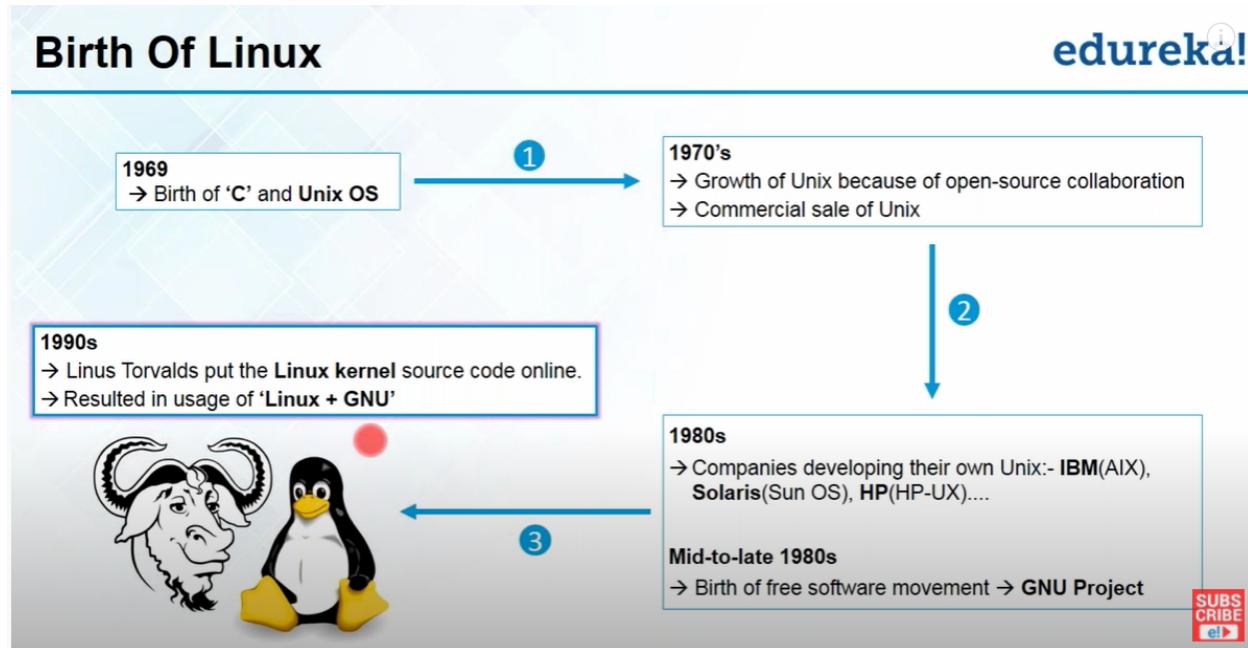
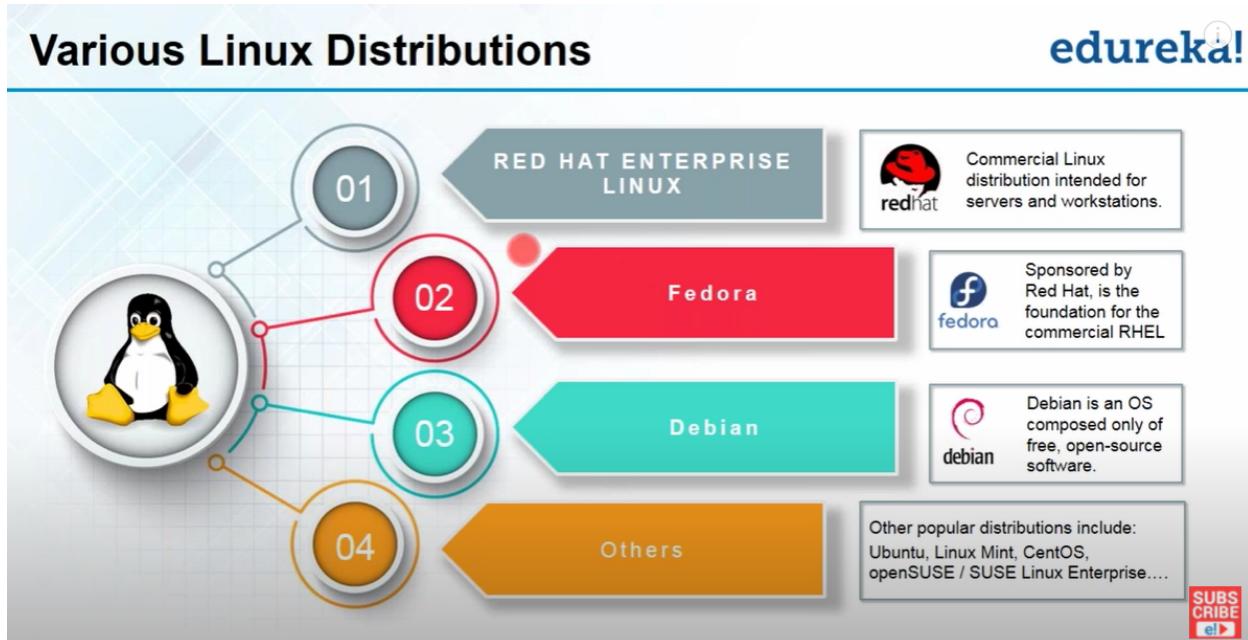


