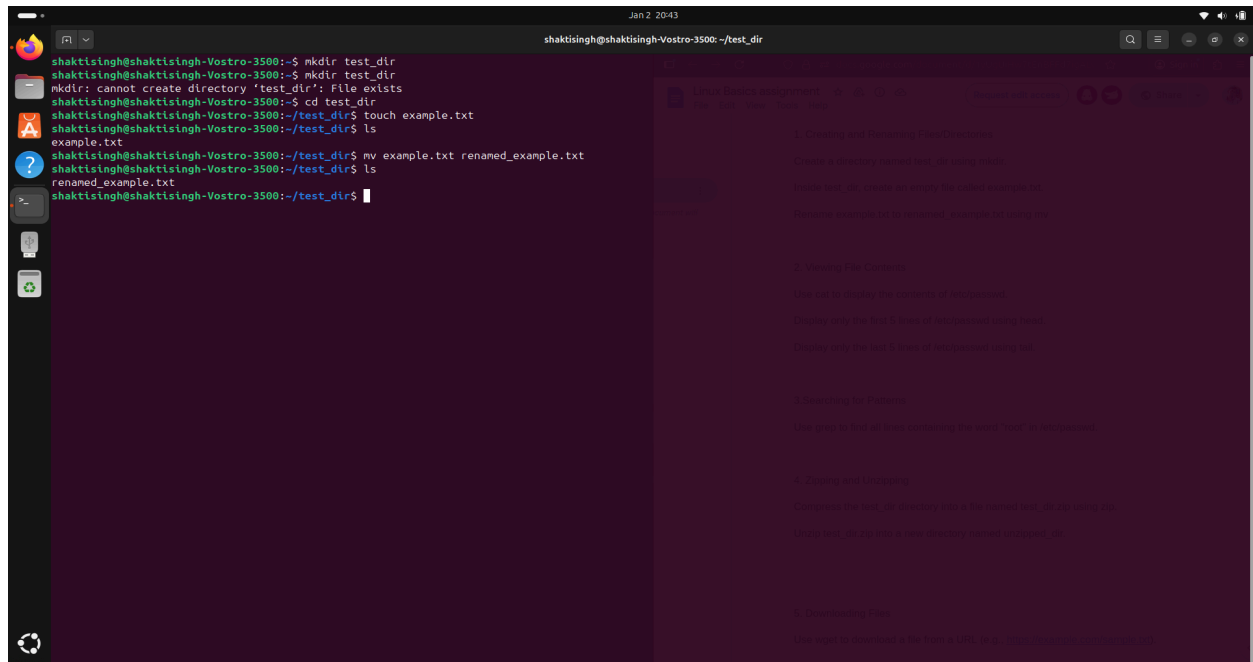


# 1. Creating and Renaming Files/Directories

Create a directory named `test_dir` using `mkdir`.

Inside `test_dir`, create an empty file called `example.txt`.

Rename `example.txt` to `renamed_example.txt` using `mv`.



```
shaktisingh@shaktisingh-Vostro-3500:~$ mkdir test_dir
shaktisingh@shaktisingh-Vostro-3500:~$ mkdir test_dir
mkdir: cannot create directory 'test_dir': File exists
shaktisingh@shaktisingh-Vostro-3500:~$ cd test_dir
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ touch example.txt
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ ls
example.txt
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ mv example.txt renamed_example.txt
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ ls
renamed_example.txt
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$
```

## 2. Viewing File Contents

Use `cat` to display the contents of `/etc/passwd`.

Display only the first 5 lines of `/etc/passwd` using `head`.

