

# Basic Shell Commands

## 1) Listing Directory Contents

### ls

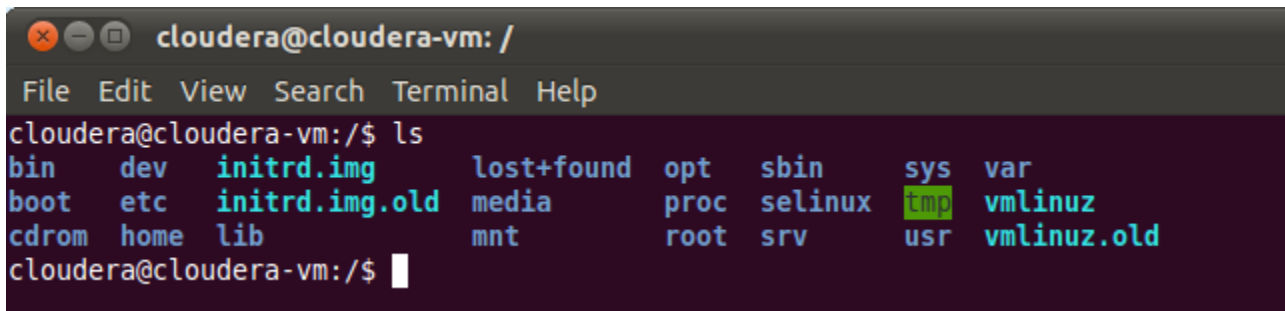
Display all files and folders in the current directory

### ls -a

Displays all files including hidden

### ls -l

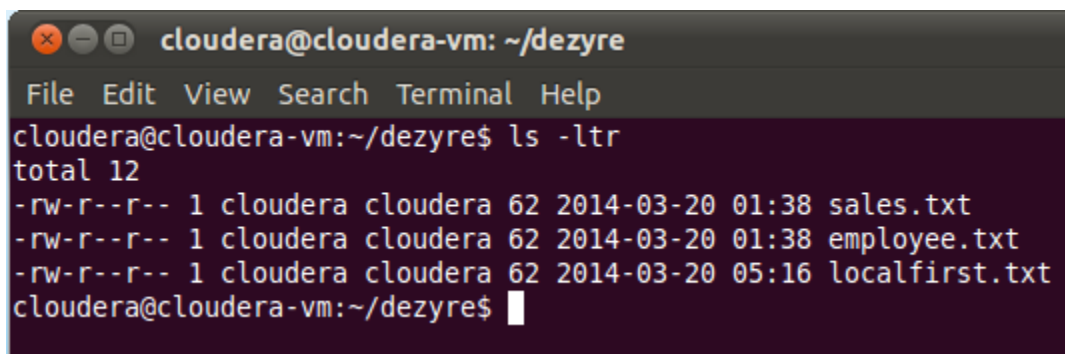
Display all files along with size and time stamp



```
cloudera@cloudera-vm: /  
File Edit View Search Terminal Help  
cloudera@cloudera-vm:/$ ls  
bin      dev      initrd.img      lost+found  opt      sbin      sys      var  
boot     etc      initrd.img.old  media       proc     selinux  tmp      vmlinuz  
cdrom    home    lib             mnt         root     srv       usr      vmlinuz.old  
cloudera@cloudera-vm:/$
```

### ls -ltr

Display in long listing format with timestamp in reverse order

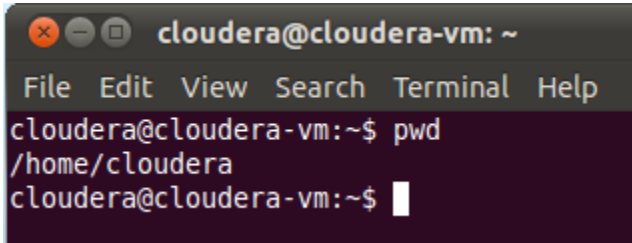


```
cloudera@cloudera-vm: ~/dezyre  
File Edit View Search Terminal Help  
cloudera@cloudera-vm:~/dezyre$ ls -ltr  
total 12  
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 01:38 sales.txt  
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 01:38 employee.txt  
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 05:16 localfirst.txt  
cloudera@cloudera-vm:~/dezyre$
```

