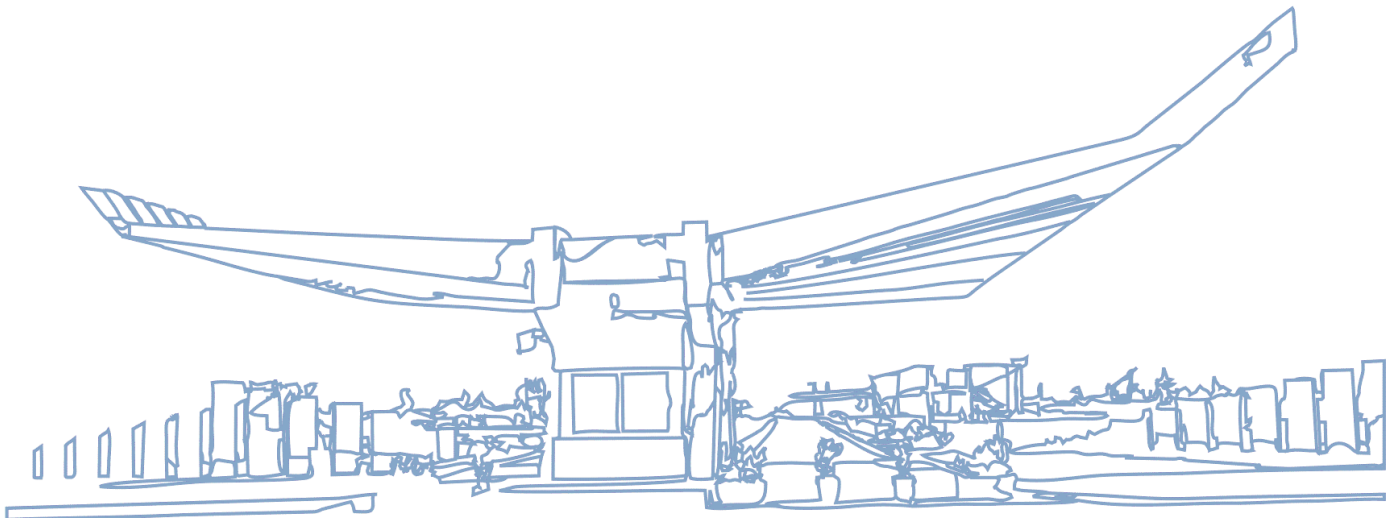


CEN 571 – Data Mining

Assignment 02- Question 1



PREPARED:
Baftjar TABAKU

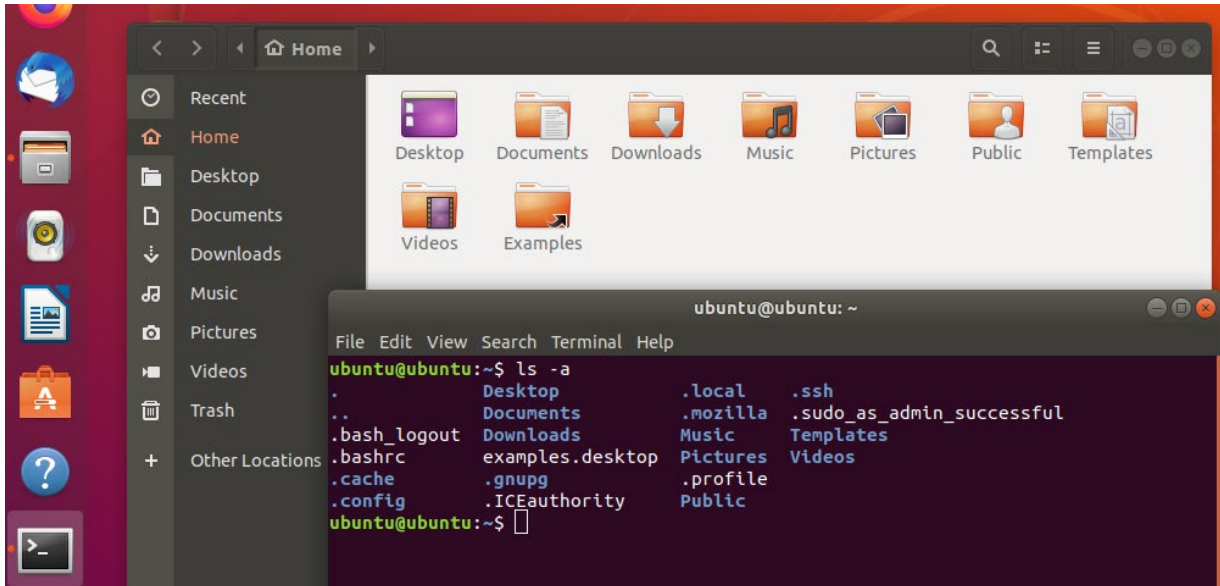
19.04.2020
Epoka University
Tirana, ALBANIA

ACCEPTED:
Prof.Dr. Arben Asllani

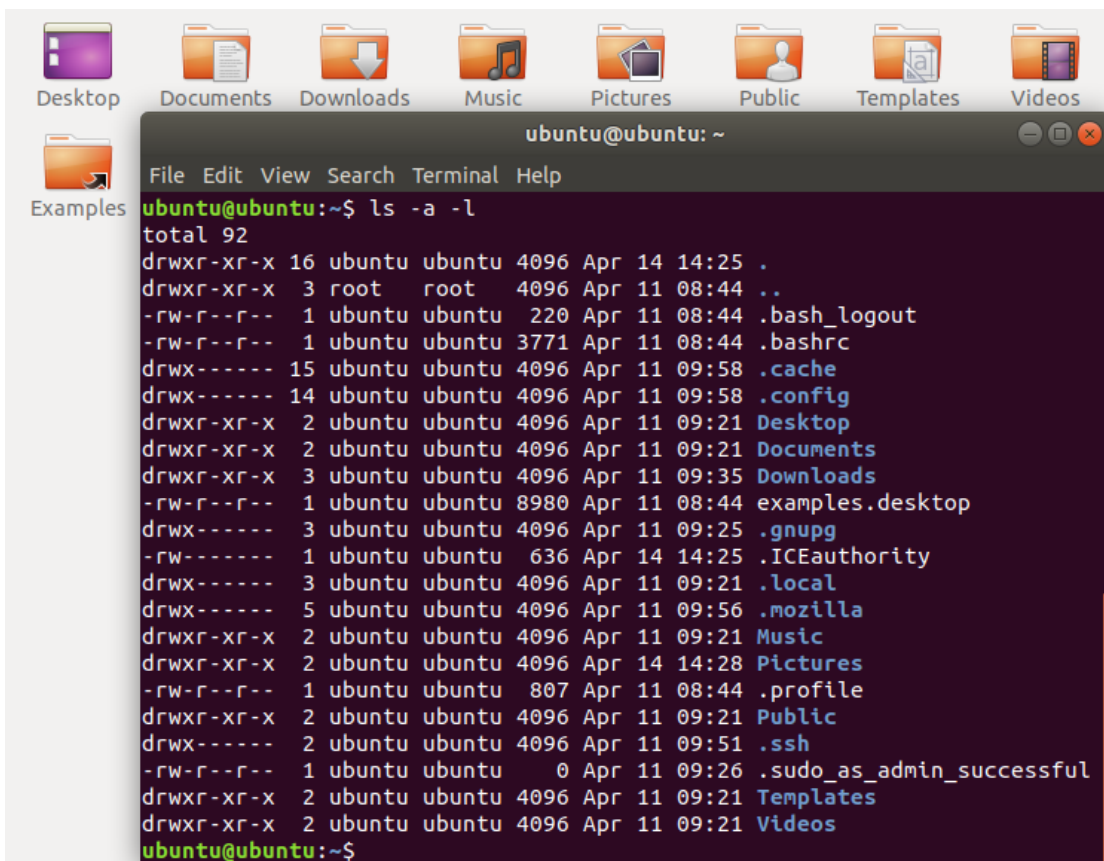
Question 1

Basic Linux commands, implemented in Ubuntu.