# Linux

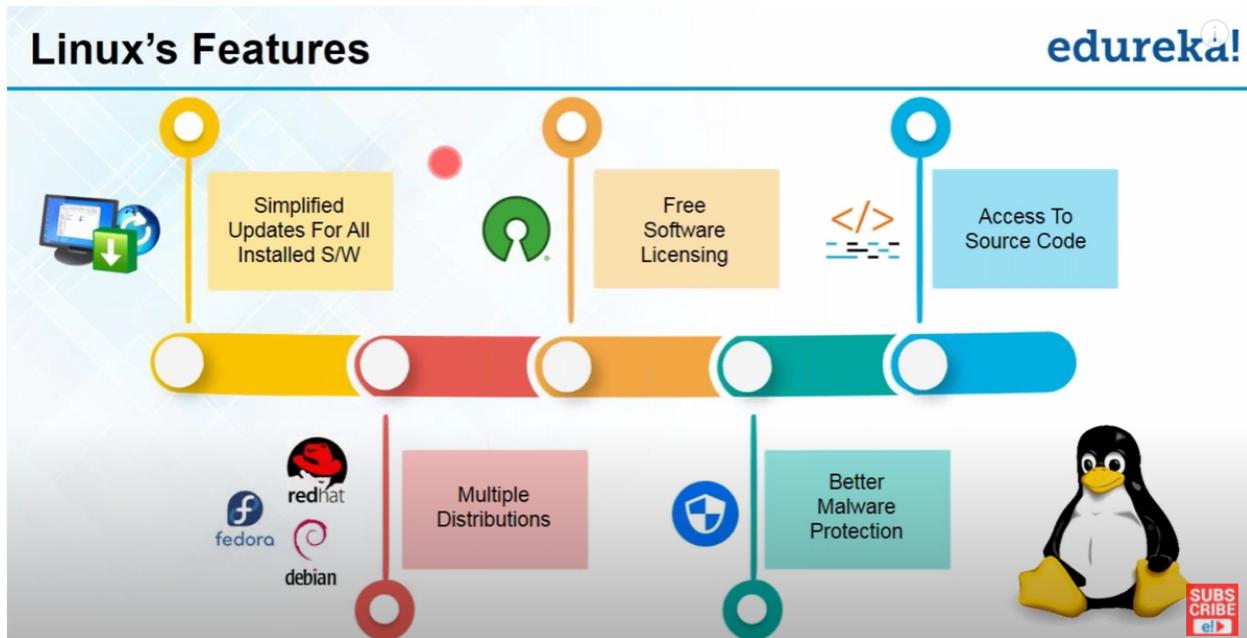
## 1. Birth Of Linux



## 2. Various linux distribution

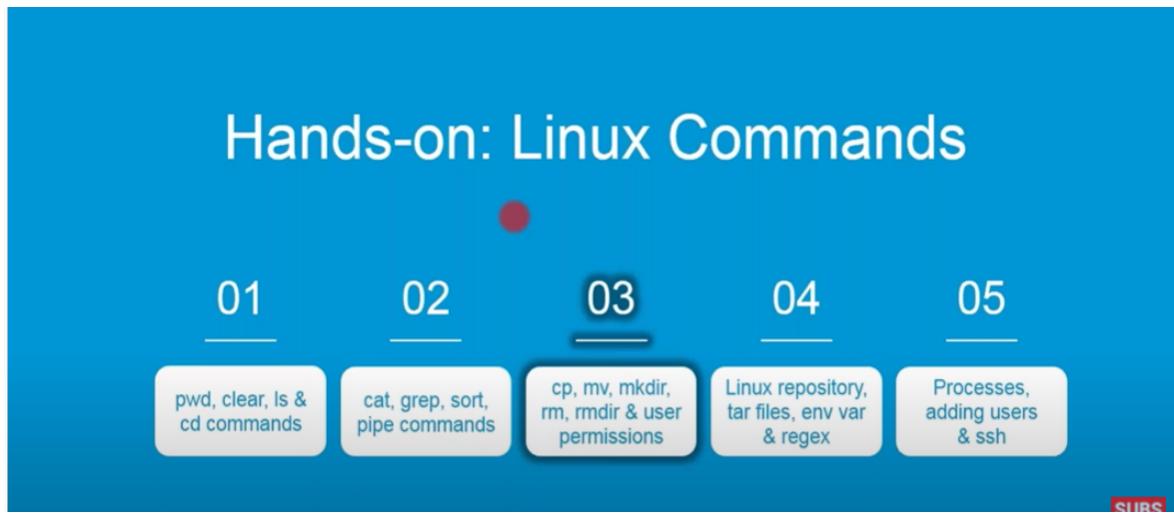


### 3.Linux's Features



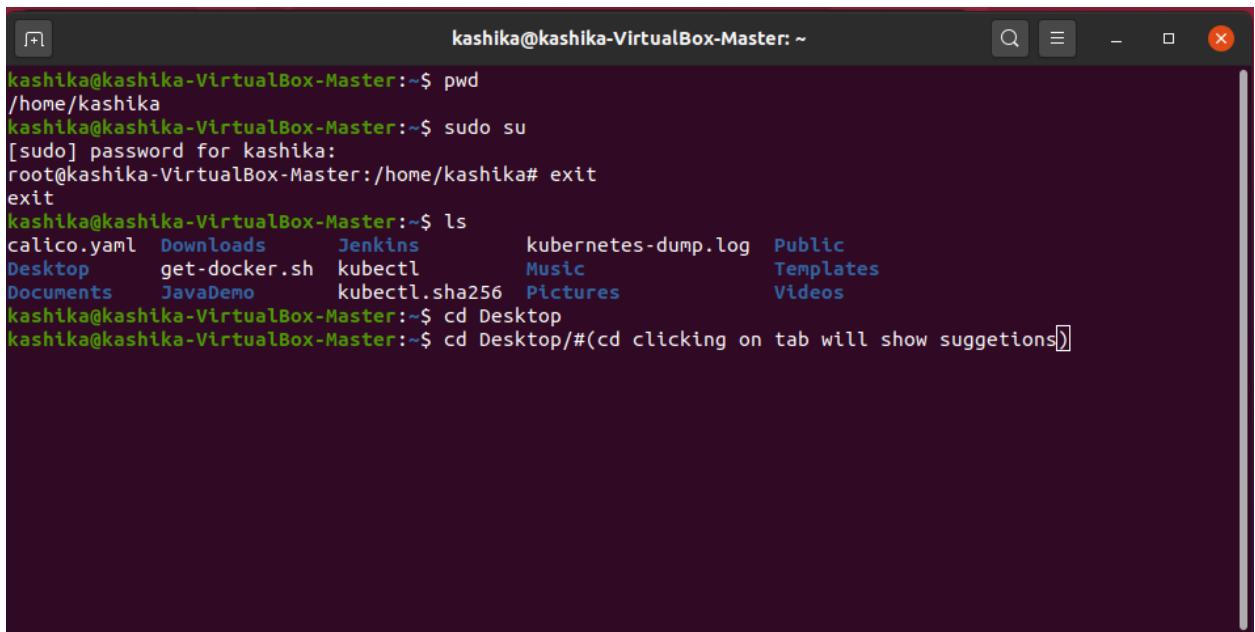
### 4.Hand-ON Linux

- Linux provides a CLI(Command Line Interface) to communicate with the OS.
- CLI is better for tasks which cannot be performed with the GUI.



- Working With Directories:'pwd' & 'clear'

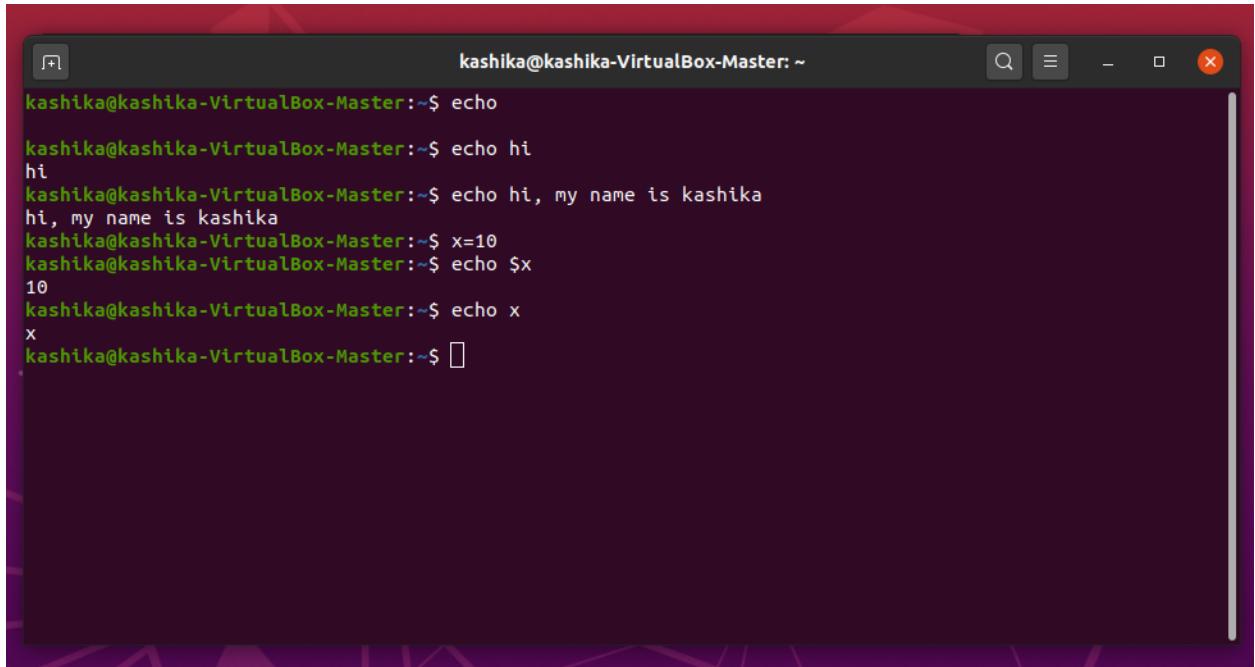
Command	Explanation
pwd	Displays the current working directory of the terminal
/	Root directory
echo	Command that writes its arguments to standard output.
su	Used to switch to root user(so that super user permissions can be used to execute commands)
su username	Used to switch to a different user
sudo	Executes only that command with root/ super user privileges
clear	This command is used to clear the terminal screen. Contents will not be deleted but scrolled down



```

kashika@kashika-VirtualBox-Master:~$ pwd
/home/kashika
kashika@kashika-VirtualBox-Master:~$ sudo su
[sudo] password for kashika:
root@kashika-VirtualBox-Master:/home/kashika# exit
exit
kashika@kashika-VirtualBox-Master:~$ ls
calico.yaml  Downloads      Jenkins      kubernetes-dump.log  Public
Desktop      get-docker.sh  kubectl     Music          Templates
Documents    JavaDemo      kubectl.sha256 Pictures      Videos
kashika@kashika-VirtualBox-Master:~$ cd Desktop
kashika@kashika-VirtualBox-Master:~$ cd Desktop/(cd clicking on tab will show suggestions)

```



A screenshot of a terminal window on an Ubuntu desktop. The title bar says "kashika@kashika-VirtualBox-Master: ~". The terminal displays the following commands and their outputs:

```
kashika@kashika-VirtualBox-Master:~$ echo  
kashika@kashika-VirtualBox-Master:~$ echo hi  
hi  
kashika@kashika-VirtualBox-Master:~$ echo hi, my name is kashika  
hi, my name is kashika  
kashika@kashika-VirtualBox-Master:~$ x=10  
kashika@kashika-VirtualBox-Master:~$ echo $x  
10  
kashika@kashika-VirtualBox-Master:~$ echo x  
x  
kashika@kashika-VirtualBox-Master:~$
```