## 2) Moving around the file system

### **pwd**

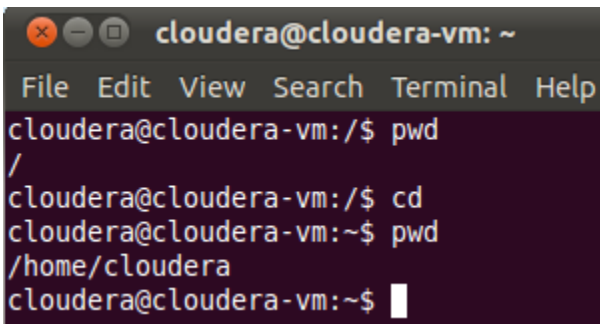
Displays the "present working directory"



```
cloudera@cloudera-vm: ~  
File Edit View Search Terminal Help  
cloudera@cloudera-vm:~$ pwd  
/home/cloudera  
cloudera@cloudera-vm:~$
```

### **cd**

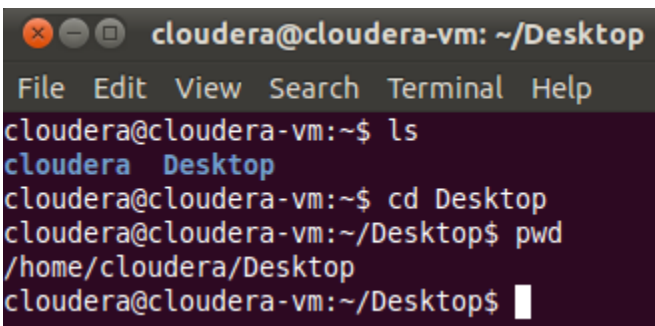
Changes current directory to "HOME" directory



```
cloudera@cloudera-vm: ~  
File Edit View Search Terminal Help  
cloudera@cloudera-vm:/$ pwd  
/  
cloudera@cloudera-vm:/$ cd  
cloudera@cloudera-vm:~$ pwd  
/home/cloudera  
cloudera@cloudera-vm:~$
```

### **cd desktop**

Looks for a directory name desktop in the current working directory and changes to that



```
cloudera@cloudera-vm: ~/Desktop  
File Edit View Search Terminal Help  
cloudera@cloudera-vm:~$ ls  
cloudera Desktop  
cloudera@cloudera-vm:~$ cd Desktop  
cloudera@cloudera-vm:~/Desktop$ pwd  
/home/cloudera/Desktop  
cloudera@cloudera-vm:~/Desktop$
```

## **cd /home/cloudera**

Changes current directory to /home/cloudera

```
cloudera@cloudera-vm: ~  
File Edit View Search Terminal Help  
cloudera@cloudera-vm:/bin$ pwd  
/bin  
cloudera@cloudera-vm:/bin$ cd /home/cloudera  
cloudera@cloudera-vm:~$ pwd  
/home/cloudera  
cloudera@cloudera-vm:~$
```

## **3) Create a directory**

### **mkdir dezyre**

Creates a directory **dezyre** in the current directory

```
cloudera@cloudera-vm: ~  
File Edit View Search Terminal Help  
cloudera@cloudera-vm:~$ ls  
cloudera Desktop  
cloudera@cloudera-vm:~$ mkdir dezyre  
cloudera@cloudera-vm:~$ ls  
cloudera Desktop dezyre  
cloudera@cloudera-vm:~$
```

## **4) Create a copy of file in same directory**

### **cp file1 file2**

Creates a copy of file1 in the same directory with name file2

```
cloudera@cloudera-vm: ~/dezyre  
File Edit View Search Terminal Help  
cloudera@cloudera-vm:~/dezyre$ ls  
file1  
cloudera@cloudera-vm:~/dezyre$ cp file1 file2  
cloudera@cloudera-vm:~/dezyre$ ls  
file1 file2  
cloudera@cloudera-vm:~/dezyre$
```

## 5) Create a copy of file in different directory

### **cp file1 backup/file2**

Creates a copy of file in directory /backup with name file2

```
cloudera@cloudera-vm: ~/dezyre/backup
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls
backup file1
cloudera@cloudera-vm:~/dezyre$ cp file1 backup/file2
cloudera@cloudera-vm:~/dezyre$ cd backup
cloudera@cloudera-vm:~/dezyre/backup$ ls
file2
cloudera@cloudera-vm:~/dezyre/backup$
```