Display only the last 5 lines of `/etc/passwd` using `tail`.

```
shaktisingh@shaktisingh-Vostro-3500: ~/test_dir
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ cat something.cpp
#include <iostream>
using namespace std;

int main() {
    int n, sum = 0;

    cout << "Enter a number: ";
    cin >> n;

    for (int i = 1; i <= n; i++) {
        sum += i;
    }

    cout << "Sum of first " << n << " numbers is: " << sum << endl;

    if (sum % 2 == 0) {
        cout << "Sum is Even" << endl;
    } else {
        cout << "Sum is Odd" << endl;
    }

    return 0;
}
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ head -n 5 something.cpp
#include <iostream>
using namespace std;

int main() {
    int n, sum = 0;
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ tail -n 5 something.cpp
    cout << "Sum is Odd" << endl;
}

return 0;
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$
```

### 3.Searching for Patterns

Use grep to find all lines containing the word "root" in /etc/passwd.

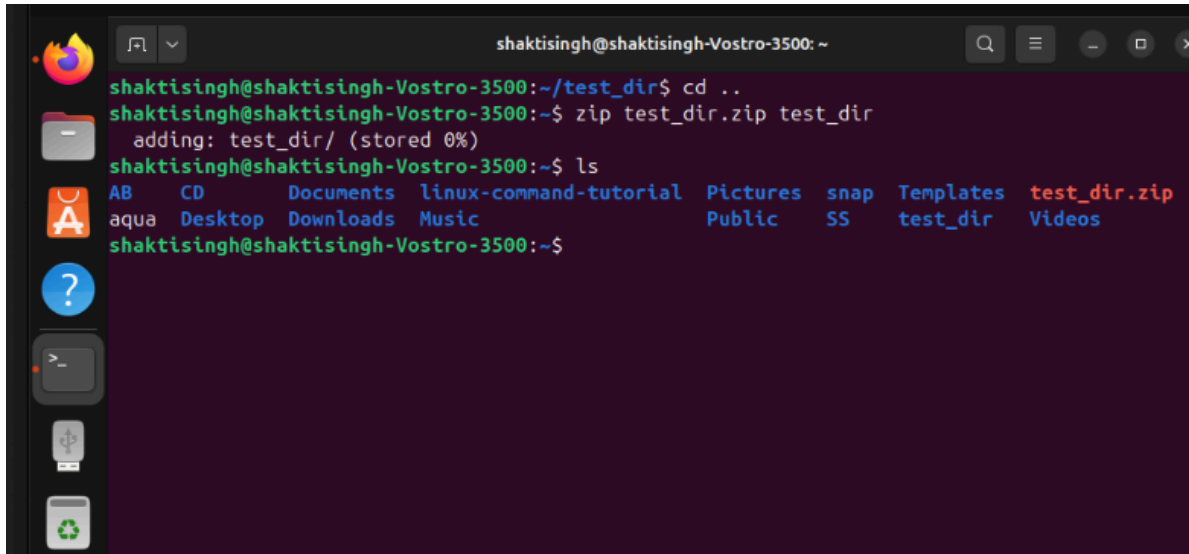
```
shaktisingh@shaktisingh-Vostro-3500:~$ ls
AB      CD      Documents  linux-command-tutorial  Pictures  snap  Templates  Videos
aqua    Desktop Downloads  Music                  Public   SS      test_dir

shaktisingh@shaktisingh-Vostro-3500:~$ cd test_dir
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ ls
renamed_example.txt  sample.txt  something.cpp
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ cat sample.txt | grep root
When we read and write, we learn the root of knowledge.
When we learn the root words, we can write, form, and create better sentences.
A good act can build, form, and root confidence.
Finally, learning the root helps us code, build, plan, and join success.
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ cat sample.txt | grep root -n
2:When we read and write, we learn the root of knowledge.
6:When we learn the root words, we can write, form, and create better sentences.
7:A good act can build, form, and root confidence.
10:Finally, learning the root helps us code, build, plan, and join success.
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$
```

## 4. Zipping and Unzipping

Compress the test\_dir directory into a file named test\_dir.zip using zip.