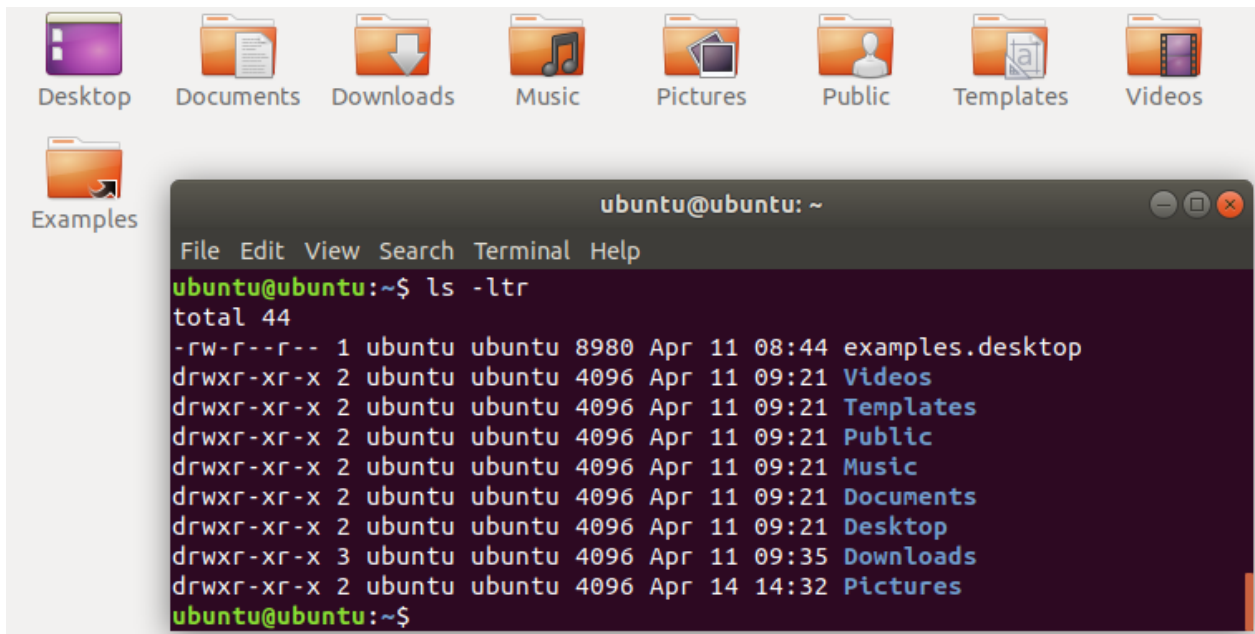
1. Displaying all files and folders in the current directory Displays all files including hidden ones too.



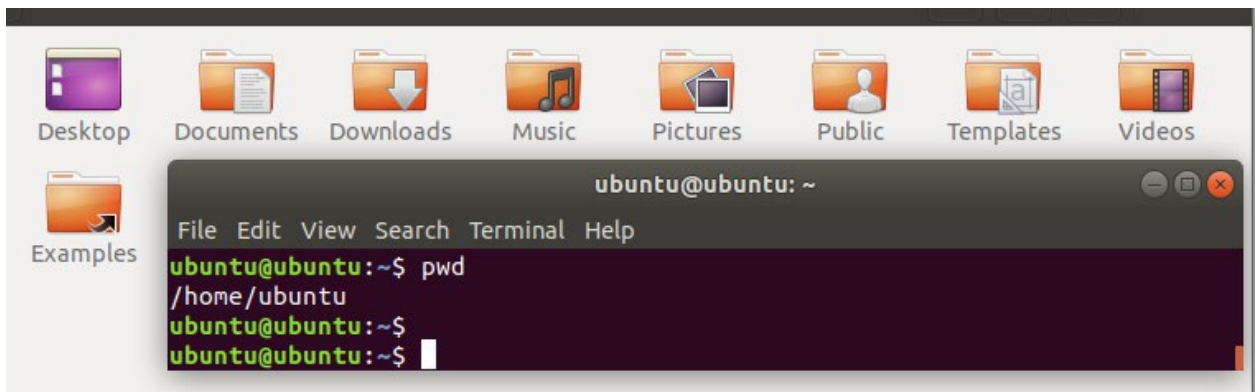
2. Displaying all files (optionally also the hidden too) along with size and time stamp.



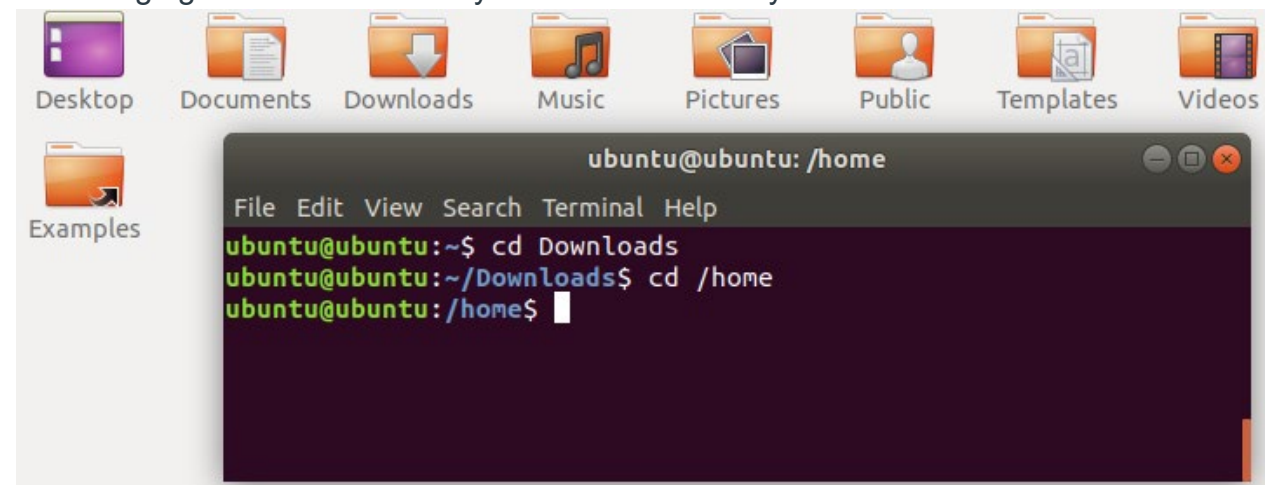
3. Displaying in long listing format with timestamp in reverse order



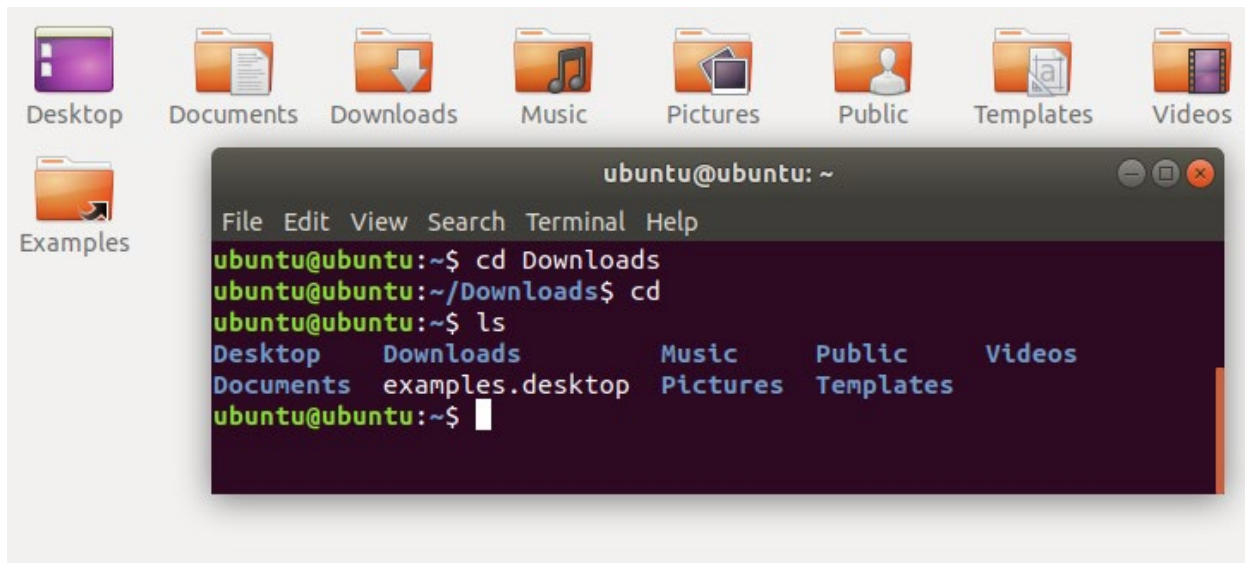
4. Displaying the "present working directory"