+++++

- Working With Directories:'ls' command

**\$ ls [options] [file | Directory]**

ls	This command lists all the contents in the current working directory
ls path	By specifying the path after ls, the content in that path will be displayed
ls -l	Using 'l' flag, lists all the contents along with its owner settings, permissions & time stamp (long format)
ls -a	Using 'a' flag, lists all the hidden contents in the specified directory
ls --author	Using '--author' flag, lists the contents in the specified directory along with its owner
ls -S	Using 'a' flag, sorts and lists all the contents in the specified directory by size
ls *.html	Using '*' flag, lists only the contents in the directory of a particular format
ls -IS > file.txt	Using '>' flag, copies the result of ls command into a text file



```
root@kashika-VirtualBox-Master:/home/kashika# ls
calico.yaml  Downloads  Jenkins      kubernetes-dump.log  Public
Desktop     get-docker.sh  kubectl    Music          Templates
Documents   JavaDemo    kubectl.sha256 Pictures      Videos
root@kashika-VirtualBox-Master:/home/kashika# ls -l
total 39796
-rw-r--r-- 1 root      root      19739 Jan 28 15:33 calico.yaml
drwxr-xr-x 2 kashika  kashika   4096 Jan  8 15:30 Desktop
drwxr-xr-x 3 kashika  kashika   4096 Jan 10 00:11 Documents
drwxr-xr-x 3 kashika  kashika   4096 Jan 10 19:25 Downloads
-rw-rw-r-- 1 kashika  kashika  13857 Jan 12 15:10 get-docker.sh
drwxrwxr-x 4 kashika  kashika   4096 Feb  2 10:31 JavaDemo
drwxrwxr-x 4 kashika  kashika   4096 Jan 18 16:48 Jenkins
-rw-rw-r-- 1 kashika  kashika 40230912 Jan 27 10:35 kubectl
-rw-r--r-- 1 kashika  kashika    64 Jan 27 10:37 kubectl.sha256
-rw-r--r-- 1 root      root     437359 Jan 28 10:37 kubernetes-dump.log
drwxr-xr-x 2 kashika  kashika   4096 Jan  8 15:30 Music
drwxr-xr-x 2 kashika  kashika   4096 Feb  1 16:36 Pictures
drwxr-xr-x 2 kashika  kashika   4096 Jan  8 15:30 Public
drwxr-xr-x 2 kashika  kashika   4096 Jan  8 15:30 Templates
drwxr-xr-x 2 kashika  kashika   4096 Jan  8 15:30 Videos
root@kashika-VirtualBox-Master:/home/kashika# ls -a
..           .bashrc   Desktop     .gitconfig  Jenkins      kubernetes-dump.log  Pictures  .sudo_as_admin_successful  .vboxclient-display-svga-x11
.            .cache    Documents   .gnupg     .kube       .local      .profile   Templates          .vboxclient-draganddrop.pid
.bash_history  calico.yaml Downloads   .java      kubectl    .mozilla    Public    .thunderbird        .vboxclient-seamless.pid
.bash_logout   .config   get-docker.sh JavaDemo   kubectl.sha256 Music      .ssh      .vboxclient-clipboard.pid  Videos
```

```

root@kashika-VirtualBox-Master:/home/kashika# ls -la
total 39884
drwxr-xr-x 21 kashika kashika 4096 Feb  2 09:56 .
drwxr-xr-x  3 root   root    4096 Jan  8 15:21 .
-rw-r--r--  1 kashika kashika 2895 Feb  1 17:00 bash_history
-rw-r--r--  1 kashika kashika 220 Jan  8 15:21 bash_logout
-rw-r--r--  1 kashika kashika 3771 Jan  8 15:21 bashrc
drwx----- 15 kashika kashika 4096 Feb  1 15:49 cache
-rw-r--r--  1 root   root    19739 Jan 28 15:33 calico.yaml
drwx----- 15 kashika kashika 4096 Feb  1 15:50 config
drwxr-xr-x  2 kashika kashika 4096 Jan  8 15:30 Desktop
drwxr-xr-x  3 kashika kashika 4096 Jan 10 00:11 Documents
drwxr-xr-x  3 kashika kashika 4096 Jan 10 19:25 Downloads
-rw-rw-r--  1 kashika kashika 13857 Jan 12 15:10 get-docker.sh
-rw-rw-r--  1 kashika kashika 46 Jan 13 17:41 gitconfig
drwx----- 3 kashika kashika 4096 Jan 27 10:12 gnupg
drwxrwxr-x  3 kashika kashika 4096 Jan 10 19:17 java
drwxrwxr-x  4 kashika kashika 4096 Feb  2 10:31 JavaDemo
drwxr-xr--  4 kashika kashika 4096 Jan 18 16:48 Jenkins
drwxr-x--- 3 kashika kashika 4096 Jan 27 17:19 kube
-rw-rw-r--  1 kashika kashika 40230912 Jan 27 10:35 kubectl
-rw-rw-r--  1 kashika kashika 64 Jan 27 10:37 kubectl.sha256
-rw-r--r--  1 root   root    437359 Jan 28 10:37 kubernetes-dump.log
drwxr-xr-x  3 kashika kashika 4096 Jan  8 15:30 local
drwx----- 5 kashika kashika 4096 Jan  8 15:31 mozilla
drwxr-xr-x  2 kashika kashika 4096 Jan  8 15:30 Music
drwxr-xr-x  2 kashika kashika 4096 Feb  1 16:36 Pictures
-rw-r--r--  1 kashika kashika 807 Jan  8 15:21 profile
drwxr-xr--  2 kashika kashika 4096 Jan  8 15:30 Public
drwx----- 2 kashika kashika 4096 Jan 18 15:27 ssh
-rw-r--r--  1 kashika kashika 0 Jan  8 17:50 sudo_as_admin_successful
drwxr-xr-x  2 kashika kashika 4096 Jan  8 15:30 Templates
drwx----- 6 kashika kashika 4096 Feb  1 15:49 thunderbird
-rw-r----- 1 kashika kashika 5 Feb  2 09:56 vboxclient-clipboard.pid
-rw-r----- 1 kashika kashika 5 Feb  2 09:56 vboxclient-display-svga-x11.pid
-rw-r----- 1 kashika kashika 5 Feb  2 09:56 vboxclient-dragndrop.pid
-rw-r----- 1 kashika kashika 5 Feb  2 09:56 vboxclient-seamless.pid
drwxr-xr-x  2 kashika kashika 4096 Jan  8 15:30 Videos
-rw-r----- 1 kashika kashika 1073 Jan 13 17:37 .vtmInfo
-rw-r----- 1 kashika kashika 164 Jan 10 18:38 .wget-hsts

```

```

root@kashika-VirtualBox-Master:/home/kashika# ls -las
total 39884
-rw-rw-r-- 1 kashika kashika 40230912 Jan 27 10:35 kubectl
-rw-r--r-- 1 root   root    437359 Jan 28 10:37 kubernetes-dump.log
-rw-r--r-- 1 root   root    19739 Jan 28 15:33 calico.yaml
-rw-rw-r-- 1 kashika kashika 13857 Jan 12 15:10 get-docker.sh
drwxr-xr-x 21 kashika kashika 4096 Feb  2 09:56 .
drwxr-xr-x  3 root   root    4096 Jan  8 15:21 .
-rw-r--r-- 15 kashika kashika 4096 Feb  1 15:49 cache
drwx----- 15 kashika kashika 4096 Feb  1 15:50 config
drwxr-xr-x  2 kashika kashika 4096 Jan  8 15:30 Desktop
drwxr-xr-x  3 kashika kashika 4096 Jan 10 00:11 Documents
drwxr-xr-x  3 kashika kashika 4096 Jan 10 19:25 Downloads
drwx----- 3 kashika kashika 4096 Jan 27 10:12 gnupg
drwxrwxr-x  3 kashika kashika 4096 Jan 10 19:17 java
drwxrwxr-x  4 kashika kashika 4096 Feb  2 10:31 JavaDemo
drwxr-xr--  4 kashika kashika 4096 Jan 18 16:48 Jenkins
drwxr-x--- 3 kashika kashika 4096 Jan 27 17:19 kube
drwxr-xr-x  3 kashika kashika 4096 Jan  8 15:30 local
drwx----- 5 kashika kashika 4096 Jan  8 15:33 mozilla
drwxr-xr-x  2 kashika kashika 4096 Jan  8 15:30 Music
drwxr-xr-x  2 kashika kashika 4096 Feb  1 16:36 Pictures
drwxr-xr-x  2 kashika kashika 4096 Jan  8 15:30 Public
drwxr-xr--  2 kashika kashika 4096 Jan 18 15:27 ssh
drwxr-xr-x  2 kashika kashika 4096 Jan  8 15:30 Templates
drwx----- 6 kashika kashika 4096 Feb  1 15:49 thunderbird
drwxr-xr-x  2 kashika kashika 4096 Jan  8 15:30 Videos
-rw-r--r--  1 kashika kashika 3771 Jan  8 15:21 bashrc
-rw----- 1 kashika kashika 2895 Feb  1 17:00 bash_history
-rw----- 1 kashika kashika 1073 Jan 13 17:37 .vtmInfo
-rw-r--r--  1 kashika kashika 807 Jan  8 15:21 profile
-rw-r--r--  1 kashika kashika 220 Jan  8 15:21 bash_logout
-rw-rw-r--  1 kashika kashika 164 Jan 10 18:38 .wget-hsts
-rw-rw-r--  1 kashika kashika 64 Jan 27 10:37 kubectl.sha256
-rw-rw-r--  1 kashika kashika 46 Jan 13 17:41 gitconfig
drwx----- 1 kashika kashika 4096 Feb  2 09:56 vboxclient-clipboard.pid
drwx----- 1 kashika kashika 5 Feb  2 09:56 vboxclient-display-svga-x11.pid
drwx----- 1 kashika kashika 5 Feb  2 09:56 vboxclient-dragndrop.pid
drwx----- 1 kashika kashika 5 Feb  2 09:56 vboxclient-seamless.pid
-rw-r--r--  1 kashika kashika 0 Jan  8 17:50 sudo_as_admin_successful

```

```

root@kashika-VirtualBox-Master:/home/kashika# ls
calico.yaml Desktop Documents Downloads get-docker.sh JavaDemo Jenkins kubectl kubectl.sha256 kubernetes-dump.log Music Pictures Public Templates Videos
root@kashika-VirtualBox-Master:/home/kashika# cd JavaDemo/
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# ls -las > File2.txt
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# ls
Calculator.class Calculator.java C05_SandBox File1.txt File2.txt HelloWorld.class HelloWorld.java hello-world-java-master makefile
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# v File2.txt
v: command not found
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# vi File2.txt