## 6) Rename a file

### **mv file1 newfile**

Renames file1 to newfile

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls
backup file1
cloudera@cloudera-vm:~/dezyre$ mv file1 newfile
cloudera@cloudera-vm:~/dezyre$ ls
backup newfile
cloudera@cloudera-vm:~/dezyre$
```

## 7) Move file from one directory to another

### **mv file1 backup/file2**

Moves the file1 from current directory into subdirectory backup with name file2 - file1 will no longer exist in the current directory

```
cloudera@cloudera-vm: ~/dezyre/backup
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls
backup newfile
cloudera@cloudera-vm:~/dezyre$ mv newfile backup/newfile
cloudera@cloudera-vm:~/dezyre$ ls
backup
cloudera@cloudera-vm:~/dezyre$ cd backup
cloudera@cloudera-vm:~/dezyre/backup$ ls
file2 newfile
cloudera@cloudera-vm:~/dezyre/backup$
```

## 8) Delete a file

### **rm file1**

Deletes file1 from current directory

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls
backup file1
cloudera@cloudera-vm:~/dezyre$ rm file1
cloudera@cloudera-vm:~/dezyre$ ls
backup
cloudera@cloudera-vm:~/dezyre$
```

## 9) Delete an empty directory

### **rmdir backup**

Deletes directory backup only if its empty

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls
backup file1
cloudera@cloudera-vm:~/dezyre$ rmdir backup/
cloudera@cloudera-vm:~/dezyre$ ls
file1
cloudera@cloudera-vm:~/dezyre$
```

## 10) Delete a directory with files

### **rm -r dezyre**

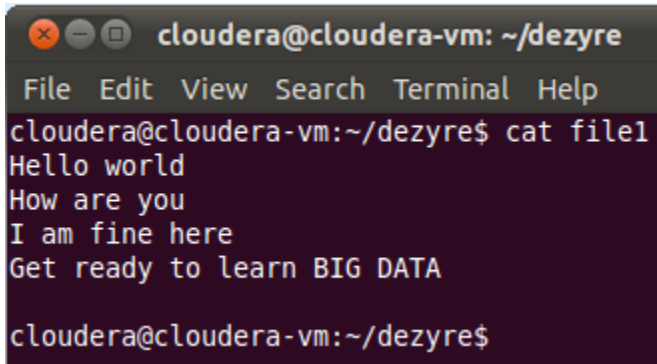
Deletes dezyre and all its files and subfolders

```
cloudera@cloudera-vm: ~
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls
backup file1 file2
cloudera@cloudera-vm:~/dezyre$ cd ..
cloudera@cloudera-vm:~$ ls
cloudera Desktop dezyre
cloudera@cloudera-vm:~$ rm -r dezyre
cloudera@cloudera-vm:~$ ls
cloudera Desktop
cloudera@cloudera-vm:~$
```

## 11) Viewing files

### cat file1

Will display contents of file1 on screen



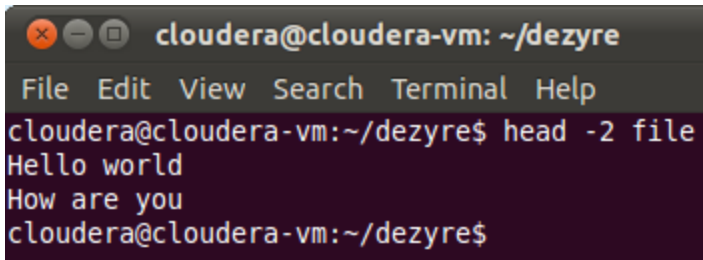
```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ cat file1
Hello world
How are you
I am fine here
Get ready to learn BIG DATA
cloudera@cloudera-vm:~/dezyre$
```

### more file1

Used to display the contents of a large file (ENTER = one line down; SPACE = page down; q=Quit)

### head file or head -2 file

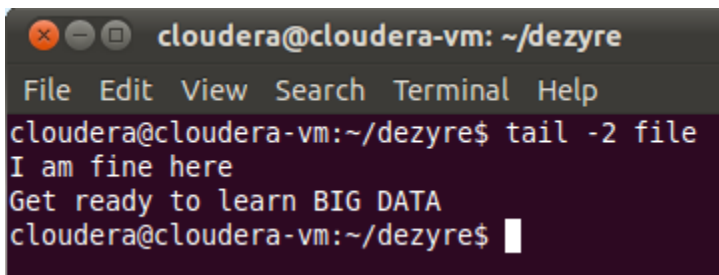
Will display the first few lines of a file or if -2 is given - will display the top 2 lines