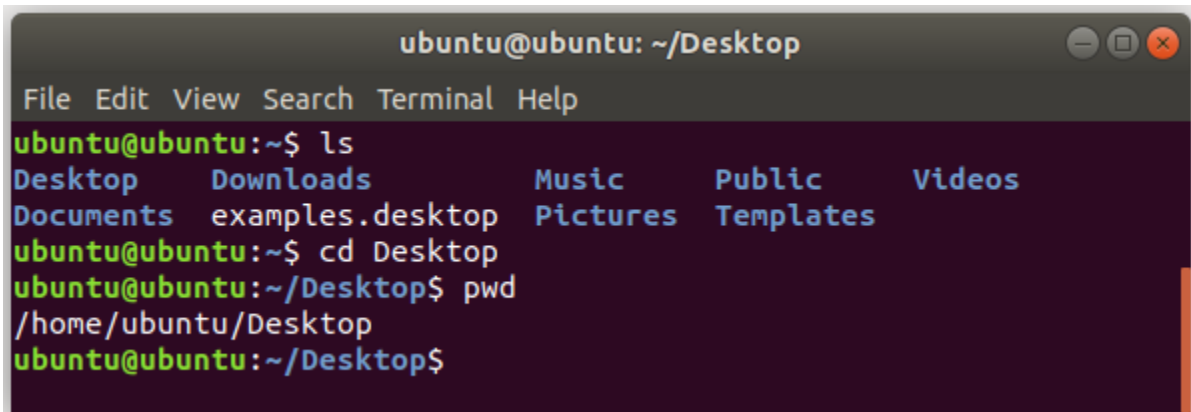
5. Changing the current directory to "HOME" directory



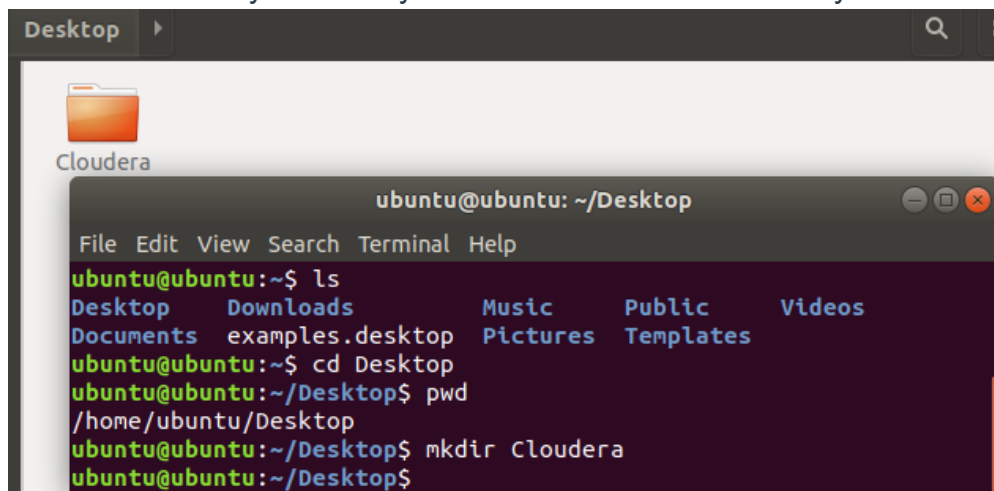
Or directly by typing “cd”



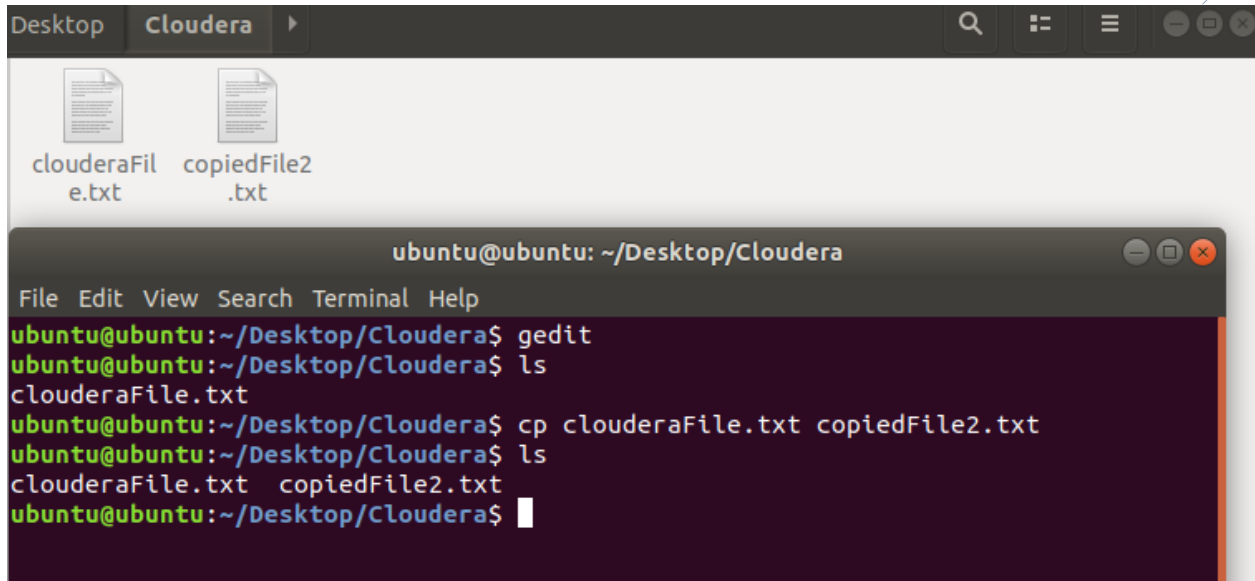
6. Look for a directory name desktop in the current working directory and changes to that.