```

A screenshot of a Linux desktop environment. The terminal window is open and shows the command 'ls' being run in the directory '/home/kashika/JavaDemo'. The output lists several files and directories:

```
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo
Feb 2 11:04
total 80
drwxrwxr-x  1 kashika kashika 20200 Jan 13 17:32 Calculator.java
-rw-rw-r--  1 kashika kashika 12686 Jan 13 17:38 Calculator.class
-rw-r--r--  1 root   root    12288 Feb  2 10:31 File1.txt.swp
drwxrwxr-x  4 kashika kashika  4096 Feb  2 10:38 .
drwxr-xr-x 21 kashika kashika  4096 Feb  2 09:56 ..
drwxrwxr-x  6 kashika kashika  4096 Jan 13 17:39 COS_SandBox
drwxrwxr-x  2 kashika kashika  4096 Jan 10 00:18 hello-world-java-master
-rw-r--r--  1 root   root    2427 Feb  2 10:31 File1.txt
-rw-rw-r--  1 kashika kashika  427 Jan 13 17:38 HelloWorld.class
-rw-rw-r--  1 kashika kashika 128 Jan 13 17:32 HelloWorld.java
-rw-rw-r--  1 kashika kashika 104 Jan 13 17:38 makefile
-rw-r--r--  1 root   root     0 Feb  2 10:38 File2.txt
```

The terminal window has a dark background and light-colored text. The status bar at the bottom shows the file 'File2.txt' with 13L and 750C. The desktop interface includes a dock with icons for various applications like a browser, file manager, and terminal.

- Working with Directories: 'cd'

A help card for the 'cd' command. It starts with the syntax '\$ cd [directory]'. Below it is a table with five rows, each showing a command and its description.

cd	Changes the directory to the home directory
cd ~	This command also changes the directory to home directory
cd /	Changes the directory to root directory
cd ..	Changes the directory to its parent directory
cd 'xx yy'	We specify the folder name in inverted commas because there is a space in the folder name

```
[+] root@kashika-VirtualBox-Master: /home/kashika/JavaDemo 
root@kashika-VirtualBox-Master:/# cd home/kashika/JavaDemo
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd ~
root@kashika-VirtualBox-Master:~/# cd /
root@kashika-VirtualBox-Master:/# cd
root@kashika-VirtualBox-Master:~/# cd /
root@kashika-VirtualBox-Master:/# cd home/kashika
root@kashika-VirtualBox-Master:/home/kashika# cd 'JavaDemo' /
bash: cd: too many arguments
root@kashika-VirtualBox-Master:/home/kashika# ls
calico.yaml Desktop Documents Downloads get-docker.sh JavaDemo Jenkins
kubectl kubectl.sha256 kubernetes-dump.log Music Pictures Public Templates Videos
root@kashika-VirtualBox-Master:/home/kashika# cd 'JavaDemo' /
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# 
```

- Working with files: ‘cat’ command

cat	This command is used to display the content of text files and concatenate several files into one
cat -b	This is used to add line numbers to non blank lines
cat -n	This is used to add line numbers to all lines
cat -s	This is used to squeeze blank lines into one line
cat -E	Show \$ at the end of line

\$ cat [options] file1 [file2..]

\$ cat > file1.txt  
The '>' flag can be used to create a new file and enter text contents from the terminal

\$ cat >> file1.txt  
The '>>' flag can be used to append text contents to an existing file from the terminal

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```
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat File2.txt
total 80
-rw-rw-r-- 1 kashika kashika 20200 Jan 13 17:32 Calculator.java
-rw-rw-r-- 1 kashika kashika 12686 Jan 13 17:38 Calculator.class
-rw-r--r-- 1 root root 12288 Feb 2 10:31 .File1.txt.swp
drwxrwxr-x 4 kashika kashika 4096 Feb 2 10:38 .
drwxr-xr-x 21 kashika kashika 4096 Feb 2 09:56 ..
drwxrwxr-x 6 kashika kashika 4096 Jan 13 17:39 COS_SandBox
drwxrwxr-x 2 kashika kashika 4096 Jan 10 00:18 hello-world-java-master
-rw-r--r-- 1 root root 2427 Feb 2 10:31 File1.txt
-rw-rw-r-- 1 kashika kashika 427 Jan 13 17:38 HelloWorld.class
-rw-rw-r-- 1 kashika kashika 128 Jan 13 17:32 HelloWorld.java
-rw-rw-r-- 1 kashika kashika 104 Jan 13 17:38 makefile
-rw-r--r-- 1 root root 0 Feb 2 10:38 File2.txt
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat > File3.txt
Hi, my name is kashika khatri
Welcome to Elktrorbit
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat File3.txt
Hi, my name is kashika khatri
Welcome to Elktrorbit
```

```
root@kashika-VirtualBox-Master: /home/kashika/JavaDemo# cat File2.txt >> File3.txt
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat File2.txt
total 80
-rw-rw-r-- 1 kashika kashika 20200 Jan 13 17:32 Calculator.java
-rw-rw-r-- 1 kashika kashika 12686 Jan 13 17:38 Calculator.class
-rw-r--r-- 1 root root 12288 Feb 2 10:31 .File1.txt.swp
drwxrwxr-x 4 kashika kashika 4096 Feb 2 10:38 .
drwxr-xr-x 21 kashika kashika 4096 Feb 2 09:56 ..
drwxrwxr-x 6 kashika kashika 4096 Jan 13 17:39 COS_SandBox
drwxrwxr-x 2 kashika kashika 4096 Jan 10 00:18 hello-world-java-master
-rw-r--r-- 1 root root 2427 Feb 2 10:31 File1.txt
-rw-rw-r-- 1 kashika kashika 427 Jan 13 17:38 HelloWorld.class
-rw-rw-r-- 1 kashika kashika 128 Jan 13 17:32 HelloWorld.java
-rw-rw-r-- 1 kashika kashika 104 Jan 13 17:38 makefile
-rw-r--r-- 1 root root 0 Feb 2 10:38 File2.txt
```

```
root@kashika-VirtualBox-Master: /home/kashika/JavaDemo# cat File3.txt
Hi, my name is kashika khatri
Welcome to Elktrorbit
total 80
-rw-rw-r-- 1 kashika kashika 20200 Jan 13 17:32 Calculator.java
-rw-rw-r-- 1 kashika kashika 12686 Jan 13 17:38 Calculator.class
-rw-r--r-- 1 root root 12288 Feb 2 10:31 .File1.txt.swp
drwxrwxr-x 4 kashika kashika 4096 Feb 2 10:38 .
drwxr-xr-x 21 kashika kashika 4096 Feb 2 09:56 ..
drwxrwxr-x 6 kashika kashika 4096 Jan 13 17:39 COS_SandBox
drwxrwxr-x 2 kashika kashika 4096 Jan 10 00:18 hello-world-java-master
-rw-r--r-- 1 root root 2427 Feb 2 10:31 File1.txt
-rw-rw-r-- 1 kashika kashika 427 Jan 13 17:38 HelloWorld.class
-rw-rw-r-- 1 kashika kashika 128 Jan 13 17:32 HelloWorld.java
-rw-rw-r-- 1 kashika kashika 104 Jan 13 17:38 makefile
-rw-r--r-- 1 root root 0 Feb 2 10:38 File2.txt
```

```
root@kashika-VirtualBox-Master: /home/kashika/JavaDemo# cat >> File3.txt
qwerty
tyui

yui
asdfg
```

```
Activities Terminal ▾ root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat -b File3.txt
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# Feb 2 14:32
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat -b File3.txt
1 Hi, my name is kashika khatr
2 Welcome to Elktrorbt
3 total 80
4 -rw-rw-r-- 1 kashika kashika 20200 Jan 13 17:32 Calculatorrr.java
5 -rw-rw-r-- 1 kashika kashika 12686 Jan 13 17:38 Calculatorrr.class
6 -rw-rw-r-- 1 root root 12288 Feb 2 10:31 File1.txt.swp
7 drwxrwxr-x 4 kashika kashika 4096 Feb 2 10:38 .
8 drwxr-xr-x 21 kashika kashika 4096 Feb 2 09:56 ..
9 drwxrwxr-x 6 kashika kashika 4096 Jan 13 17:39 COS_SandBox
10 drwxrwxr-x 2 kashika kashika 4096 Jan 10 00:18 hello-world-java-master
11 -rw-rw-r-- 1 root root 2427 Feb 2 10:31 File1.txt
12 -rw-rw-r-- 1 kashika kashika 427 Jan 13 17:38 HelloWorld.class
13 -rw-rw-r-- 1 kashika kashika 128 Jan 13 17:32 HelloWorld.java
14 -rw-rw-r-- 1 kashika kashika 104 Jan 13 17:38 makefile
15 -rw-r--r-- 1 root root 0 Feb 2 10:38 File2.txt