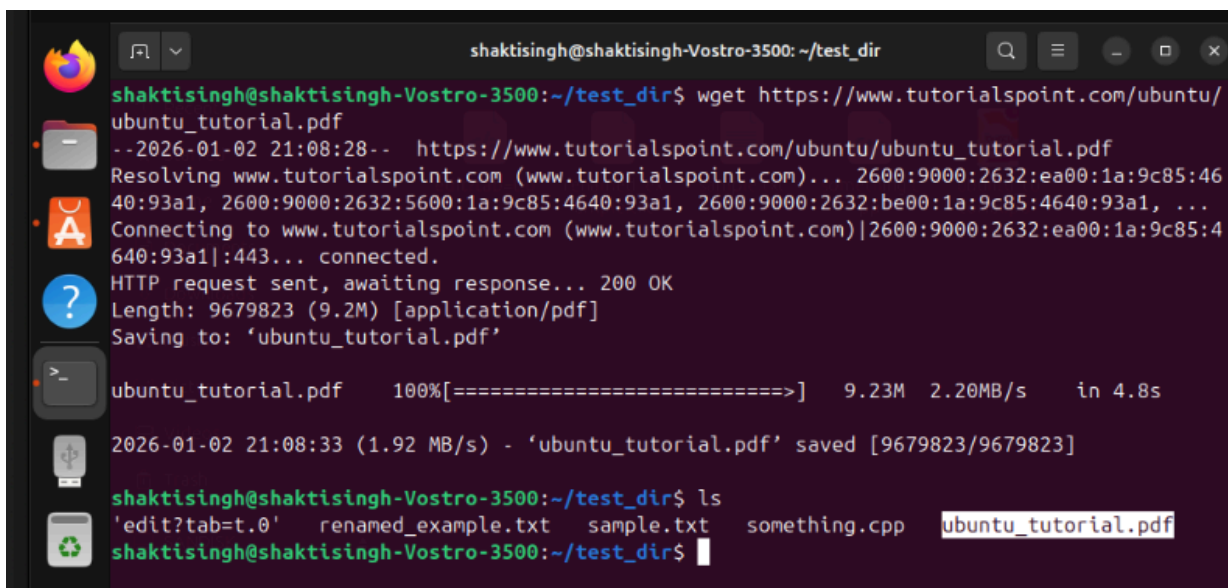
Unzip test\_dir.zip into a new directory named unzipped\_dir.

A terminal window titled 'shaktisingh@shaktisingh-Vostro-3500: ~' with a search bar and window controls. The user navigates to the test\_dir directory and runs 'zip test\_dir.zip test\_dir', which outputs 'adding: test\_dir/ (stored 0%)'. Then, 'ls' is run, showing a directory listing including 'test\_dir.zip'.

```
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ cd ..
shaktisingh@shaktisingh-Vostro-3500:~$ zip test_dir.zip test_dir
  adding: test_dir/ (stored 0%)
shaktisingh@shaktisingh-Vostro-3500:~$ ls
AB  CD  Documents  linux-command-tutorial  Pictures  snap  Templates  test_dir.zip
aqua Desktop  Downloads  Music                Public    SS    test_dir  Videos
shaktisingh@shaktisingh-Vostro-3500:~$
```

## 5. Downloading Files

Use wget to download a file from a URL (e.g., <https://example.com/sample.txt>).