```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ head -2 file
Hello world
How are you
cloudera@cloudera-vm:~/dezyre$
```

### tail file or tail -2 file

Will display the last few lines of a file or if -2 is mentioned - will display the last 2 lines

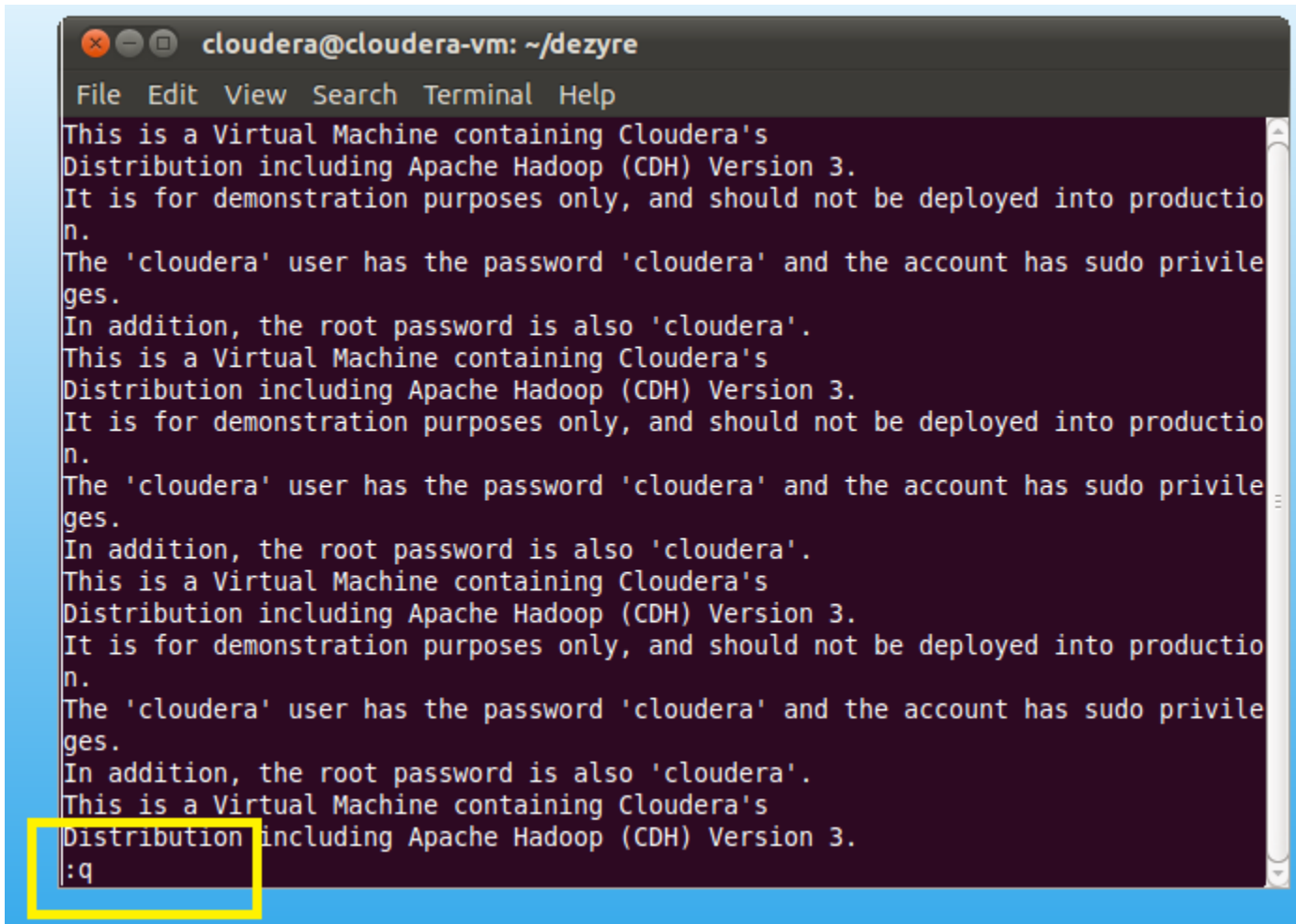


```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ tail -2 file
I am fine here
Get ready to learn BIG DATA
cloudera@cloudera-vm:~/dezyre$
```

## 12) Editing files

### vi file1

Will open vi editor to editor to edit file (:q = Quit; :wq = Write and Quit;