16 qwerty
17 tyui

18 yui
19 asdfg

20 sdfD
```

```
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat -n File3.txt
1 Hi, my name is kashika khatr
2 Welcome to Elktrorbt
3 total 80
4 -rw-rw-r-- 1 kashika kashika 20200 Jan 13 17:32 Calculatorrr.java
5 -rw-rw-r-- 1 kashika kashika 12686 Jan 13 17:38 Calculatorrr.class
6 -rw-rw-r-- 1 root root 12288 Feb 2 10:31 File1.txt.swp
7 drwxrwxr-x 4 kashika kashika 4096 Feb 2 10:38 .
8 drwxr-xr-x 21 kashika kashika 4096 Feb 2 09:56 ..
9 drwxrwxr-x 6 kashika kashika 4096 Jan 13 17:39 COS_SandBox
10 drwxrwxr-x 2 kashika kashika 4096 Jan 10 00:18 hello-world-java-master
11 -rw-rw-r-- 1 root root 2427 Feb 2 10:31 File1.txt
12 -rw-rw-r-- 1 kashika kashika 427 Jan 13 17:38 HelloWorld.class
13 -rw-rw-r-- 1 kashika kashika 128 Jan 13 17:32 HelloWorld.java
14 -rw-rw-r-- 1 kashika kashika 104 Jan 13 17:38 makefile
15 -rw-r--r-- 1 root root 0 Feb 2 10:38 File2.txt
16
17 qwerty
18 tyui
19
20
21 yui
22 asdfg
23
24
25
26
27
28 sdfD
29
```

- Working with ‘grep’ Command

We use the 'grep' command to search for a particular string/ word in a text file.

This is similar to “Ctrl+F”, but executed via a CLI.

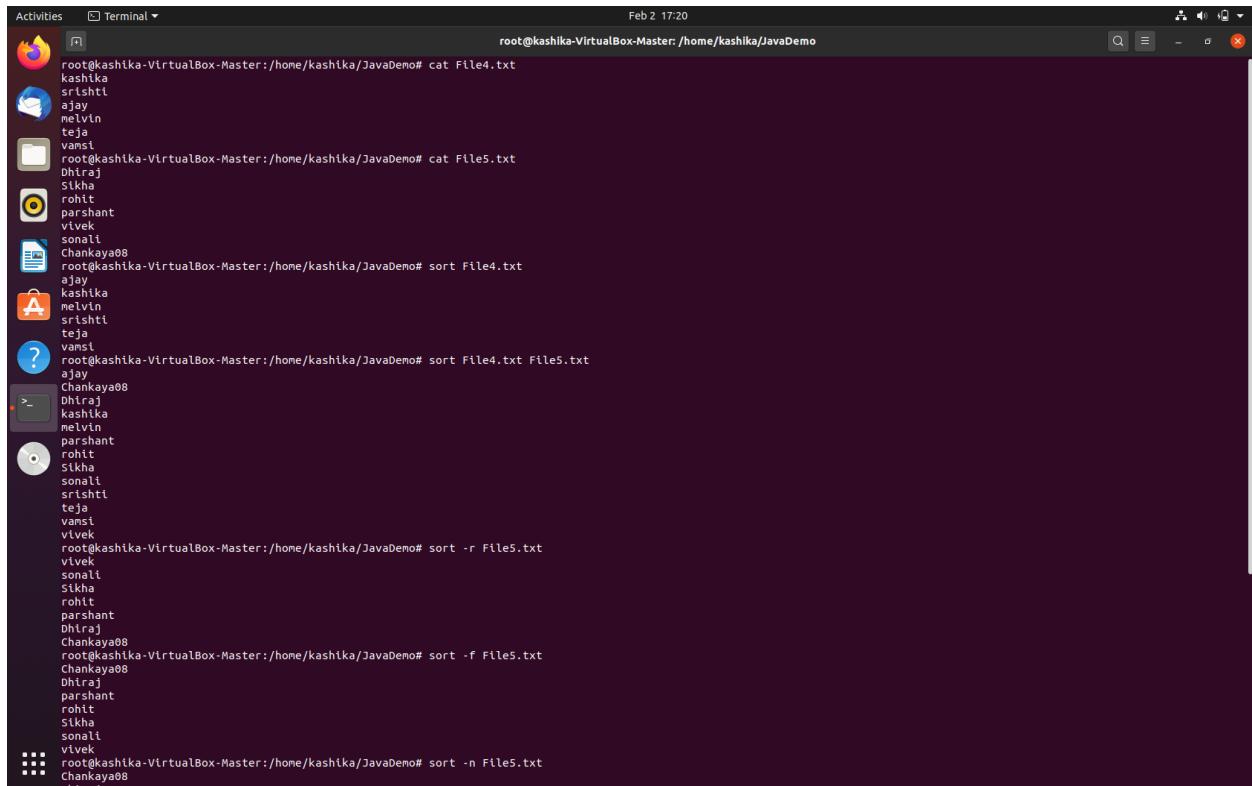
```
$ grep options file1.txt // Returns results for matching string "options"  
$ grep -i options file1.txt // Returns the results for case insensitive strings  
$ grep -n options file1.txt // Returns the matching strings along with their line number  
$ grep -v options file1.txt // Returns the result of lines not matching the search string  
$ grep -c options file1.txt // Returns the number of lines in which the results matched search string
```

```
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat > File4.txt
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat > File4.txt
kashika
senthil
ajay
melvin
teja
vamsi
^C
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# grep a  File4.txt
kashika
ajay
teja
vamsi
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# grep >> File4.txt
Usage: grep [OPTION]... PATTERN [FILE]...
Try 'grep --help' for more information.
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat >> File4.txt
CHANAKYA^C
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# grep -i a File4.txt
kashika
ajay
teja
vamsi
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# grep -n a File4.txt
1:kashika
3:ajay
5:teja
6:vamsi
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# grep -v a File4.txt
srishti
melvin
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# grep -c a File4.txt
4
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# 
```

## ● Working with ‘sort’ command

We use the ‘sort’ command to sort the results of a search either alphabetically or numerically.  
Files, file contents and directories can be sorted.

```
$ sort file1.txt // Sorts the contents of file1.txt and returns them in alphabetical order  
$ sort File1.txt File2.txt // Sorts the contents of both File1.txt & File2.txt  
$ sort -r file1.txt // 'r' flag returns the results in reverse order;  
$ sort -f file1.txt // 'f' flag does case insensitive sorting  
$ sort -n file1.txt // 'n' flag returns the results as per numerical order
```



The screenshot shows a terminal window titled 'Terminal' with the following session:

```
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat File4.txt
kashika
srishtha
ajay
melvln
teja
vansl
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cat File5.txt
Dhiraj
Sikha
rohit
parshant
vivek
sonali
Chankaya08
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort File4.txt
ajay
kashika
melvin
srishtha
teja
vansl
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort File4.txt File5.txt
ajay
Chankaya08
Dhiraj
kashika
melvin
parshant
rohit
Sikha
sonali
srishtha
teja
vansl
vivek
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort -r File5.txt
vivek
sonali
Sikha
rohit
parshant
Dhiraj
Chankaya08
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort -f File5.txt
Chankaya08
Dhiraj
parshant
rohit
Sikha
sonali
vivek
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort -n File5.txt
Chankaya08
Dhiraj
```

A screenshot of a Linux desktop environment. In the top left corner, there's a dock with icons for Activities, Terminal, and other applications. The main area shows a terminal window titled 'Terminal'. The terminal window has a dark background and contains the following text:

```
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort File4.txt File5.txt
ajay
Chankaya08
Dhiraj
kashika
melvin
parsant
rohit
Sikha
sonali
srishthi
teja
vanst
vivek
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort -r File5.txt
vivek
sonali
Sikha
rohit
parsant
Dhiraj
Chankaya08
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort -f File5.txt
Chankaya08
Dhiraj
parsant
rohit
Sikha
sonali
vivek
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort -n File5.txt
Chankaya08
Dhiraj
parsant
rohit
Sikha
sonali
vivek
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort
asdf
asdf
tgh
luhg
erfgh^C
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# sort
```

At the bottom of the terminal window, there is some status information:

```
^[[A^[[A^[[A^[[A
^Z
[3]+ Stopped sort
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo#
```

-type sort and give some words and press ctrl d it will sorted the word list

A screenshot of a terminal window. The title bar says 'kashika@kashika-VirtualBox-Master: ~'. The terminal window contains the following text:

```
kashika@kashika-VirtualBox-Master:~$ sort
abc
efg
acd
jkl
wer
cvb
yui
hgf
abc
acd
cvb
efg
hgf
jkl
wer
yui
kashika@kashika-VirtualBox-Master:~$
```

## ● Working with ‘|’ Command

### Working With ‘|’ Command

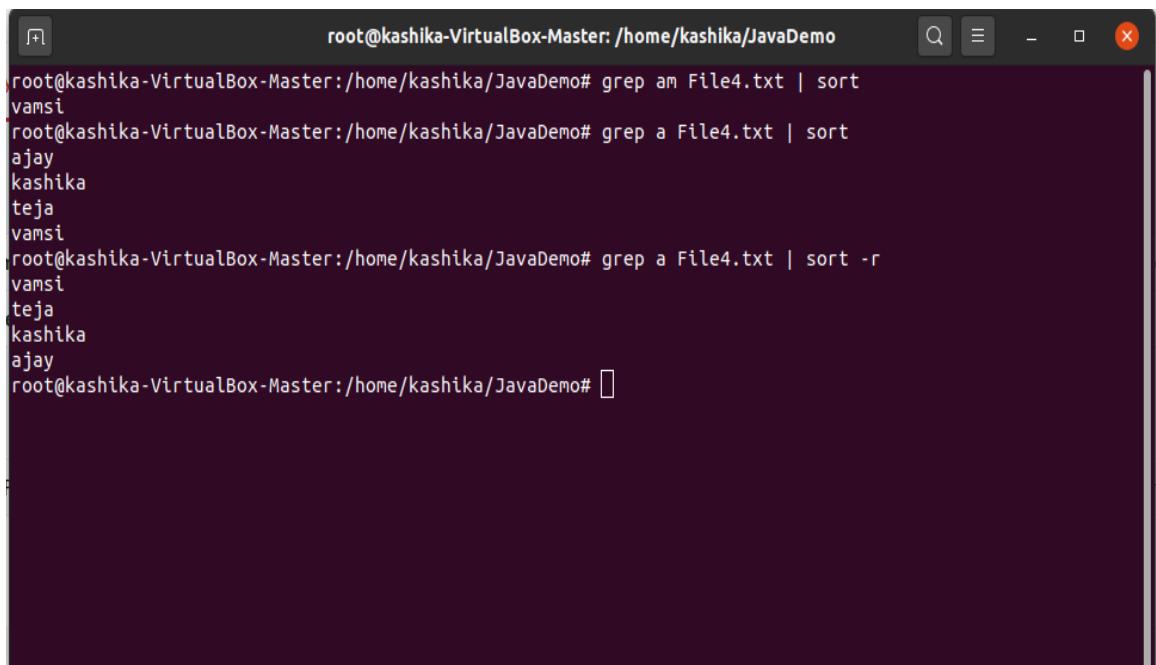
edureka!

The ‘|’ command a.k.a ‘pipe’ command is used to output the result of one command as input to another command.

‘|’ are used to perform two operations in the same command

```
$ grep dh File1.txt File2.txt | sort // Searches for string 'dh' from both files and sorts the results
```

```
$ grep dh File1.txt File2.txt | sort -r // Sorts the results in reverse order
```



A screenshot of a terminal window titled "root@kashika-VirtualBox-Master: /home/kashika/JavaDemo". The terminal displays the following commands and their outputs:

```
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# grep am File4.txt | sort
vamsi
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# grep a File4.txt | sort
ajay
kashika
teja
vamsi
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# grep a File4.txt | sort -r
vamsi
teja
kashika
ajay
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo#
```

- Working with File and directories ‘cp’ command

## Working With Files & Directories: ‘cp’ Command

\$ cp [options] source destination

<b>cp</b>	This command is used to copy files and directories
cp -i	Enters interactive mode; CLI asks before overwriting files
cp -n	Does not overwrite the file
cp -u	Updates the destination file only when source file is different from destination file
cp -R	Recursive copy; Copies even hidden files
cp -v	Verbose; Prints informative messages

```
S Terminal ▾ Feb 3 12:18
root@kashika-VirtualBox-Master:/home/kashika/Desktop
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cd JavaDemo/
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# ls
Calculator.class COS_SandBox File2.txt File4.txt HelloWorld.class hello-world-java-master
Calculator.java File1.txt File3.txt File5.txt HelloWorld.java makefile
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cp File3.txt /home/kashika/Documents/
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Documents/
root@kashika-VirtualBox-Master:/home/kashika/Documents# ls
Calculator-main File3.txt
root@kashika-VirtualBox-Master:/home/kashika/Documents# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cp -R Test /home/kashika/Documents/
root@kashika-VirtualBox-Master:/home/kashika# cd Documents/
root@kashika-VirtualBox-Master:/home/kashika/Documents# ls
Calculator-main File3.txt Test
root@kashika-VirtualBox-Master:/home/kashika/Documents# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cp -Rv Test /home/kashika/Documents/
'Test' -> '/home/kashika/Documents/Test'
root@kashika-VirtualBox-Master:/home/kashika# cd Documents/
root@kashika-VirtualBox-Master:/home/kashika/Documents# ls
Calculator-main File3.txt Test
root@kashika-VirtualBox-Master:/home/kashika/Documents# cp File3.txt /home/kashika/Desktop/
root@kashika-VirtualBox-Master:/home/kashika/Documents# cp -i File3.txt /home/kashika/Desktop/
cp: overwrite '/home/kashika/Desktop/File3.txt'? y
root@kashika-VirtualBox-Master:/home/kashika/Documents# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Desktop/
root@kashika-VirtualBox-Master:/home/kashika/Desktop# ls
File3.txt
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Documents/
root@kashika-VirtualBox-Master:/home/kashika/Documents# cp -n File3.txt /home/kashika/Desktop/
root@kashika-VirtualBox-Master:/home/kashika/Documents# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Desktop/
root@kashika-VirtualBox-Master:/home/kashika/Desktop# ls
File3.txt
```

```
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Documents/
root@kashika-VirtualBox-Master:/home/kashika/Documents# cat File3.txt
Hi, my name is kashika khatri
Welcome to Elktrobit
total 80
-rw-rw-r-- 1 kashika kashika 20200 Jan 13 17:32 Calculatorr.java
-rw-rw-r-- 1 kashika kashika 12686 Jan 13 17:38 Calculatorr.class
-rw-r--r-- 1 root root 12288 Feb 2 10:31 .File1.txt.swp
drwxrwxr-x 4 kashika kashika 4096 Feb 2 10:38 .
drwxr-xr-x 21 kashika kashika 4096 Feb 2 09:56 ..
drwxrwxr-x 6 kashika kashika 4096 Jan 10 00:18 hello-world-Java-master
drwxrwxr-x 2 kashika kashika 4096 Jan 13 17:38 HelloWorld.class
-rw-rw-r-- 1 kashika kashika 128 Jan 13 17:32 HelloWorld.java
-rw-rw-r-- 1 kashika kashika 104 Jan 13 17:38 makefile
-rw-r--r-- 1 root root 0 Feb 2 10:38 File2.txt

qwerty
tyut

yui
asdfg

sdfD

Xcat
```

```
root@kashika-VirtualBox-Master:/home/kashika/Documents# cat >> File3.txt
cat dog
ltt
root@kashika-VirtualBox-Master:/home/kashika/Documents# cat File3.txt
Hi, my name is kashika khatri
Welcome to Elktrobit
total 80
-rw-rw-r-- 1 kashika kashika 20200 Jan 13 17:32 Calculatorr.java
-rw-rw-r-- 1 kashika kashika 12686 Jan 13 17:38 Calculatorr.class
-rw-r--r-- 1 root root 12288 Feb 2 10:31 .File1.txt.swp
drwxrwxr-x 4 kashika kashika 4096 Feb 2 10:38 .
drwxr-xr-x 21 kashika kashika 4096 Feb 2 09:56 ..
drwxrwxr-x 6 kashika kashika 4096 Jan 13 17:39 COS_SandBox
drwxrwxr-x 2 kashika kashika 4096 Jan 10 00:18 hello-world-Java-master
-rw-r--r-- 1 root root 2427 Feb 2 10:31 File1.txt
-rw-rw-r-- 1 kashika kashika 427 Jan 13 17:38 HelloWorld.class
-rw-rw-r-- 1 kashika kashika 128 Jan 13 17:32 HelloWorld.java
-rw-rw-r-- 1 kashika kashika 104 Jan 13 17:38 makefile
-rw-r--r-- 1 root root 0 Feb 2 10:38 File2.txt

qwerty
tyut

yui
asdfg

sdfD

Xcat
cat dog
lion
```

```
root@kashika-VirtualBox-Master:/home/kashika/Documents# cp -n File3.txt /home/kashika/Desktop/
root@kashika-VirtualBox-Master:/home/kashika/Documents# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Desktop/
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cat File3.txt
Hi, my name is kashika khatri
Welcome to Elktrobit
total 80
-rw-rw-r-- 1 kashika kashika 20200 Jan 13 17:32 Calculatorr.java
-rw-rw-r-- 1 kashika kashika 12686 Jan 13 17:38 Calculatorr.class
-rw-r--r-- 1 root root 12288 Feb 2 10:31 .File1.txt.swp
drwxrwxr-x 4 kashika kashika 4096 Feb 2 10:38 .
drwxr-xr-x 21 kashika kashika 4096 Feb 2 09:56 ..
drwxrwxr-x 6 kashika kashika 4096 Jan 13 17:39 COS_SandBox
drwxrwxr-x 2 kashika kashika 4096 Jan 10 00:18 hello-world-Java-master
-rw-r--r-- 1 root root 2427 Feb 2 10:31 File1.txt
-rw-rw-r-- 1 kashika kashika 427 Jan 13 17:38 HelloWorld.class
-rw-rw-r-- 1 kashika kashika 128 Jan 13 17:32 HelloWorld.java
-rw-rw-r-- 1 kashika kashika 104 Jan 13 17:38 makefile
-rw-r--r-- 1 root root 0 Feb 2 10:38 File2.txt