A terminal window titled 'shaktisingh@shaktisingh-Vostro-3500: ~/test\_dir' with a search bar and window controls. The user runs 'wget https://www.tutorialspoint.com/ubuntu/ubuntu\_tutorial.pdf'. The output shows the file being resolved, connected to, and downloaded. A progress bar indicates 100% completion. Finally, 'ls' is run, showing the downloaded file 'ubuntu\_tutorial.pdf' in the directory.

```
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ wget https://www.tutorialspoint.com/ubuntu/
ubuntu_tutorial.pdf
--2026-01-02 21:08:28-- https://www.tutorialspoint.com/ubuntu/ubuntu_tutorial.pdf
Resolving www.tutorialspoint.com (www.tutorialspoint.com)... 2600:9000:2632:ea00:1a:9c85:46
40:93a1, 2600:9000:2632:5600:1a:9c85:4640:93a1, 2600:9000:2632:be00:1a:9c85:4640:93a1, ...
Connecting to www.tutorialspoint.com (www.tutorialspoint.com)|2600:9000:2632:ea00:1a:9c85:4
640:93a1|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 9679823 (9.2M) [application/pdf]
Saving to: 'ubuntu_tutorial.pdf'

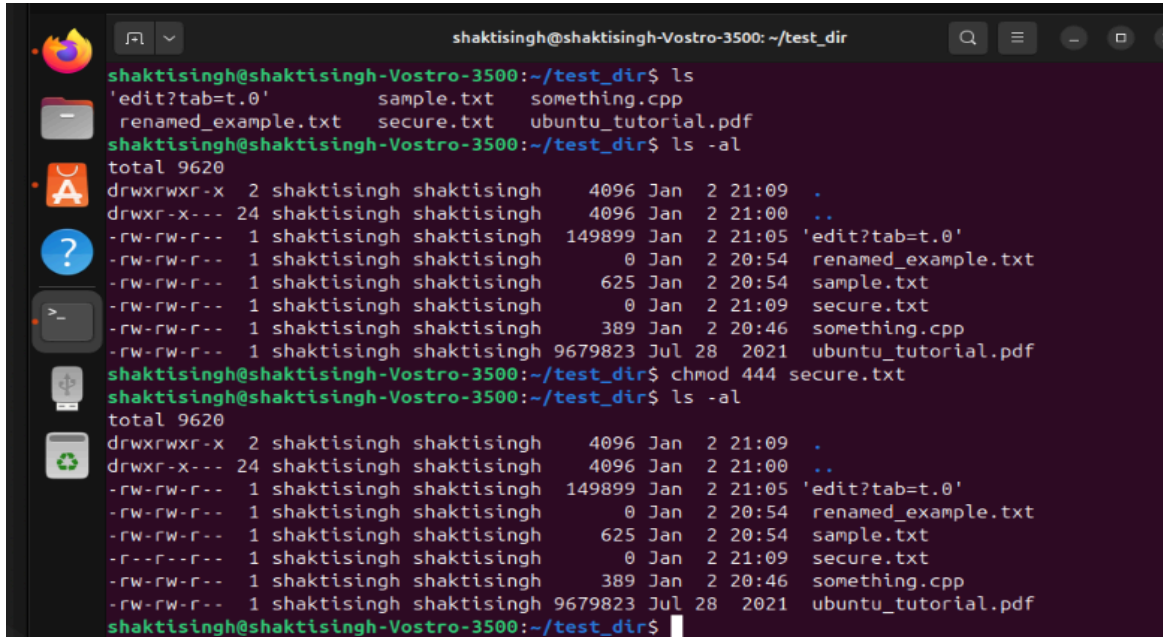
ubuntu_tutorial.pdf  100%[=====>]  9.23M  2.20MB/s  in 4.8s

2026-01-02 21:08:33 (1.92 MB/s) - 'ubuntu_tutorial.pdf' saved [9679823/9679823]

shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ ls
'edit?tab=t.0'  renamed_example.txt  sample.txt  something.cpp  ubuntu_tutorial.pdf
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$
```

## 6. Changing Permissions

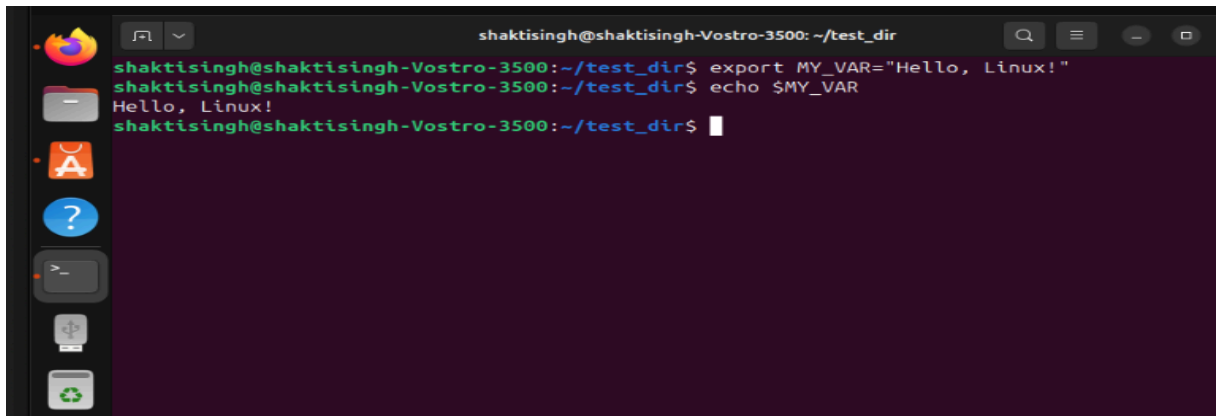
Create a file named `secure.txt` and change its permissions to read-only for everyone using `chmod`.

