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Assignment No. 0

1. pwd command

To check the full path of your current working directory, use the pwd command.

```
ubuntu@ubuntu:~$ pwd
/home/ubuntu
```

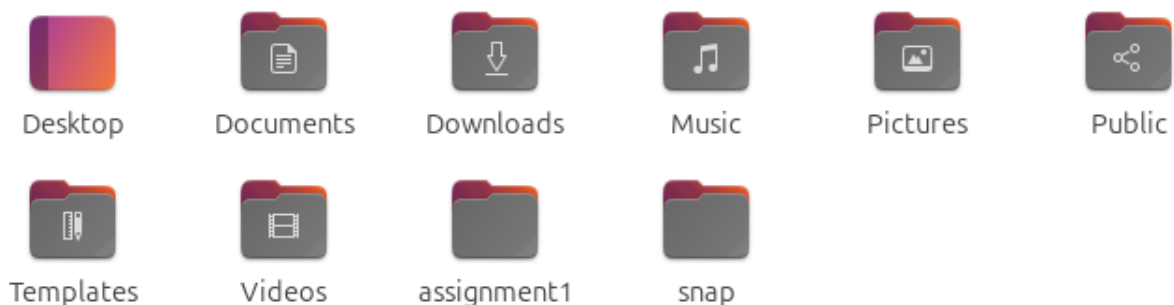
2. mkdir command

The mkdir command lets you create one or multiple directories.

The syntax looks like this: mkdir [options] directory_name1 directory_name2

To create a folder in another location, specify the full path. Otherwise, this command will make the new item in your current working directory.

```
ubuntu@ubuntu:~$ mkdir assignment1
```

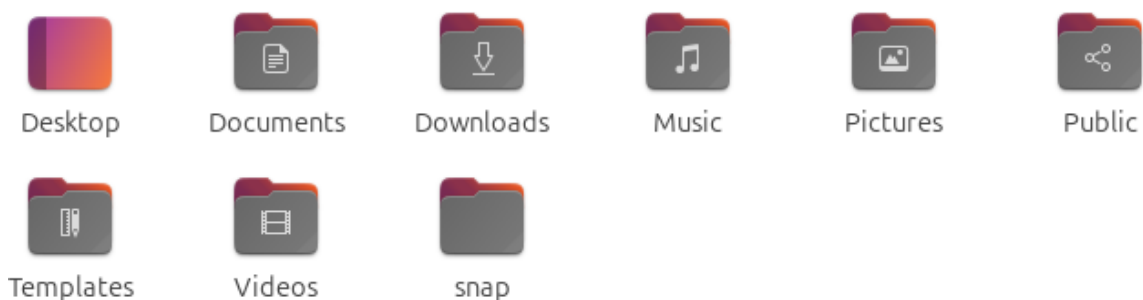


3. rm command

The rm command deletes files from a directory. You must have the write permission for the folder or use sudo. Here's the syntax:

rm [options] file1 file

```
ubuntu@ubuntu:~$ rm -r assignment1
ubuntu@ubuntu:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos  snap
```



4. cd command

Use `cd` to navigate between directories in your Linux VPS. It doesn't have any option, and the syntax is simple:

`cd [path_or_directory]`

- `cd` – returns to the current user's home directory.
- `cd ..` – moves a directory up.
- `cd -` – goes back to the previous directory.

```
ubuntu@ubuntu:~$ cd assignment1
ubuntu@ubuntu:~/assignment1$ cd ..
```

5. touch command

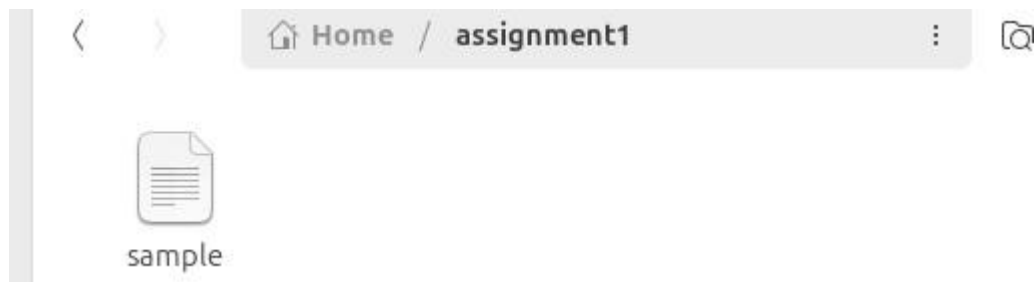
Run the `touch` command to create a new empty file in a specific directory. The syntax is as follows:

`touch [options] [path_and_file_name]`

If you omit the path, the `touch` command will create a new file in your current working directory. Here's an example:

`touch file.txt`

```
ubuntu@ubuntu:~$ touch sample
```



6. mv command

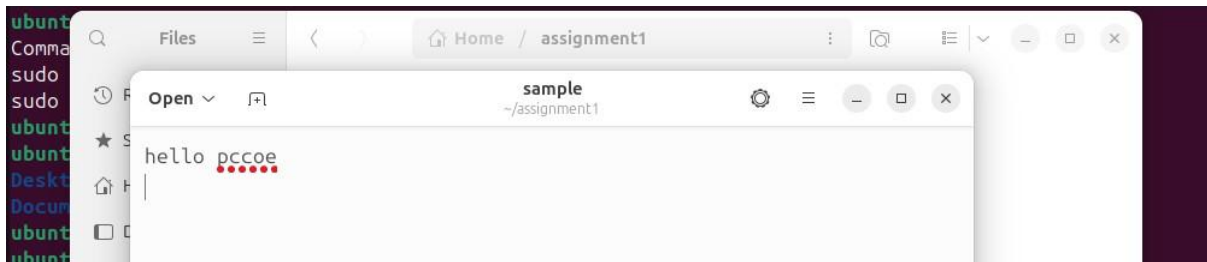
The main usage of the `mv` command is to move a file or folder to another location. Here's the syntax:

`mv file_or_directory [target_directory]`

```

ubuntu@ubuntu:~$ mv sample ./assignment1
ubuntu@ubuntu:~$ ls
Desktop    Downloads  Pictures   Templates  assignment1
Documents  Music      Public     Videos     snap
ubuntu@ubuntu:~$ cd assignment1
ubuntu@ubuntu:~/assignment1$ ls
sample

```



7. cat command

The concatenate or cat command has various usages. The most basic one is printing the content of a file. Here's the syntax:

cat file_name

```

ubuntu@ubuntu:~$ cd assignment1/
ubuntu@ubuntu:~/assignment1$ cat sample
hello pccoe

ubuntu@ubuntu:~/assignment1$

```

8. grep command

Global regular expression print or grep lets you search specific lines from a file using keywords. It is useful for filtering large data like logs. The syntax looks as follows:
 grep [options] keyword [file]

```

ubuntu@ubuntu:~/assignment1$ grep e sample
hello pccoe

```

9. history command

Run the history command to check previously run utilities. Here's its syntax:

history [options]

```
ubuntu@ubuntu:~/assignment1$ history
1  lr
2  sudo apt update
3  sudo apt install build-essentials dkms linux-header-$(uname -r)
4  lr
5  sudo apt install lr
6  lr
7  sudo apt install -y build-essentials dkms linux-header-$(uname -r)
8  sudo apt install -y build-essential linux-header-$(uname -r)
9  sudo apt install -y build-essential linux-headers-$(uname -r)
10 mkdir assignment1
11 cd assignment1
12 cd ..
13 ls
14 pwd
15 rm -r assignment1
16 ls
17 mkdir assignment1
18 cd assignment1
19 cd ..
20 ls
21 touch sample
22 mv sample ./assignment1
23 ls
24 mv sample ./assignment1
25 rs -r assignment1
26 rm -r assignment1
27 ls
28 touch sample
29 mv sample ./assignment1
30 ls
31 cd assignment1
32 ls
33 cat sample
top - 20:24:01 up 23 min, 1 user, load average: 0.11, 0.25, 0.45
Tasks: 368 total, 3 running, 365 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.3 us, 1.3 sy, 0.0 ni, 98.3 id, 0.0 wa, 0.0 hi, 0.1 st, 0.0 st
MiB Mem : 10835.0 total, 1226.5 free, 2008.0 used, 8495.9 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used, 8826.9 avail Mem
```

```

  PID USER      PR  NI    VIRT    RES    SHR  S  %CPU  %MEM     TIME+ COMMAND
 2487 ubuntu    20   0 6671892 435368 145192 R 22.6   3.9   2:16.53 gnome-shell
 2242 ubuntu    20   0 349868 99684 64876 R 12.0   0.9   0:41.65 Xorg
 6924 ubuntu    20   0 852908 55688 42812 S 4.7   0.5   0:04.15 gnome-terminal-
1100 root        20   0      0      0      0 I 0.9   0.0   0:00.31 kworker/2:2-mm_percpu_wq
 7262 ubuntu    20   0 23736 5632 3456 R 0.9   0.1   0:00.06 top
 17 root        20   0      0      0      0 I 0.4   0.0   0:02.50 rcu_preempt
2727 ubuntu    20   0 423444 23400 17088 S 0.4   0.2   0:00.83 gsd-keyboard
4090 ubuntu    20   0 499136 26952 19820 S 0.4   0.2   0:00.84 update-notifier
5176 ubuntu    20   0 3516964 69908 52344 S 0.4   0.6   0:02.24 gjs
5635 root        20   0      0      0      0 I 0.4   0.0   0:00.20 kworker/0:1-events
 1 root        20   0 23376 13984 9376 S 0.0   0.1   0:24.71 systemd
 2 root        20   0      0      0      0 S 0.0   0.0   0:03.00 kthreadd
top - 20:24:01 up 23 min, 1 user, load average: 0.11, 0.25, 0.45
Tasks: 368 total, 4 running, 364 sleeping, 0 stopped, 0 zombie
%Cpu(s): 2.8 us, 12.7 sy, 0.0 ni, 84.5 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 10835.0 total, 1226.5 free, 2008.0 used, 8495.9 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used, 8826.9 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR  S  %CPU  %MEM     TIME+ COMMAND
 2487 ubuntu    20   0 6675540 438952 148776 R 180.0   4.0   2:16.62 gnome-shell
 2242 ubuntu    20   0 348280 100892 64488 R 40.0   0.9   0:41.67 Xorg
2718 ubuntu    20   0 472776 12968 6912 S 20.0   0.1   0:03.53 ibus-daemon
6924 ubuntu    20   0 853292 55944 42812 S 20.0   0.5   0:04.16 gnome-terminal-
 7262 ubuntu    20   0 23736 5632 3456 R 20.0   0.1   0:00.07 top
 1 root        20   0 23376 13984 9376 S 0.0   0.1   0:24.71 systemd
 2 root        20   0      0      0      0 S 0.0   0.0   0:03.00 kthreadd
 3 root        20   0      0      0      0 S 0.0   0.0   0:00.00 pool_workqueue_release
 4 root        0 -20      0      0      0 I 0.0   0.0   0:00.34 kworker/R-rcu_g
 5 root        0 -20      0      0      0 I 0.0   0.0   0:00.00 kworker/R-rcu_p
 6 root        0 -20      0      0      0 I 0.0   0.0   0:00.00 kworker/R-slub_
 7 root        0 -20      0      0      0 I 0.0   0.0   0:00.00 kworker/R-netns
10 root        0 -20      0      0      0 I 0.0   0.0   0:00.00 kworker/0:0H-events_highpri
11 root        20   0      0      0      0 I 0.0   0.0   0:00.10 kworker/u28:0-netns
12 root        0 -20      0      0      0 I 0.0   0.0   0:00.65 kworker/R-mm_pe
13 root        20   0      0      0      0 I 0.0   0.0   0:00.00 rcu_tasks_kthread
14 root        20   0      0      0      0 I 0.0   0.0   0:00.00 rcu_tasks_rude_kthread
15 root        20   0      0      0      0 I 0.0   0.0   0:00.01 rcu_tasks_trace_kthread
16 root        20   0      0      0      0 S 0.0   0.0   0:00.85 ksoftirqd/0
17 root        20   0      0      0      0 I 0.0   0.0   0:02.50 rcu_preempt
18 root        rt  0      0      0      0 S 0.0   0.0   0:01.29 migration/0
19 root        -51  0      0      0      0 S 0.0   0.0   0:00.00 idle_inject/0
20 root        20   0      0      0      0 S 0.0   0.0   0:00.00 cpuhp/0
21 root        20   0      0      0      0 S 0.0   0.0   0:00.00 cpuhp/1
22 root        -51  0      0      0      0 S 0.0   0.0   0:00.00 idle_inject/1
top: write error
```

10. echo command

Use echo to print text in your command as a Terminal output. Here's the syntax:

echo [options] [text]

```
ubuntu@ubuntu:~/assignment1$ echo hello
hello
```

11. ls

Lists files and directories in the current directory. Use options like -l for detailed info or -a to include hidden files.