```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
This is a Virtual Machine containing Cloudera's
Distribution including Apache Hadoop (CDH) Version 3.
It is for demonstration purposes only, and should not be deployed into production.
The 'cloudera' user has the password 'cloudera' and the account has sudo privileges.
In addition, the root password is also 'cloudera'.
This is a Virtual Machine containing Cloudera's
Distribution including Apache Hadoop (CDH) Version 3.
It is for demonstration purposes only, and should not be deployed into production.
The 'cloudera' user has the password 'cloudera' and the account has sudo privileges.
In addition, the root password is also 'cloudera'.
This is a Virtual Machine containing Cloudera's
Distribution including Apache Hadoop (CDH) Version 3.
It is for demonstration purposes only, and should not be deployed into production.
The 'cloudera' user has the password 'cloudera' and the account has sudo privileges.
In addition, the root password is also 'cloudera'.
This is a Virtual Machine containing Cloudera's
Distribution including Apache Hadoop (CDH) Version 3.
:q
```

For vi commands - you can refer to links below

<http://www.cs.rit.edu/~cslab/vi.html>

<http://www.cs.colostate.edu/helpdocs/vi.html>

<http://www.tutorialspoint.com/unix/unix-vi-editor.htm>



### 13) Size of files

**du -h dezyre/**