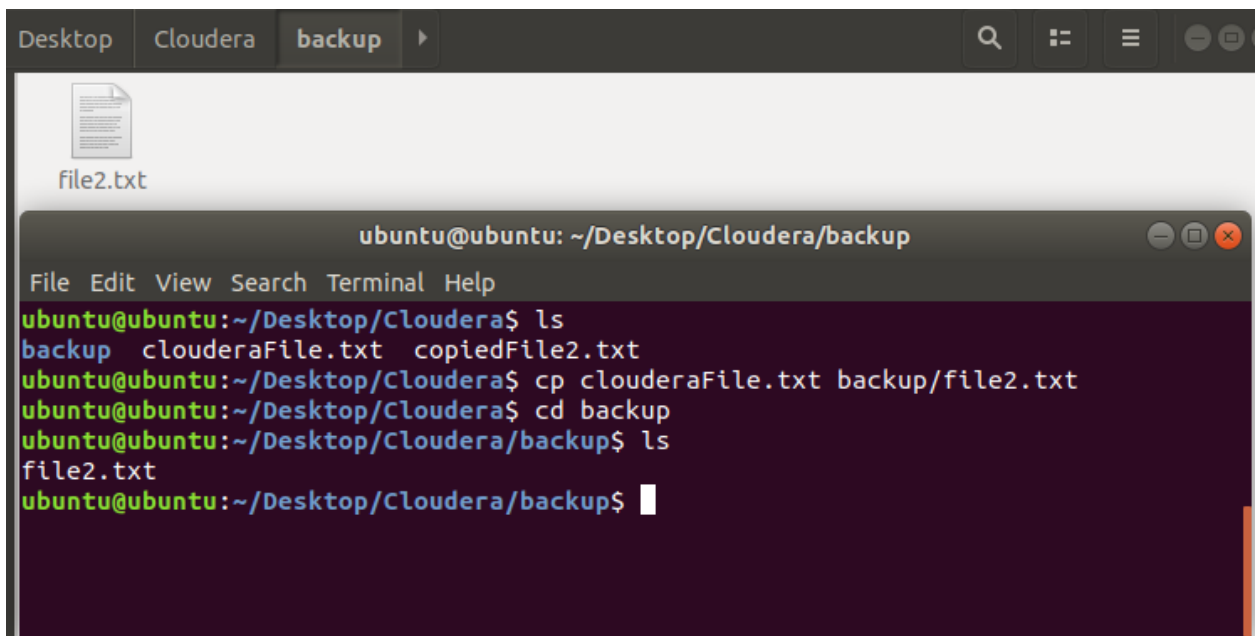
7. Create a directory <directory name> in the current directory



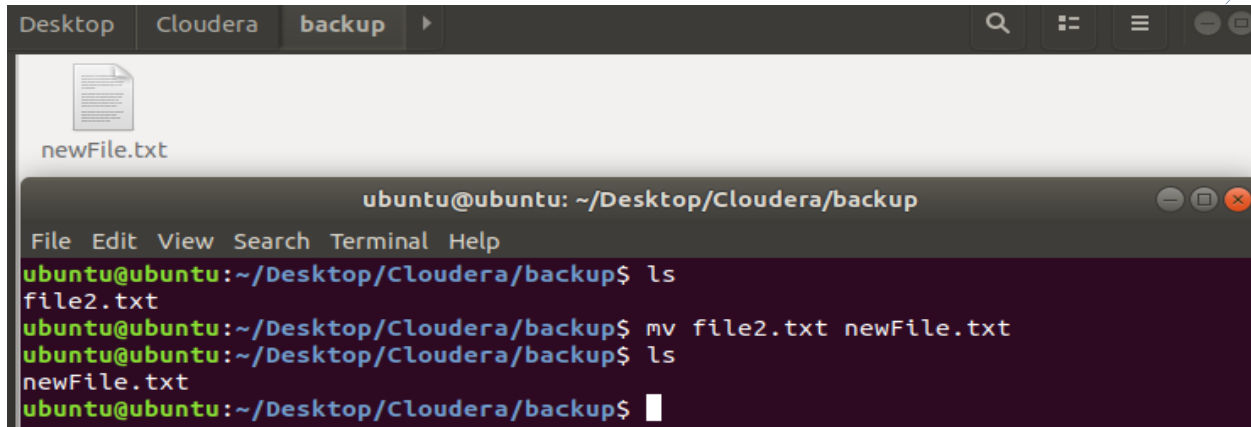
8. Create a copy of file in same directory.



9. Create a copy of file in different directory



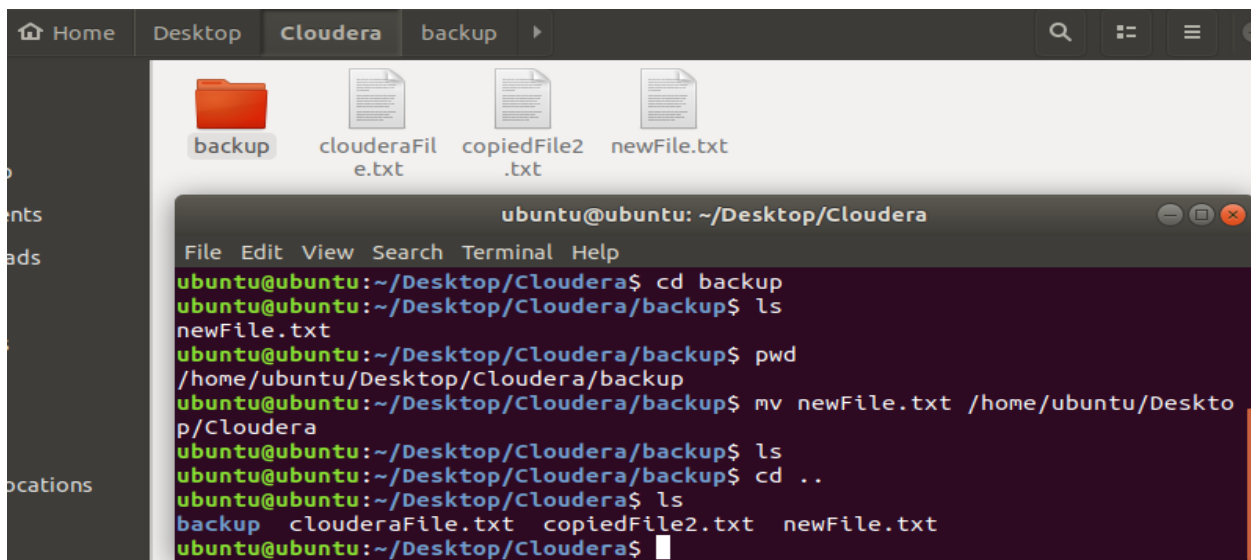
10. Rename a file



The screenshot shows a file manager window with the path Desktop > Cloudera > backup. A file named 'newFile.txt' is visible. Below it, a terminal window shows the following commands and output:

```
ubuntu@ubuntu: ~/Desktop/Cloudera/backup
File Edit View Search Terminal Help
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ ls
file2.txt
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ mv file2.txt newFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ ls
newFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera/backup$
```

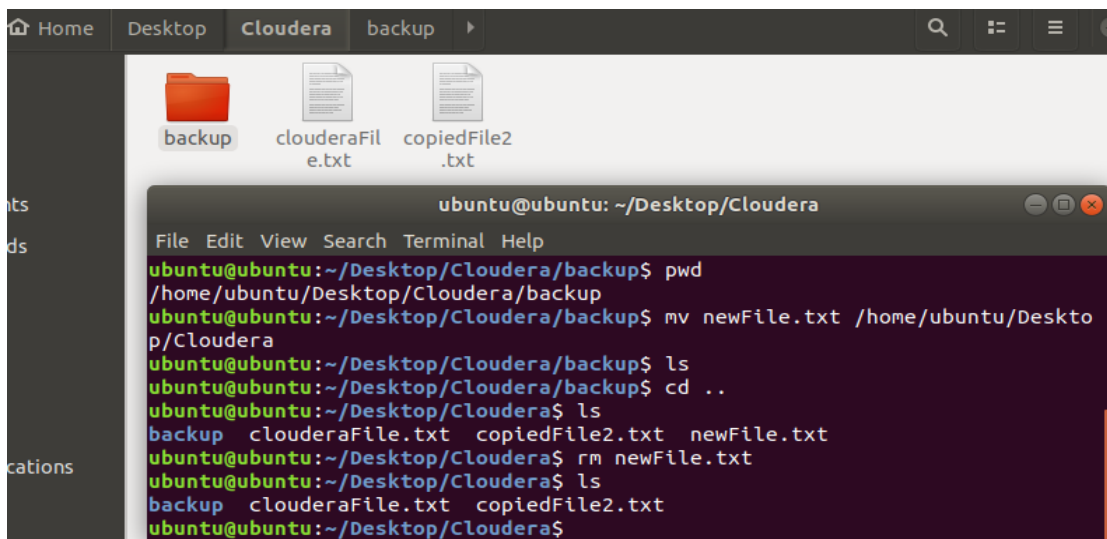
11. Move file from one directory to another