qwerty
tyut

yui
asdfg

sdfD

Xcat
```

```

Terminal ▾ Feb 3 12:19
root@kashika-VirtualBox-Master: /home/kashika/Desktop ▾

sdfD

Xcat
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Documents
root@kashika-VirtualBox-Master:/home/kashika/Documents# cp File3.txt /home/kashika/Desktop/
root@kashika-VirtualBox-Master:/home/kashika/Documents# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Desktop/
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cat File3.txt
Hi, my name is kashika khatri
Welcome to Elktrorbit
total 88
-rw-rw-r-- 1 kashika kashika 20200 Jan 13 17:32 Calculator.java
-rw-rw-r-- 1 kashika kashika 12686 Jan 13 17:38 Calculator.class
-rw-rw-r-- 1 root root 12288 Feb 2 10:31 File1.txt.swp
drwxrwxr-x 4 kashika kashika 4096 Feb 2 10:38 .
drwxr-xr-x 21 kashika kashika 4096 Feb 2 09:56 ..
drwxrwxr-x 6 kashika kashika 4096 Jan 13 17:39 COS_Sandbox
drwxrwxr-x 2 kashika kashika 4096 Jan 10 00:18 hello-world-java-master
-rw-r--r-- 1 root root 2427 Feb 2 10:31 File1.txt
-rw-r--r-- 1 kashika kashika 427 Jan 13 17:38 HelloWorld.class
-rw-rw-r-- 1 kashika kashika 128 Jan 13 17:32 HelloWorld.java
-rw-rw-r-- 1 kashika kashika 104 Jan 13 17:38 makefile
-rw-r--r-- 1 root root 0 Feb 2 10:38 File2.txt

qwerty
tyul

yui
asdfg

sdfD

Xcat
cat dog
lion
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cp /home/kashika/Documents/File4.txt .
cp: cannot stat '/home/kashika/Documents/File4.txt': No such file or directory
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cp /home/kashika/JavaDemo/File4.txt .
root@kashika-VirtualBox-Master:/home/kashika/Desktop# ls
File3.txt File4.txt
root@kashika-VirtualBox-Master:/home/kashika/Desktop# 

```

## • Working with Files and Directories ‘mv’ Command

### Working With Files & Directories: ‘mv’ Command

`$ mv [options] source destination`

<b>mv</b>	This command is used to move files and directories
<code>mv -i</code>	Enters interactive mode; CLI asks before overwriting files
<code>mv -u</code>	Updates the destination file only when source file is different from destination file
<code>mv -v</code>	Verbose; Prints source and destination files

```
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cd ..
root@kashika-VirtualBox-Master:/home/kashika# ls
calico.yaml  Desktop  Documents  Downloads  get-docker.sh  JavaDemo  Jenkins  kubectl  kubectl.sha256  kubernetes-dump.log  Music  Pictures  Public  Templates  Test  Videos
root@kashika-VirtualBox-Master:/home/kashika# mv Test /home/kashika/Desktop/
root@kashika-VirtualBox-Master:/home/kashika# cd Desktop/
root@kashika-VirtualBox-Master:/home/kashika/Desktop# ls
File3.txt  File4.txt  Test
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd JavaDemo/
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# ls
Calculator.class  Calculator.java  CDS_Sandbox  File1.txt  File2.txt  File3.txt  File4.txt  File5.txt  HelloWorld.class  HelloWorld.java  hello-world-java-master  makefile
root@kashika-VirtualBox-Master:/home/kashika/Desktop# mv File4.txt File5.txt /home/kashika/Desktop/Test
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Desktop/Test/
root@kashika-VirtualBox-Master:/home/kashika/Desktop/Test# ls
File4.txt  File5.txt
root@kashika-VirtualBox-Master:/home/kashika/Desktop/Test# cd ..
root@kashika-VirtualBox-Master:/home/kashika/Desktop# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd JavaDemo/
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# mv -i File4.txt File5.txt /home/kashika/Desktop/Test
mv: cannot stat 'File4.txt': No such file or directory
mv: cannot stat 'File5.txt': No such file or directory
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# mv -i File4.txt File5.txt /home/kashika/Desktop/Test
mv: overwrite '/home/kashika/Desktop/Test/File4.txt'? y
mv: overwrite '/home/kashika/Desktop/Test/File5.txt'? y
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# mv -u File4.txt File5.txt /home/kashika/Desktop/Test
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# mv -v File4.txt File5.txt /home/kashika/Desktop/Test
renamed 'File4.txt' -> '/home/kashika/Desktop/Test/file4.txt'
renamed 'File5.txt' -> '/home/kashika/Desktop/Test/files.txt'
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# 
```

```
root@kashika-VirtualBox-Master:/home/kashika/Documents/Test#
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cp *.txt /home/kashika/Documents/
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Documents/
root@kashika-VirtualBox-Master:/home/kashika/Documents# ls
Calculator-main  File1.txt  File2.txt  File3.txt  Test
root@kashika-VirtualBox-Master:/home/kashika/Documents# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd JavaDemo/
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# mv *.txt /home/kashika/Documents/Test/
root@kashika-VirtualBox-Master:/home/kashika/JavaDemo# cd ..
root@kashika-VirtualBox-Master:/home/kashika# cd Documents/Test/
root@kashika-VirtualBox-Master:/home/kashika/Documents/Test# ls
File1.txt  File2.txt  File3.txt
root@kashika-VirtualBox-Master:/home/kashika/Documents/Test# 
```

```
[edureka@localhost ~]$ ls
customer.pig  Desktop  Downloads  metastore_db  Newcsv.java-  Pictures  Templates  workspace
derby.log    Documents  File1.txt  Music      NYSE_daily_prices_0.csv-  Public    Videos
[edureka@localhost ~]$ cd Music/
[edureka@localhost Music]$ ls
[edureka@localhost Music]$ mv /home/edureka/Pictures/*.txt .
[edureka@localhost Music]$ 
```

- Working with directories : 'mkdir' command

## Working With Directories: 'mkdir' Command

edureka!

\$ mkdir *directory-path*

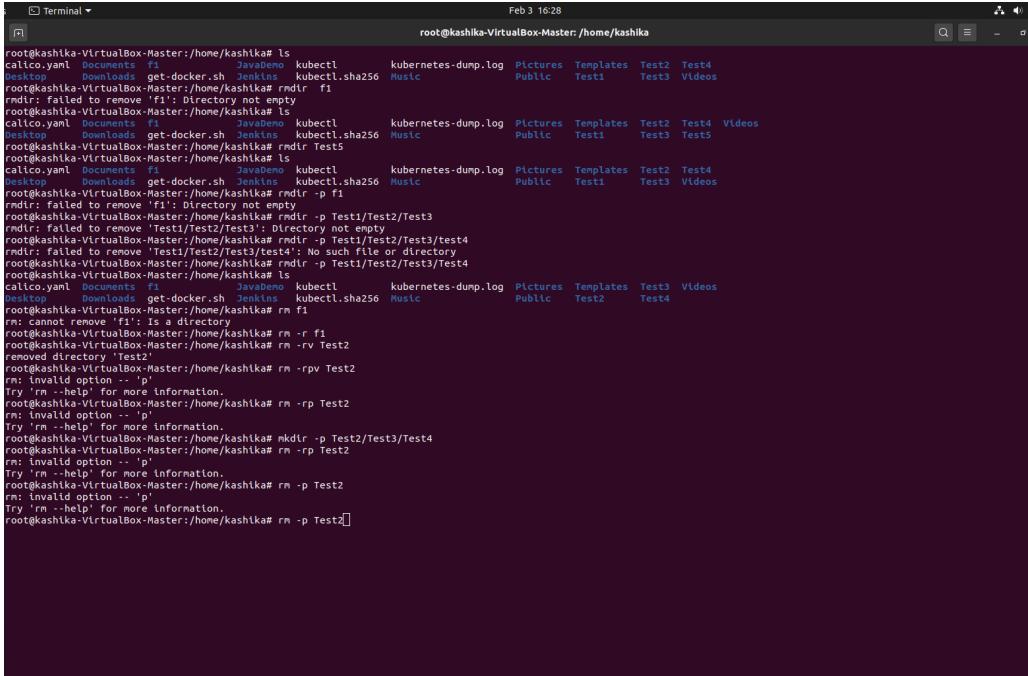
mkdir	This command is used to create a new directory
mkdir -p	Creates both a new parent directory and a sub-directory
mkdir --parents	This is also used for the same process
mkdir -p file1/{f2,f3,f4}	This is used to create multiple subdirectories inside the new parent directory