```
cloudera@cloudera-vm: ~  
File Edit View Search Terminal Help  
cloudera@cloudera-vm:~$ du -h dezyre/  
16K    dezyre/  
cloudera@cloudera-vm:~$
```

**du -h dezyre/\***

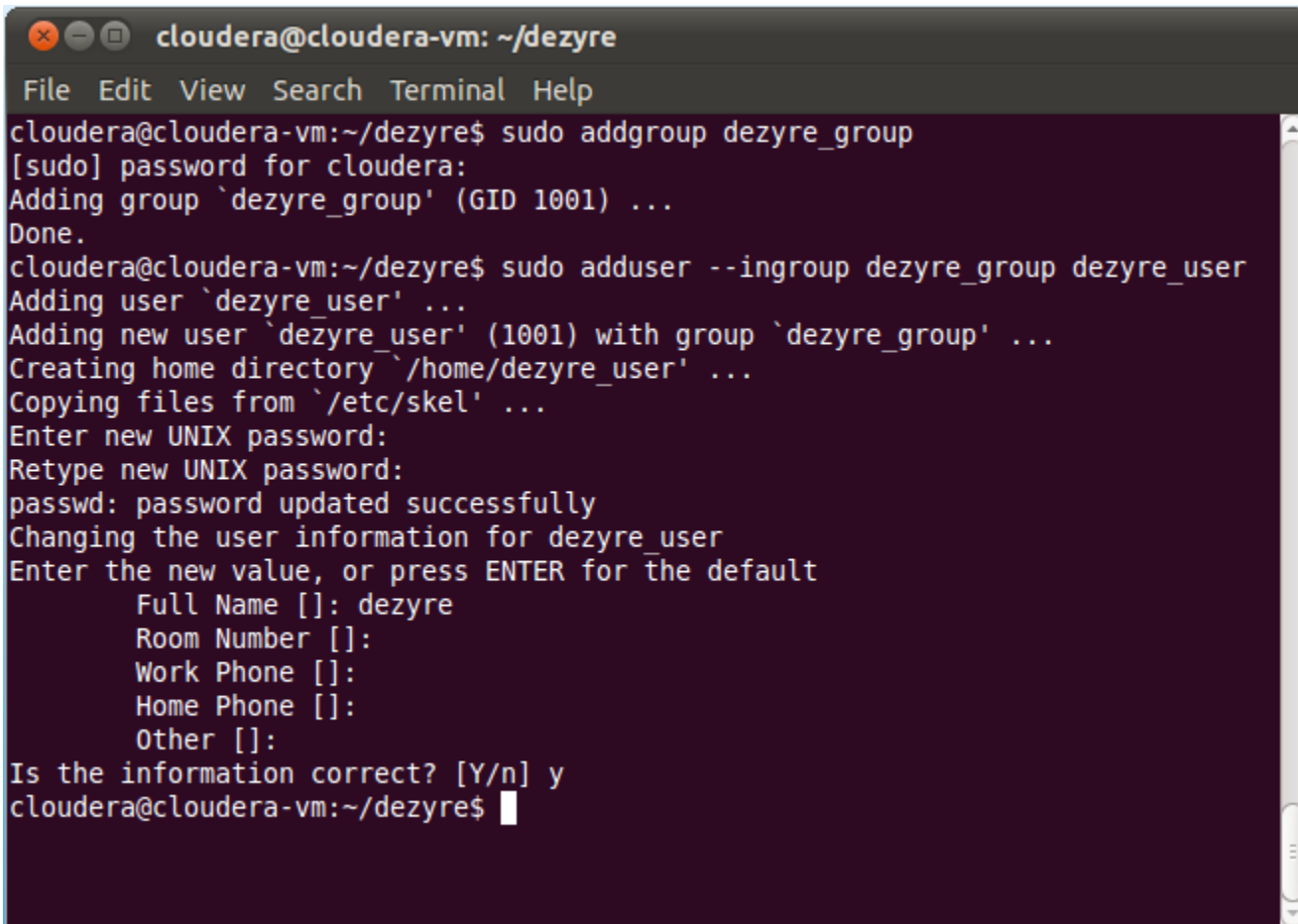
```
cloudera@cloudera-vm: ~  
File Edit View Search Terminal Help  
cloudera@cloudera-vm:~$ du -h dezyre/*  
4.0K   dezyre/employee.txt  
4.0K   dezyre/localfirst.txt  
4.0K   dezyre/sales.txt  
cloudera@cloudera-vm:~$
```

## 14) Change group of file/directory

Create a group `dezyre_group` and a user `dezyre_user`

**`sudo addgroup dezyre_group`**

**`sudo adduser --ingroup dezyre_group dezyre_user`**

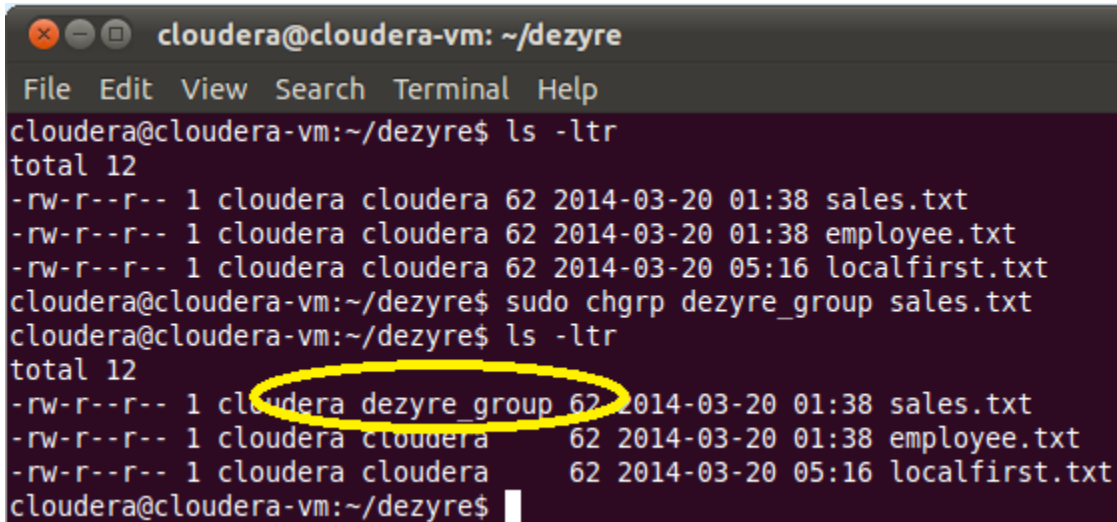


