1. Creating and Renaming Files/Directories
    a. Create a directory named test_dir using mkdir.

        -> Command: mkdir test_dir

        -> Make directory command to create a new empty directory.

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

        -> Command: touch test_dir/example.txt or

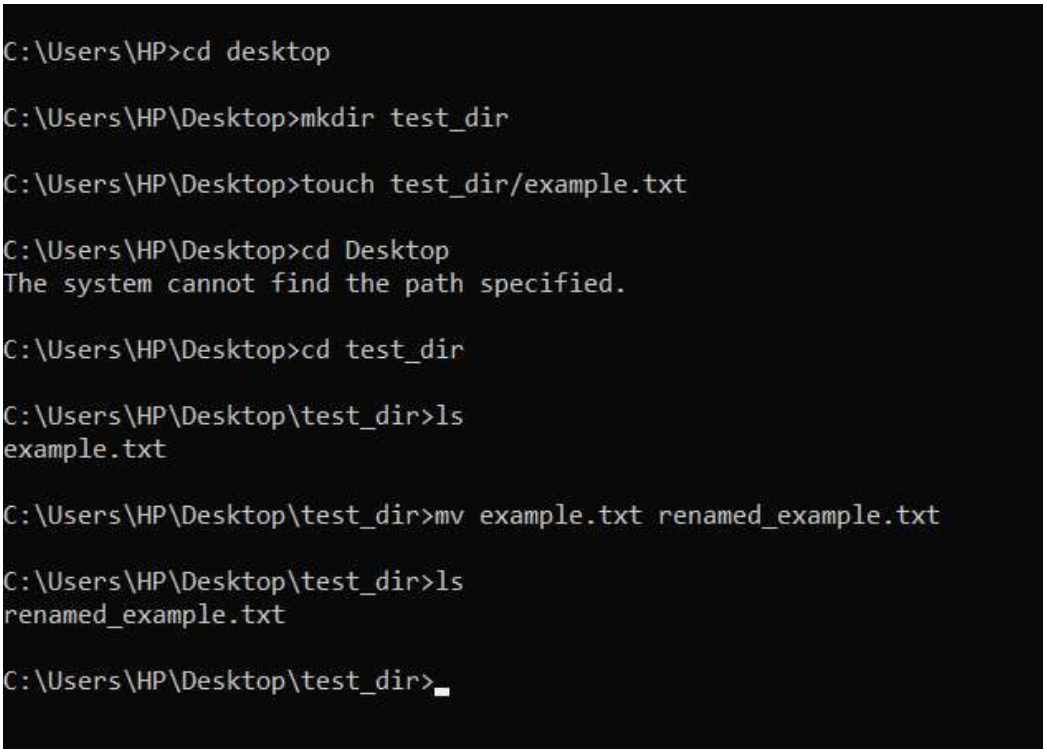
        Navigate to folder test_dir: cd test_dir

        Create file: touch example.txt

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

        -> mv example.txt renamed_example.txt

        -> mv command can be used to move file or rename file



2. Viewing File Contents
    a. Use cat to display the contents of /etc/passwd.

        -> Navigate to root then

        -> Command: cat etc/passwd

        -> Concatenate and display files command primarily used to view file content.

3. Searching for Patterns

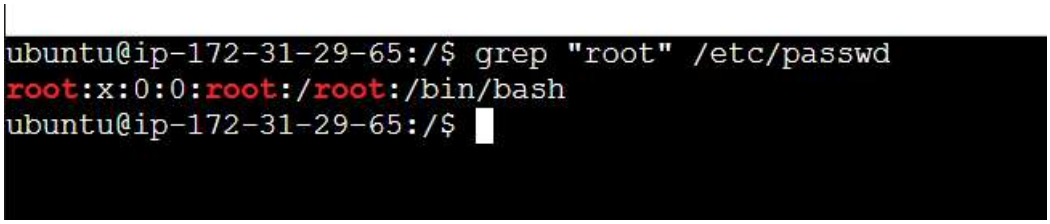
    a. Use grep to find all lines containing the word "root" in /etc/passwd.

        -> Command: grep “root” /etc/passwd

        -> grep: the command used for searching plain-text data sets for lines matching regular expression.

        -> “root”: The pattern you are searching for.

        -> /etc/passwd: the file you are searching within



4. Zipping and Unzipping

    a. Compress the test_dir directory into a file named test_dir.zip using zip.

        -> Command: zip -r test_dir.zip test_dir

        -> Zip command to zip, was not available so installed it using

            sudo apt-get install zip

-> -r: recursive, so to recursively iterate through the folder so to select each and every file in the folder.

```
ubuntu@ip-172-31-29-65:~$ zip -r test_dir.zip test_dir
  adding: test_dir/ (stored 0%)
  adding: test_dir/example.txt (stored 0%)
ubuntu@ip-172-31-29-65:~$ ls
test_dir  test_dir.zip
ubuntu@ip-172-31-29-65:~$ zcat test_dir.zip
gzip: test_dir.zip has more than one entry--rest ignored
ubuntu@ip-172-31-29-65:~$
```

b. Unzip test_dir.zip into a new directory named unzipped_dir.

-> Command: unzip test_dir.zip

```
ubuntu@ip-172-31-29-65:~$ unzip test_dir.zip
Archive:  test_dir.zip
replace test_dir/example.txt? [y]es, [n]o, [A]ll, [N]one, [r]ename: r
new name: unzipped_test_dir
 extracting: unzipped_test_dir
ubuntu@ip-172-31-29-65:~$ ls
test_dir  test_dir.zip  unzipped_test_dir
ubuntu@ip-172-31-29-65:~$
```

5. Downloading Files

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

-> Command: wget https://example.com/sample.txt

6. Changing Permissions

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

-> touch secure.txt

-> chmod 400 secure.txt

```
ubuntu@ip-172-31-29-65:~$ touch secure.txt
ubuntu@ip-172-31-29-65:~$ chmod 400 secure.txt
ubuntu@ip-172-31-29-65:~$ ls -l
total 8
-r-------- 1 ubuntu ubuntu    0 Jan 20 07:09 secure.txt
drwxrwxr-x 2 ubuntu ubuntu 4096 Jan 20 06:57 test_dir
-rw-rw-r-- 1 ubuntu ubuntu  336 Jan 20 06:59 test_dir.zip
-rw-rw-r-- 1 ubuntu ubuntu    0 Jan 20 06:57 unzipped_test_dir
ubuntu@ip-172-31-29-65:~$
```

7. Working with Environment Variables

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

   -> export MY_VAR=”Hello, Linux!”


```
ubuntu@ip-172-31-29-65:~$ echo $MY_VAR
Hello, Linux!
ubuntu@ip-172-31-29-65:~$
```