```
es [2] Terminal ▾ Feb 3 16:01
root@kashika-VirtualBox-Master:/home/kashika/Documents/Test# cd ..
root@kashika-VirtualBox-Master:/home/kashika/Documents# cd ..
root@kashika-VirtualBox-Master:/home/kashika# mkdir Test1
root@kashika-VirtualBox-Master:/home/kashika# ls
calico.yaml  Documents  get-docker.sh  Jenkins  kubectl  sha256      Music  Public  Test1
Desktop        Downloads  JavaDemo     kubectl   kubernetes-dump.log  Pictures  Templates  Videos
root@kashika-VirtualBox-Master:/home/kashika# cd Test1
root@kashika-VirtualBox-Master:/home/kashika/Test1# mkdir -p Test2/Test3/Test4
root@kashika-VirtualBox-Master:/home/kashika/Test1# ls
Test2
root@kashika-VirtualBox-Master:/home/kashika/Test1# cd Test2
root@kashika-VirtualBox-Master:/home/kashika/Test1/Test2# ls
Test3
root@kashika-VirtualBox-Master:/home/kashika/Test1/Test2# cd Test3
root@kashika-VirtualBox-Master:/home/kashika/Test1/Test2/Test3# ls
Test4
root@kashika-VirtualBox-Master:/home/kashika/Test1/Test2# cd ..
root@kashika-VirtualBox-Master:/home/kashika/Test1# cd ..
root@kashika-VirtualBox-Master:/home/kashika# rm -r Test1
root@kashika-VirtualBox-Master:/home/kashika# rm Test1
rm: cannot remove 'Test1': Is a directory
root@kashika-VirtualBox-Master:/home/kashika# rm -r Test1
root@kashika-VirtualBox-Master:/home/kashika# ls
calico.yaml  Downloads  Jenkins  kubernetes-dump.log  Public  Test2  Videos
Desktop        JavaDemo     kubectl  sha256      Pictures  Templates  Test3
Documents      get-docker.sh  kubectl  kubernetes-dump.log  Pictures  Templates  Test4
root@kashika-VirtualBox-Master:/home/kashika# mkdir {Test1}
root@kashika-VirtualBox-Master:/home/kashika# rm {Test1}
root@kashika-VirtualBox-Master:/home/kashika# rm -r {Test1}
root@kashika-VirtualBox-Master:/home/kashika# mkdir Test1
root@kashika-VirtualBox-Master:/home/kashika# ls
calico.yaml  Downloads  Jenkins  kubernetes-dump.log  Public  Test2  Videos
Desktop        JavaDemo     kubectl  sha256      Pictures  Templates  Test3
Documents      get-docker.sh  kubectl  Music      Pictures  Templates  Test4
root@kashika-VirtualBox-Master:/home/kashika# cd f1/
root@kashika-VirtualBox-Master:/home/kashika/f1# ls
Test1  Test2  Test3
root@kashika-VirtualBox-Master:/home/kashika/f1#
```

- Working with files and directories : ‘rm’ ‘rmdir’ Commands

**Working With Files & Directories: ‘rm’ & ‘rmdir’** 

\$ <b>rmdir</b> <i>foldername</i>	\$ <b>rm</b> <i>filename/ foldername</i>
<b>rmdir</b>	
This command is used to remove the specified directory (Empty)	
<b>rmdir -p</b>	Removes both the parent and child directory
<b>rmdir -pv</b>	Removes all the parent and sub directories along with the verbose.
<b>rm -r</b>	Removes even non empty directories.
<b>rm -rp</b>	Removes non empty directories including parent and subdirectories.

```

root@kashika-VirtualBox:~/home/kashika# ls
calico.yaml  Documents  Downloads  JavaDemo  kubectl  kubernetes-dump.log  Pictures  Templates  Test2  Test4
Desktop  Downloads  get-docker.sh  Jenkins  kubectl.sha256  Music  Public  Test1  Test3  Videos
root@kashika-VirtualBox:~/home/kashika# rmdir f1
rmdir: failed to remove 'f1': Directory not empty
root@kashika-VirtualBox:~/home/kashika# ls
calico.yaml  Documents  Downloads  JavaDemo  kubectl  kubernetes-dump.log  Pictures  Templates  Test2  Test4
Desktop  Downloads  get-docker.sh  Jenkins  kubectl.sha256  Music  Public  Test1  Test3  Videos
root@kashika-VirtualBox:~/home/kashika# rmdir Test5
root@kashika-VirtualBox:~/home/kashika# ls
calico.yaml  Documents  f1  Downloads  JavaDemo  kubectl  kubernetes-dump.log  Pictures  Templates  Test2  Test4
Desktop  Downloads  get-docker.sh  Jenkins  kubectl.sha256  Music  Public  Test1  Test3  Videos
root@kashika-VirtualBox:~/home/kashika# rm -rf f1
rm: failed to remove 'f1': Directory not empty
root@kashika-VirtualBox:~/home/kashika# rmdir -p Test1/Test2/Test3
rmdir: failed to remove 'Test1/Test2/Test3': Directory not empty
root@kashika-VirtualBox:~/home/kashika# rmdir -p Test1/Test2/Test3/test4
rmdir: failed to remove 'Test1/Test2/Test3/test4': No such file or directory
root@kashika-VirtualBox:~/home/kashika# rmdir -p Test1/Test2/Test3/Test4
root@kashika-VirtualBox:~/home/kashika# ls
calico.yaml  Documents  f1  Downloads  JavaDemo  kubectl  kubernetes-dump.log  Pictures  Templates  Test2  Test4
Desktop  Downloads  get-docker.sh  Jenkins  kubectl.sha256  Music  Public  Test1  Test3  Videos
root@kashika-VirtualBox:~/home/kashika# rm -rf Test2
rm: cannot remove 'f1': Is a directory
root@kashika-VirtualBox:~/home/kashika# rm -rf Test2
root@kashika-VirtualBox:~/home/kashika# rm -rf Test2
removed directory 'Test2'
root@kashika-VirtualBox:~/home/kashika# rm -rp Test2
rm: invalid option -- 'p'
Try 'rm -help' for more information.
root@kashika-VirtualBox:~/home/kashika# rm -rp Test2
rm: invalid option -- 'p'
Try 'rm -help' for more information.
root@kashika-VirtualBox:~/home/kashika# rm -p Test2
rm: invalid option -- 'p'
Try 'rm -help' for more information.
root@kashika-VirtualBox:~/home/kashika# rm -p Test2
rm: invalid option -- 'p'
Try 'rm -help' for more information.
root@kashika-VirtualBox:~/home/kashika# rm -p Test2

```

- Working with user permission:’r’ ‘w’ ‘x’ Commands

## Working With User Permissions: 'r', 'w' & 'x'



### FILE TYPES

Normal File – '-'	Read – 'r'	Users – 'u'
Directory – 'd'	Write – 'w'	Groups – 'g'
Character Special File – 'c'	Execute – 'x'	Others – 'o'
Binary Special File – 'b'		All – 'a'

### FILE PERMISSIONS

-rw-r--r--	1 root root	19739 Jan 28 15:33	calico.yaml
drwxr-xr-x	3 kashika kashika	4096 Feb 3 12:48	Desktop
drwxr-xr-x	4 kashika kashika	4096 Feb 3 15:03	Documents
drwxr-xr-x	3 kashika kashika	4096 Jan 10 19:25	Downloads
-rw-rw-r--	1 kashika kashika	13857 Jan 12 15:10	get-docker.sh
drwxrwxr-x	4 kashika kashika	4096 Feb 3 15:05	JavaDemo
drwxrwxr-x	4 kashika kashika	4096 Jan 18 16:48	Jenkins
-rw-rw-r--	1 kashika kashika	40230912 Jan 27 10:35	kubectl
-rw-rw-r--	1 kashika kashika	64 Jan 27 10:37	kubectl.sha256
-rw-r--r--	1 root root	437359 Jan 28 10:37	kubernetes-dump.log
drwxr-xr-x	2 kashika kashika	4096 Jan 8 15:30	Music
drwxr-xr-x	2 kashika kashika	4096 Feb 3 16:28	Pictures
drwxr-xr-x	2 kashika kashika	4096 Jan 8 15:30	Public
drwxr-xr-x	2 kashika kashika	4096 Jan 8 15:30	Templates
drwxr-xr-x	3 root root	4096 Feb 3 16:27	Test2
drwxr-xr-x	2 root root	4096 Feb 3 15:52	Test3
drwxr-xr-x	2 kashika kashika	4096 Feb 3 15:52	Test4
drwxr-xr-x	2 kashika kashika	4096 Jan 8 15:30	Videos

### DENOTATIONS

```
root@kashika-VirtualBox-Master:/home/kashika# ls -l
total 39808
-rw-r--r-- 1 root root 19739 Jan 28 15:33 calico.yaml
drwxr-xr-x 3 kashika kashika 4096 Feb 3 12:48 Desktop
drwxr-xr-x 4 kashika kashika 4096 Feb 3 15:03 Documents
drwxr-xr-x 3 kashika kashika 4096 Jan 10 19:25 Downloads
-rw-rw-r-- 1 kashika kashika 13857 Jan 12 15:10 get-docker.sh
drwxrwxr-x 4 kashika kashika 4096 Feb 3 15:05 JavaDemo
drwxrwxr-x 4 kashika kashika 4096 Jan 18 16:48 Jenkins
-rw-rw-r-- 1 kashika kashika 40230912 Jan 27 10:35 kubectl
-rw-rw-r-- 1 kashika kashika 64 Jan 27 10:37 kubectl.sha256
-rw-r--r-- 1 root root 437359 Jan 28 10:37 kubernetes-dump.log
drwxr-xr-x 2 kashika kashika 4096 Jan 8 15:30 Music
drwxr-xr-x 2 kashika kashika 4096 Feb 3 16:28 Pictures
drwxr-xr-x 2 kashika kashika 4096 Jan 8 15:30 Public
drwxr-xr-x 2 kashika kashika 4096 Jan 8 15:30 Templates
drwxr-xr-x 3 root root 4096 Feb 3 16:27 Test2
drwxr-xr-x 2 root root 4096 Feb 3 15:52 Test3
drwxr-xr-x 2 kashika kashika 4096 Feb 3 15:52 Test4
drwxr-xr-x 2 kashika kashika 4096 Jan 8 15:30 Videos
root@kashika-VirtualBox-Master:/home/kashika# 
```