The screenshot shows a file manager window with the path Desktop > Cloudera > backup. Files 'backup', 'clouderaFile.txt', 'copiedFile2.txt', and 'newFile.txt' are visible. Below it, a terminal window shows the following commands and output:

```
ubuntu@ubuntu: ~/Desktop/Cloudera
File Edit View Search Terminal Help
ubuntu@ubuntu:~/Desktop/Cloudera$ cd backup
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ ls
newFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ pwd
/home/ubuntu/Desktop/Cloudera/backup
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ mv newFile.txt /home/ubuntu/Desktop/Cloudera
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ ls
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ cd ..
ubuntu@ubuntu:~/Desktop/Cloudera$ ls
backup clouderaFile.txt copiedFile2.txt newFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera$
```

12. Delete a file

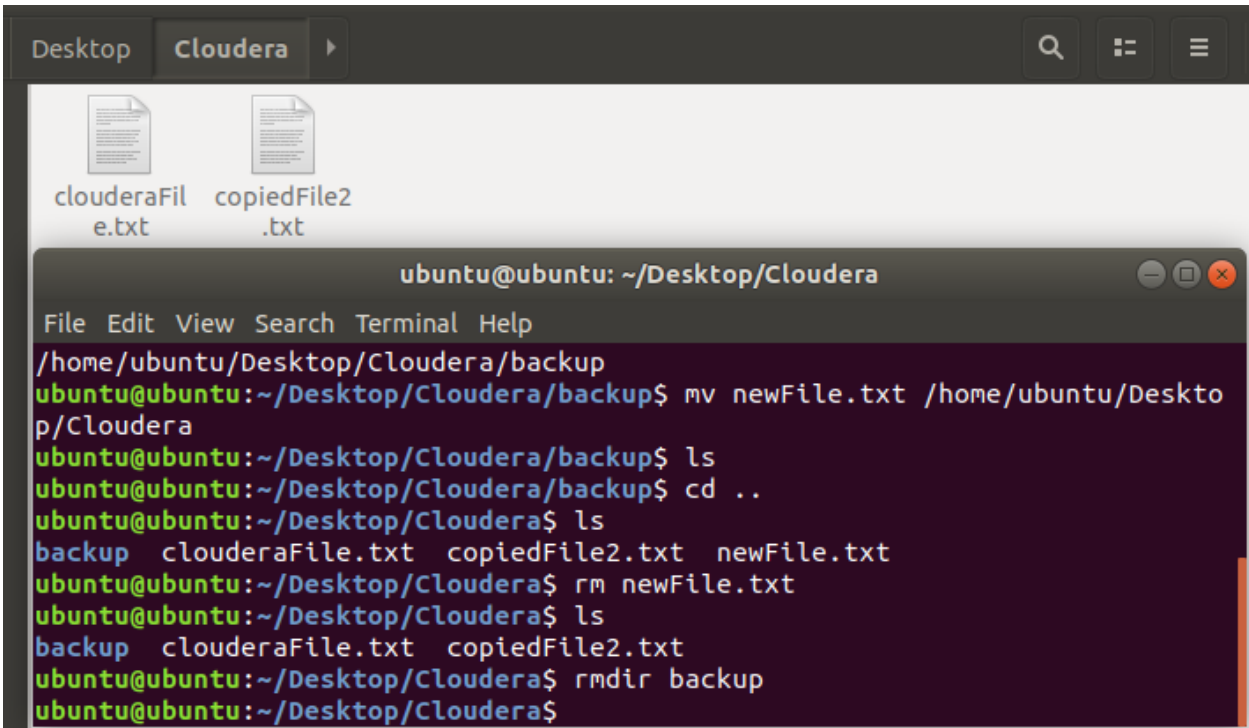


The screenshot shows a file manager window with the path Desktop > Cloudera > backup. Files 'backup', 'clouderaFile.txt', and 'copiedFile2.txt' are visible. Below it, a terminal window shows the following commands and output:

```
ubuntu@ubuntu: ~/Desktop/Cloudera
File Edit View Search Terminal Help
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ pwd
/home/ubuntu/Desktop/Cloudera/backup
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ mv newFile.txt /home/ubuntu/Desktop/Cloudera
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ ls
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ cd ..
ubuntu@ubuntu:~/Desktop/Cloudera$ ls
backup clouderaFile.txt copiedFile2.txt newFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera$ rm newFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera$ ls
backup clouderaFile.txt copiedFile2.txt
ubuntu@ubuntu:~/Desktop/Cloudera$
```

13. Delete an empty directory

As we see the 'backup' directory now is a empty directory, and we delete it.



The screenshot shows a file manager window titled 'Desktop Cloudera' with two files: 'clouderaFile.e.txt' and 'copiedFile2.txt'. Below it, a terminal window titled 'ubuntu@ubuntu: ~/Desktop/Cloudera' shows the following commands and output:

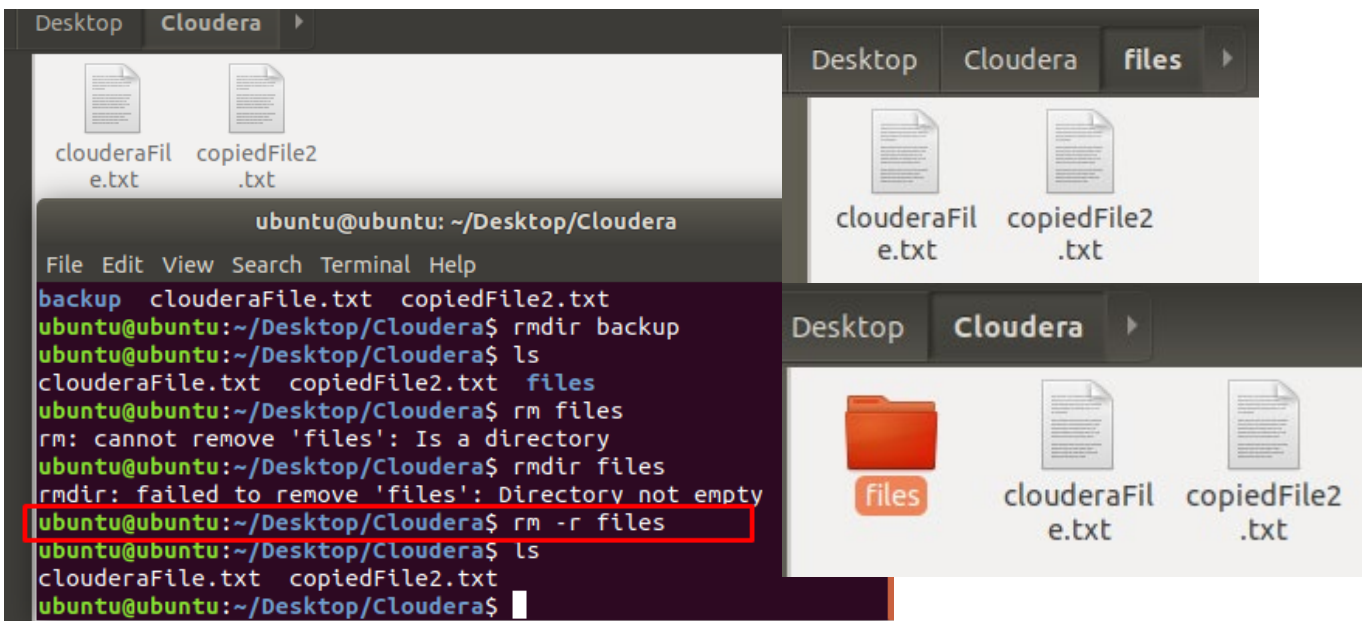
```

File Edit View Search Terminal Help
/home/ubuntu/Desktop/Cloudera/backup
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ mv newFile.txt /home/ubuntu/Desktop/Cloudera
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ ls
ubuntu@ubuntu:~/Desktop/Cloudera/backup$ cd ..
ubuntu@ubuntu:~/Desktop/Cloudera$ ls
backup clouderaFile.txt copiedFile2.txt newFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera$ rm newFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera$ ls
backup clouderaFile.txt copiedFile2.txt
ubuntu@ubuntu:~/Desktop/Cloudera$ rmdir backup
ubuntu@ubuntu:~/Desktop/Cloudera$

```

14. Delete a directory with files.

A new directory 'files' was created and there added a copy of two files, then we delete it.



