 nfsdcl	
878 ?	00:00:00 acpid	
882 ?	00:00:00 avahi-daemon	
883 ?	00:00:00 dbus-daemon	
884 ?	00:00:01 NetworkManager	
891 ?	00:00:00 atopac <td></td>	
892 ?	00:00:00 iwl_iwld	

Activities Terminal Jan 6 16:42 student@student@administrator-foss26: ~

```
student@student@administrator-foss26: ~
```

893 ?	00:00:00 irqbalance
894 ?	00:00:00 networkd-dispat
895 ?	00:00:02 polkitd
898 ?	00:00:00 rsyslogd
902 ?	00:00:00 systemd-logind
928 ?	00:00:00 avahi-daemon
932 ?	00:00:00 cron
935 ?	00:00:01 atop
996 ?	00:00:00 docker-registry
998 ?	00:00:00 ineted
1004 ?	00:00:01 /opt/saltstack/
1012 ?	00:00:00 rpc.statd
1014 ?	00:00:00 rpc.mountd
1016 ?	00:00:00 unattended-upgr
1019 ?	00:00:00 vnstatd
1024 ?	00:00:01 containerd
1045 ?	00:00:00 ModemManager
1054 ?	00:00:00 kerneloops
1056 ?	00:00:00 kerneloops
1057 ?	00:00:00 kworker/u17:1
1060 ?	00:00:00 lockd
1072 ?	00:00:00 kworker/3:3-events
1073 ?	00:00:00 iprt-VBoxWQueue
1074 ?	00:00:00 iprt-VBoxTscThr
1081 ?	00:00:00 nfsd
1082 ?	00:00:00 nfsd
1083 ?	00:00:00 nfsd
1084 ?	00:00:00 nfsd
1085 ?	00:00:00 nfsd
1086 ?	00:00:00 nfsd
1087 ?	00:00:00 nfsd
1088 ?	00:00:00 nfsd
1090 ?	00:00:00 sshd
1093 ?	00:00:00 gdm3
1102 ?	00:00:00 accounts-daemon
1121 ?	00:00:00 slapd

Chmod, ls

```
student@administrator-foss26:~$ chmod -x add.c
student@administrator-foss26:~$ chmod +x add.c
student@administrator-foss26:~$ ls -la
total 132
drwxr-x--- 21 student student 4096 Jan  6 15:46 .
drwxr-xr-x  5 root    root    4096 Oct 20 15:32 ..
-rw-------  1 student student 12288 Nov  7 15:38 .1.c.swp
-rwxrwxr-x  1 student student  100 Jan  6 15:46 add.c
-rw-----  1 student student 2165 Jan  6 15:40 .bash_history
-rw-r--r--  1 student student  220 Oct 20 15:32 .bash_logout
-rw-r--r--  1 student student 3771 Oct 20 15:32 .bashrc
drwx----- 12 student student 4096 Jan  6 15:30 .cache
drwx----- 20 student student 4096 Dec  9 16:53 .config
drwxr-xr-x  2 student student 4096 Jan  6 12:01 Desktop
drwxr-xr-x  2 student student 4096 Dec  3 15:01 Documents
drwxr-xr-x  3 student student 4096 Jan  6 15:30 Downloads
drwxrwxr-x  2 student student 4096 Jan  6 15:39 dtl
drwx----- 2 student student 4096 Dec  9 15:30 .gnupg
-rw-------  1 student student  42 Dec 28 14:32 .lesshist
drwx----- 3 student student 4096 Oct 20 15:52 .local
drwxr-xr-x  2 student student 4096 Oct 20 15:52 Music
drwxr-xr-x  2 student student 4096 Oct 20 15:52 Pictures
drwx----- 3 student student 4096 Oct 21 15:04 .pki
-rw-r--r--  1 student student  807 Oct 20 15:32 .profile
drwxr-xr-x  2 student student 4096 Oct 20 15:52 Public
drwx----- 4 student student 4096 Oct 20 15:54 snap
drwx----- 2 student student 4096 Dec 28 14:32 .ssh
drwxr-xr-x  2 student student 4096 Oct 20 15:52 Templates
drwxr-x---
```