A terminal window titled 'shaktisingh@shaktisingh-Vostro-3500: ~/test\_dir'. The user runs 'ls' showing files: 'edit?tab=t.0', 'sample.txt', 'something.cpp', 'renamed\_example.txt', 'secure.txt', and 'ubuntu\_tutorial.pdf'. Then they run 'ls -al' showing detailed file permissions. Finally, they run 'chmod 444 secure.txt' and run 'ls -al' again, showing that 'secure.txt' now has permissions '-r--r--r--'.

```
shaktisingh@shaktisingh-Vostro-3500: ~/test_dir
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ ls
'edit?tab=t.0'  sample.txt  something.cpp
renamed_example.txt  secure.txt  ubuntu_tutorial.pdf
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ ls -al
total 9620
drwxrwxr-x  2 shaktisingh shaktisingh  4096 Jan  2 21:09 .
drwxr-x--- 24 shaktisingh shaktisingh  4096 Jan  2 21:00 ..
-rw-rw-r--  1 shaktisingh shaktisingh 149899 Jan  2 21:05 'edit?tab=t.0'
-rw-rw-r--  1 shaktisingh shaktisingh    0 Jan  2 20:54 renamed_example.txt
-rw-rw-r--  1 shaktisingh shaktisingh  625 Jan  2 20:54 sample.txt
-rw-rw-r--  1 shaktisingh shaktisingh    0 Jan  2 21:09 secure.txt
-rw-rw-r--  1 shaktisingh shaktisingh  389 Jan  2 20:46 something.cpp
-rw-rw-r--  1 shaktisingh shaktisingh 9679823 Jul 28 2021 ubuntu_tutorial.pdf
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ chmod 444 secure.txt
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ ls -al
total 9620
drwxrwxr-x  2 shaktisingh shaktisingh  4096 Jan  2 21:09 .
drwxr-x--- 24 shaktisingh shaktisingh  4096 Jan  2 21:00 ..
-rw-rw-r--  1 shaktisingh shaktisingh 149899 Jan  2 21:05 'edit?tab=t.0'
-rw-rw-r--  1 shaktisingh shaktisingh    0 Jan  2 20:54 renamed_example.txt
-rw-rw-r--  1 shaktisingh shaktisingh  625 Jan  2 20:54 sample.txt
-r--r--r--  1 shaktisingh shaktisingh    0 Jan  2 21:09 secure.txt
-rw-rw-r--  1 shaktisingh shaktisingh  389 Jan  2 20:46 something.cpp
-rw-rw-r--  1 shaktisingh shaktisingh 9679823 Jul 28 2021 ubuntu_tutorial.pdf
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$
```

## 7. Working with Environment Variables

Use `export` to set a new environment variable called `MY_VAR` with the value "Hello, Linux!"

A terminal window titled 'shaktisingh@shaktisingh-Vostro-3500: ~/test\_dir'. The user runs 'export MY\_VAR="Hello, Linux!"' and then 'echo \$MY\_VAR', which outputs 'Hello, Linux!'.

```
shaktisingh@shaktisingh-Vostro-3500: ~/test_dir
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ export MY_VAR="Hello, Linux!"
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$ echo $MY_VAR
Hello, Linux!
shaktisingh@shaktisingh-Vostro-3500:~/test_dir$
```