The screenshot shows a file manager window titled 'Desktop Cloudera' with two files: 'clouderaFile.e.txt' and 'copiedFile2.txt'. Below it, a terminal window titled 'ubuntu@ubuntu: ~/Desktop/Cloudera' shows the following commands and output:

```

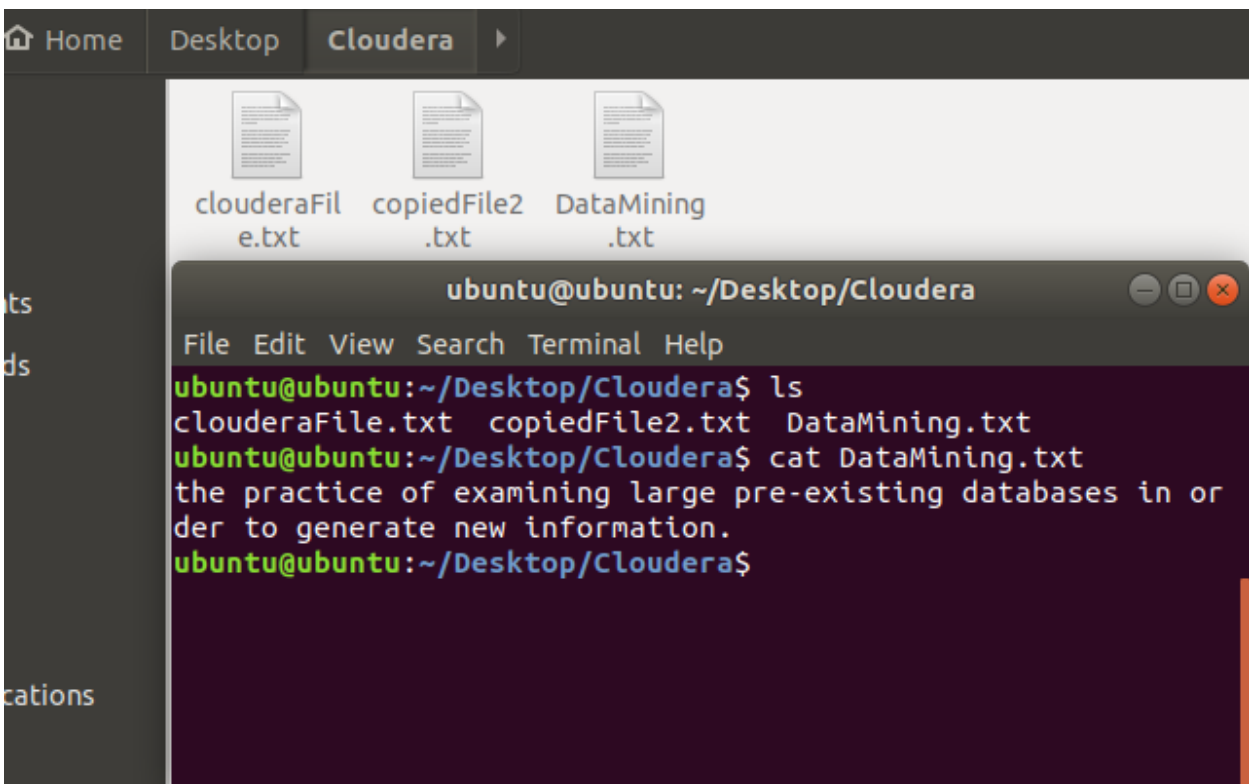
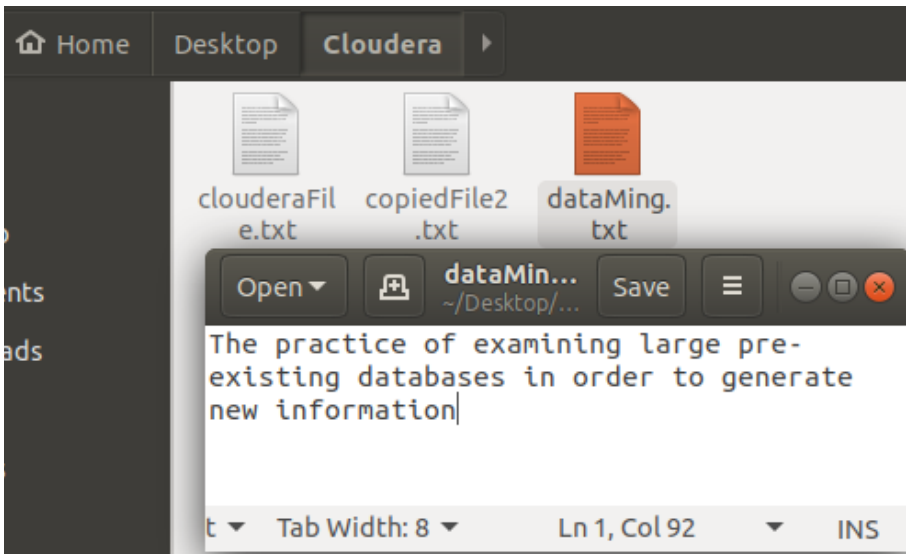
File Edit View Search Terminal Help
backup clouderaFile.txt copiedFile2.txt
ubuntu@ubuntu:~/Desktop/Cloudera$ rmdir backup
ubuntu@ubuntu:~/Desktop/Cloudera$ ls
clouderaFile.txt copiedFile2.txt files
ubuntu@ubuntu:~/Desktop/Cloudera$ rm files
rm: cannot remove 'files': Is a directory
ubuntu@ubuntu:~/Desktop/Cloudera$ rmdir files
rmdir: failed to remove 'files': Directory not empty
ubuntu@ubuntu:~/Desktop/Cloudera$ rm -r files
ubuntu@ubuntu:~/Desktop/Cloudera$ ls
clouderaFile.txt copiedFile2.txt
ubuntu@ubuntu:~/Desktop/Cloudera$

```

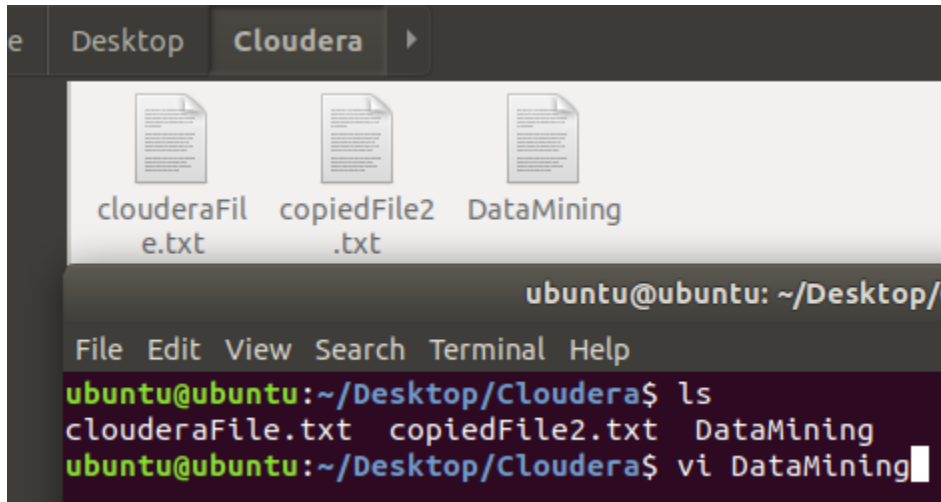
The terminal output shows that the 'files' directory was created and then deleted. The final command 'rm -r files' is highlighted with a red box.