```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ sudo addgroup dezyre_group
[sudo] password for cloudera:
Adding group `dezyre_group' (GID 1001) ...
Done.
cloudera@cloudera-vm:~/dezyre$ sudo adduser --ingroup dezyre_group dezyre_user
Adding user `dezyre_user' ...
Adding new user `dezyre_user' (1001) with group `dezyre_group' ...
Creating home directory `/home/dezyre_user' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for dezyre_user
Enter the new value, or press ENTER for the default
  Full Name []: dezyre
  Room Number []:
  Work Phone []:
  Home Phone []:
  Other []:
Is the information correct? [Y/n] y
cloudera@cloudera-vm:~/dezyre$
```

Group for sales.txt is cloudera

Change Group for sales.txt to dezyre\_group

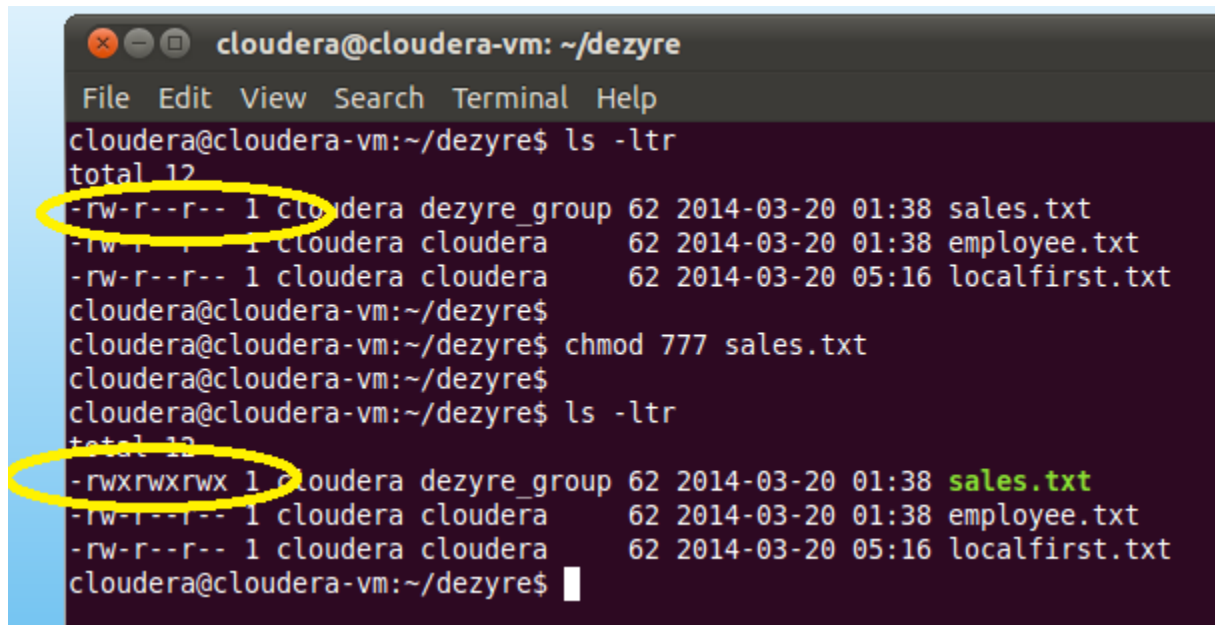
**sudo chgrp dezyre\_group sales.txt**



```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls -ltr
total 12
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 01:38 sales.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 01:38 employee.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 05:16 localfirst.txt
cloudera@cloudera-vm:~/dezyre$ sudo chgrp dezyre_group sales.txt
cloudera@cloudera-vm:~/dezyre$ ls -ltr
total 12
-rw-r--r-- 1 cloudera dezyre_group 62 2014-03-20 01:38 sales.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 01:38 employee.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 05:16 localfirst.txt
cloudera@cloudera-vm:~/dezyre$
```

## 15) Change file/directory permissions

**chmod 777 sales.txt**



```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls -ltr
total 12
-rw-r--r-- 1 cloudera dezyre_group 62 2014-03-20 01:38 sales.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 01:38 employee.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 05:16 localfirst.txt
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ chmod 777 sales.txt
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ ls -ltr
total 12
-rwxrwxrwx 1 cloudera dezyre_group 62 2014-03-20 01:38 sales.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 01:38 employee.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 05:16 localfirst.txt
cloudera@cloudera-vm:~/dezyre$
```

## 16) Change owner

The owner and group of file employee.txt is cloudera.

**sudo chown dezyre\_user:dezyre\_group employee.txt**

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls -ltr
total 12
-rwxrwxrwx 1 cloudera dezyre_group 62 2014-03-20 01:38 sales.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 01:38 employee.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 05:16 localfirst.txt
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ sudo chown dezyre_user:dezyre_group employee.txt
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ ls -ltr
total 12
-rwxrwxrwx 1 cloudera dezyre_group 62 2014-03-20 01:38 sales.txt
-rw-r--r-- 1 dezyre_user dezyre_group 62 2014-03-20 01:38 employee.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 05:16 localfirst.txt
cloudera@cloudera-vm:~/dezyre$
```