Here's the syntax:

```
ubuntu@ubuntu:~$ ls
Desktop    Downloads  Pictures   Templates  assignment1
Documents  Music      Public     Videos     snap
```

12. time command

```
ubuntu@ubuntu:~/assignment1$ time

real    0m0.000s
user    0m0.000s
sys     0m0.000s
```

The time command measures the execution time of commands or scripts to gain insights into your system performance. The basic syntax looks as follows:

time command_or_script

13. top command

The top command displays all running processes in your system and their hardware consumption. The syntax looks like this:

top [options]

```

ubuntu@ubuntu:~/assignment1$ top
top - 20:27:08 up 26 min, 1 user, load average: 0.00, 0.13, 0.36
Tasks: 366 total, 2 running, 364 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.5 sy, 0.0 ni, 99.1 id, 0.0 wa, 0.0 hi, 0.5 si, 0.0 st
MiB Mem : 10835.0 total, 1229.2 free, 2005.3 used, 8495.6 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used. 8829.7 avail Mem

  PID USER      PR  NI  VIRT  RES  SHR  S  %CPU  %MEM    TIME+  COMMAND
 2242 ubuntu    20   0 350140 102592 64316 S   2.5   0.9   0:46.87 Xorg
 2487 ubuntu    20   0 6671380 434592 144548 S   2.5   3.9   2:25.08 gnome-shell
    1 root       20   0 23376 13984 9376 S   0.0   0.1   0:24.71 systemd
    2 root       20   0      0      0  0 S   0.0   0.0   0:03.00 kthreadd
    3 root       20   0      0      0  0 S   0.0   0.0   0:00.00 pool_workqueue_release
    4 root       0 -20      0      0  0 I   0.0   0.0   0:00.34 kworker/R-rcu_g
    5 root       0 -20      0      0  0 I   0.0   0.0   0:00.00 kworker/R-rcu_p
    6 root       0 -20      0      0  0 I   0.0   0.0   0:00.00 kworker/R-slub_
    7 root       0 -20      0      0  0 I   0.0   0.0   0:00.00 kworker/R-netns
   10 root       0 -20      0      0  0 I   0.0   0.0   0:00.00 kworker/0:0H-events_highpri
   11 root      20   0      0      0  0 I   0.0   0.0   0:00.10 kworker/u28:0-netns
   12 root       0 -20      0      0  0 I   0.0   0.0   0:00.65 kworker/R-mm_pe
   13 root      20   0      0      0  0 I   0.0   0.0   0:00.00 rcu_tasks_kthread
   14 root      20   0      0      0  0 I   0.0   0.0   0:00.00 rcu_tasks_rude_kthread
   15 root      20   0      0      0  0 I   0.0   0.0   0:00.01 rcu_tasks_trace_kthread
   16 root      20   0      0      0  0 S   0.0   0.0   0:00.85 ksoftirqd/0
   17 root      20   0      0      0  0 I   0.0   0.0   0:02.51 rcu_preempt
   18 root      rt   0      0      0  0 S   0.0   0.0   0:01.30 migration/0
   19 root     -51   0      0      0  0 S   0.0   0.0   0:00.00 idle_inject/0
   20 root      20   0      0      0  0 S   0.0   0.0   0:00.00 cpuhp/0
   21 root      20   0      0      0  0 S   0.0   0.0   0:00.00 cpuhp/1
   22 root     -51   0      0      0  0 S   0.0   0.0   0:00.00 idle_inject/1
   23 root      rt   0      0      0  0 S   0.0   0.0   0:01.84 migration/1
   24 root      20   0      0      0  0 S   0.0   0.0   0:00.31 ksoftirqd/1
   25 root      20   0      0      0  0 I   0.0   0.0   0:02.85 kworker/1:0-events

```

14. head

Shows the first few lines of a file (default is 10 lines). Use the -n option to specify the number of lines.

Example: head -n 5 file.txt.

```

ubuntu@ubuntu:~/assignment1$ head sample
hello pccoe

```

15. Ls -F

The ls -F command lists directory contents and appends symbols to indicate the type of each item. For example

/ for directories.

* for executable files.

```

ubuntu@ubuntu:~/assignment1$ ls -F
sample
ubuntu@ubuntu:~/assignment1$ cd ..
ubuntu@ubuntu:~$ ls -F
Desktop/ Documents/ Downloads/ Music/ Pictures/ Public/ Templates/ Videos/ assignment1/ snap/
ubuntu@ubuntu:~$

```

16. shutdown command

The shutdown command lets you turn off or restart your Linux system at a specific time.

Here's the syntax:

shutdown [option] [time] [message]