15. Viewing files

After creating some files and adding some certain text, we will view it



16. Open vi editor to edit file

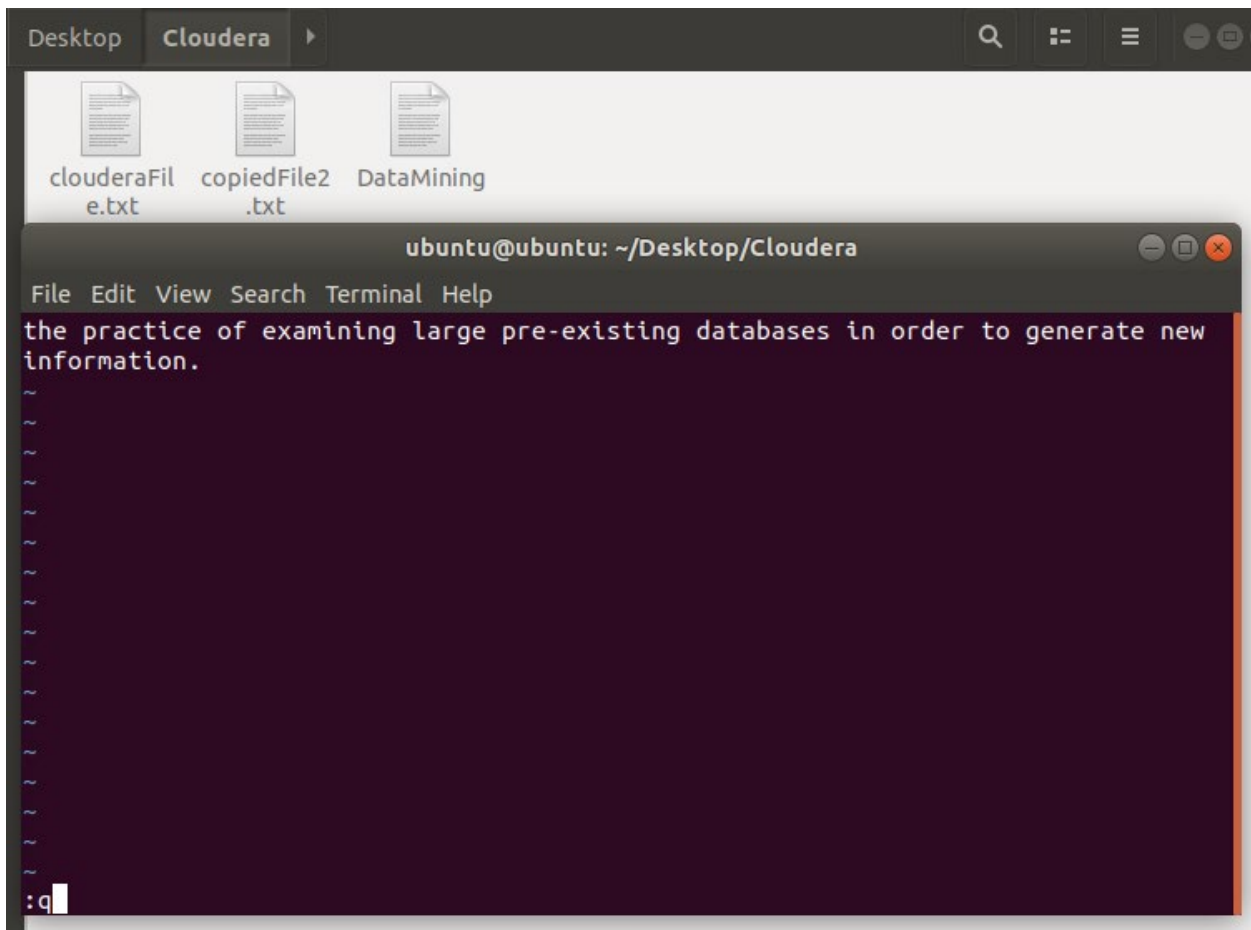


The screenshot shows a terminal window titled 'ubuntu@ubuntu: ~/Desktop/Cloudera'. The prompt is 'ubuntu@ubuntu:~/Desktop/Cloudera\$'. The user enters 'ls', and the output is 'clouderaFile.txt copiedFile2.txt DataMining'. Then, the user enters 'vi DataMining', and the prompt changes to 'ubuntu@ubuntu:~/Desktop/Cloudera\$' with a cursor at the end of the command.

```
ubuntu@ubuntu: ~/Desktop/Cloudera$ ls
clouderaFile.txt  copiedFile2.txt  DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$ vi DataMining
```

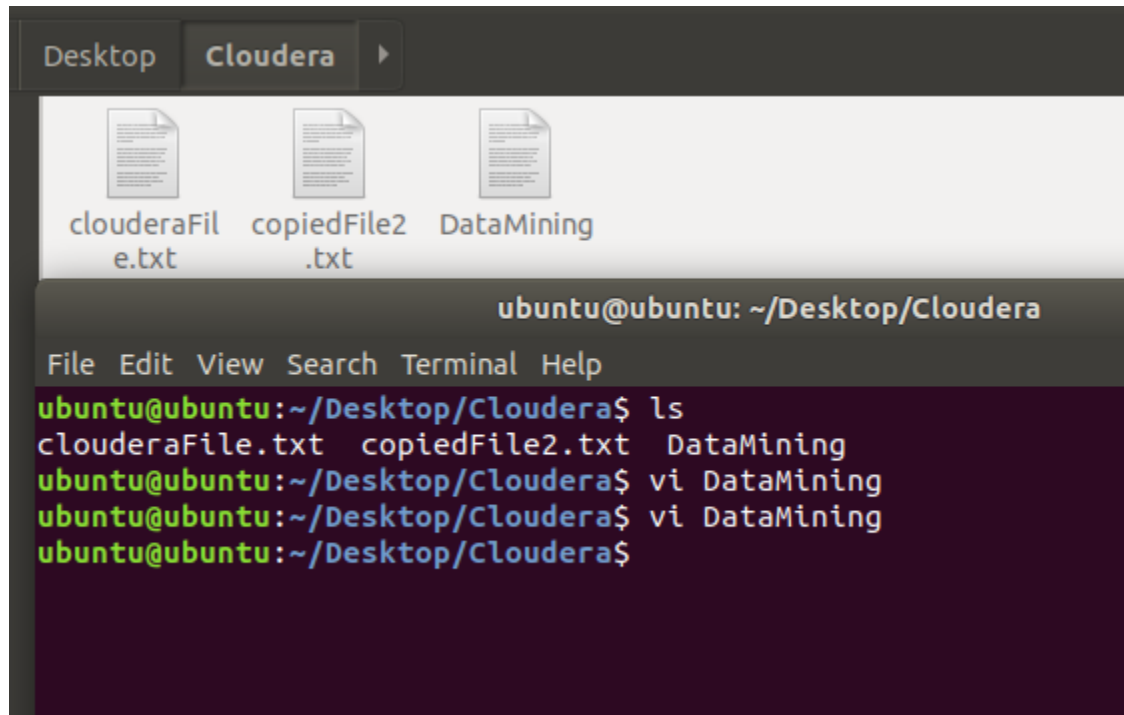
17. Quit editor

On vim editor, pressing ':' and 'q' and hitting 'enter' will exit,



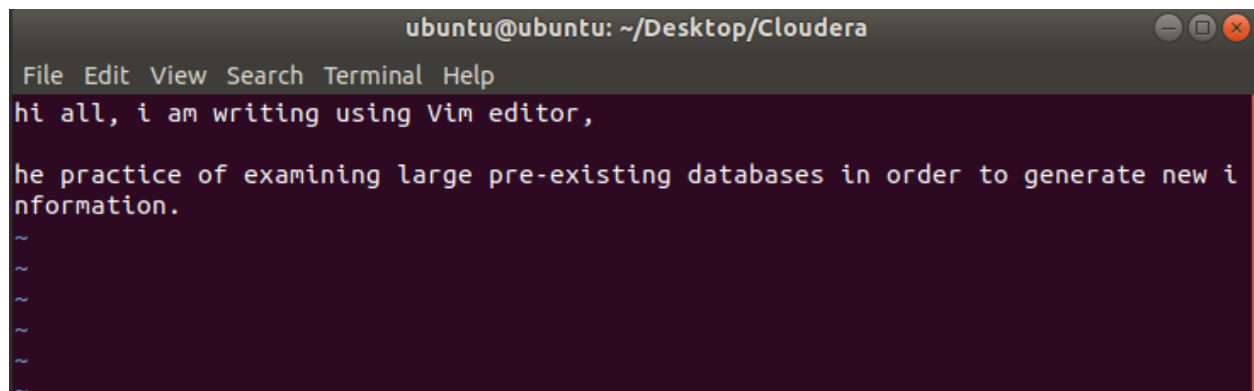
The screenshot shows a terminal window titled 'ubuntu@ubuntu: ~/Desktop/Cloudera'. The prompt is 'ubuntu@ubuntu:~/Desktop/Cloudera\$'. The user enters ':q', and the prompt changes to 'ubuntu@ubuntu:~/Desktop/Cloudera\$' with a cursor at the end of the command.

```
ubuntu@ubuntu: ~/Desktop/Cloudera$ :q
```



18. Write on a file

Adding the text in the begin, 'hi all, i am writing using Vim editor,'



19. Quit editor





```

ubuntu@ubuntu: ~/Desktop/Cloudera
File Edit View Search Terminal Help
ubuntu@ubuntu:~/Desktop/Cloudera$ vi DataMining
[No write since last change]
Press ENTER or type command to continue

```

20. Display size of files

```

Terminal Tue 15:49
ubuntu@ubuntu: ~/Desktop
File Edit View Search Terminal Help
ubuntu@ubuntu:~/Desktop/Cloudera$ ls
clouderaFile.txt copiedFile2.txt DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$ cd ..
ubuntu@ubuntu:~/Desktop$ ls
Cloudera
ubuntu@ubuntu:~/Desktop$ du -h Cloudera/
80K    Cloudera/
ubuntu@ubuntu:~/Desktop$

```

```

Terminal Tue 15:51
ubuntu@ubuntu: ~/Desktop
File Edit View Search Terminal Help
ubuntu@ubuntu:~/Desktop/Cloudera$ ls
clouderaFile.txt copiedFile2.txt DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$ cd ..
ubuntu@ubuntu:~/Desktop$ ls
Cloudera
ubuntu@ubuntu:~/Desktop$ du -h Cloudera/
80K    Cloudera/
ubuntu@ubuntu:~/Desktop$ du -h Cloudera/*
0      Cloudera/clouderaFile.txt
0      Cloudera/copiedFile2.txt
4.0K   Cloudera/DataMining
ubuntu@ubuntu:~/Desktop$

```

21. Change group of file/directory

First as we list here, we can see that the group of these files is 'ubuntu', and the user is 'ubuntu'.

```
ubuntu@ubuntu: ~/Desktop/Cloudera
File Edit View Search Terminal Help
ubuntu@ubuntu:~/Desktop/Cloudera$ ls -ltr
total 4
-rw-r--r-- 1 ubuntu ubuntu 0 Apr 14 14:52 clouderaFile.txt
-rw-r--r-- 1 ubuntu ubuntu 0 Apr 14 14:52 copiedFile2.txt
-rw-r--r-- 1 ubuntu ubuntu 93 Apr 14 15:26 DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$
```

So, to change we first create another group, and we proceed furthermore,

```
ubuntu@ubuntu:~/Desktop/Cloudera$ sudo addgroup data_mining
[sudo] password for ubuntu:
Adding group `data_mining' (GID 1001) ...
Done.
ubuntu@ubuntu:~/Desktop/Cloudera$
```

So now is another group with the same user as shown below,

```
ubuntu@ubuntu:~/Desktop/Cloudera$ ls -ltr
total 4
-rw-r--r-- 1 ubuntu ubuntu 0 Apr 14 14:52 clouderaFile.txt
-rw-r--r-- 1 ubuntu ubuntu 0 Apr 14 14:52 copiedFile2.txt
-rw-r--r-- 1 ubuntu ubuntu 93 Apr 14 15:26 DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$ sudo chgrp data_mining clouderaFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera$ ls -ltr
total 4
-rw-r--r-- 1 ubuntu data_mining 0 Apr 14 14:52 clouderaFile.txt
-rw-r--r-- 1 ubuntu ubuntu 0 Apr 14 14:52 copiedFile2.txt
-rw-r--r-- 1 ubuntu ubuntu 93 Apr 14 15:26 DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$
```

22. Create a group <group name> and a user <_user>

Creating a group 'cloudera_group' and a user 'cloudera_user',

```

ubuntu@ubuntu: ~/Desktop/Cloudera
File Edit View Search Terminal Help
ubuntu@ubuntu:~/Desktop/Cloudera$ sudo addgroup cloudera_group
Adding group 'cloudera_group' (GID 1002) ...
Done.
ubuntu@ubuntu:~/Desktop/Cloudera$ sudo adduser --ingroup cloudera_group cloudera_user
Adding user 'cloudera_user' ...
Adding new user 'cloudera_user' (1001) with group 'cloudera_group' ...
Creating home directory '/home/cloudera_user' ...
Copying files from '/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
Sorry, passwords do not match
passwd: Authentication token manipulation error
passwd: password unchanged
Try again? [y/N] y
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for cloudera_user
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
ubuntu@ubuntu:~/Desktop/Cloudera$

```

23. Change Group for a given file

```

ubuntu@ubuntu:~/Desktop/Cloudera$ ls -ltr
total 4
-rw-r--r-- 1 ubuntu ubuntu 0 Apr 14 14:52 clouderaFile.txt
-rw-r--r-- 1 ubuntu ubuntu 0 Apr 14 14:52 copiedFile2.txt
-rw-r--r-- 1 ubuntu ubuntu 93 Apr 14 15:26 DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$ sudo chgrp data_mining clouderaFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera$ ls -ltr
total 4
-rw-r--r-- 1 ubuntu data_mining 0 Apr 14 14:52 clouderaFile.txt
-rw-r--r-- 1 ubuntu ubuntu 0 Apr 14 14:52 copiedFile2.txt
-rw-r--r-- 1 ubuntu ubuntu 93 Apr 14 15:26 DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$

```

24. Change file/directory permissions with chmod 777

```
ubuntu@ubuntu:~/Desktop/Cloudera$ ls
clouderaFile.txt  copiedFile2.txt  DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$ chmod 777 clouderaFile.txt
ubuntu@ubuntu:~/Desktop/Cloudera$
```

25. Change owner

The owner and the group of 'copiedFile2.txt' is ubuntu, for the user and group.

```
ubuntu@ubuntu:~/Desktop/Cloudera$ ls -ltr
total 4
-rwxrwxrwx 1 ubuntu data mining  0 Apr 14 14:52 clouderaFile.txt
-rw-r--r-- 1 ubuntu ubuntu      0 Apr 14 14:52 copiedFile2.txt
-rw-r--r-- 1 ubuntu ubuntu      93 Apr 14 15:26 DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$
```

And there after changing group and the user,

```
ubuntu@ubuntu:~/Desktop/Cloudera$ sudo chown cloudera_user:cloudera_group copiedFile2.txt
ubuntu@ubuntu:~/Desktop/Cloudera$ ls -ltr
total 4
-rwxrwxrwx 1 ubuntu      data mining  0 Apr 14 14:52 clouderaFile.txt
-rw-r--r-- 1 cloudera user cloudera_group 0 Apr 14 14:52 copiedFile2.txt
-rw-r--r-- 1 ubuntu      ubuntu      93 Apr 14 15:26 DataMining
ubuntu@ubuntu:~/Desktop/Cloudera$
```