

# Large Scale Data Processing

## CSE3025

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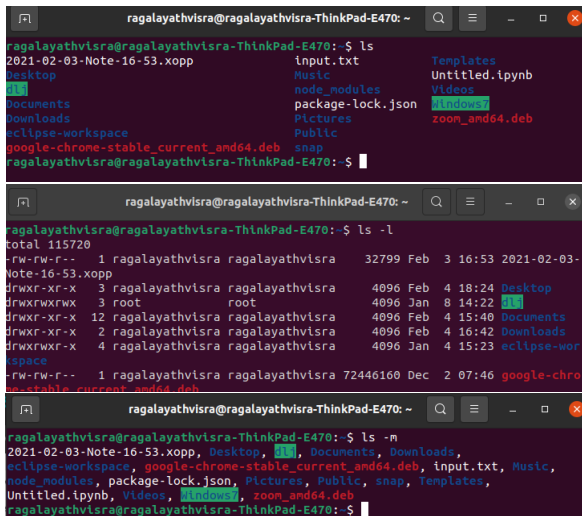
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**Vellore Institute of Technology**  
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# 1 Basic Linux Commands

# Basic Linux Commands:

## • ls

- ▶ List the files and subdirectories of the directory or folder from where it runs
- ▶ **Syntax:** ls
- ▶ Example: ls -l, ls -a, ls -lr, ls -lt, ls -ir, ls -lh, ls -s, etc.



```

ragalayathvisra@ragalayathvisra-ThinkPad-E470: ~
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~$ ls
2021-02-03-Note-16-53.xopp      input.txt      Templates
Desktop                        Music          Untitled.ipynb
ls                             node_modules   Videos
Documents                     package-lock.json windows7
Downloads                     Pictures       zoom_amd64.deb
eclipse-workspace            Public
google-chrome-stable_current_amd64.deb  snap
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~$

ragalayathvisra@ragalayathvisra-ThinkPad-E470:~$ ls -l
total 115720
-rw-rw-r-- 1 ragalayathvisra ragalayathvisra 32799 Feb  3 16:53 2021-02-03-
Note-16-53.xopp
drwxr-xr-x 3 ragalayathvisra ragalayathvisra 4096 Feb  4 18:24 Desktop
drwxrwxrwx 3 root root 4096 Jan  8 14:22 ls
drwxr-xr-x 12 ragalayathvisra ragalayathvisra 4096 Feb  4 15:40 Documents
drwxr-xr-x 2 ragalayathvisra ragalayathvisra 4096 Feb  4 16:42 Downloads
drwxrwxr-x 4 ragalayathvisra ragalayathvisra 4096 Jan  4 15:23 eclipse-wor
kspce
-rw-rw-r-- 1 ragalayathvisra ragalayathvisra 72446160 Dec  2 07:46 google-chro
se-stable_current_amd64.deb
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~$

ragalayathvisra@ragalayathvisra-ThinkPad-E470:~$ ls -lh
2021-02-03-Note-16-53.xopp, Desktop, ls, Documents, Downloads,
eclipse-workspace, google-chrome-stable_current_amd64.deb, input.txt, Music,
node_modules, package-lock.json, Pictures, Public, snap, Templates,
Untitled.ipynb, Videos, windows7, zoom_amd64.deb
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~$

```

## Basic Linux Commands:

### • mkdir: (Make Directory)

- ▶ This command allows the users to create or make new directories
- ▶ **Syntax:** mkdir [OPTION] [DIRECTORY]
- ▶ Example: mkdir zvs

```

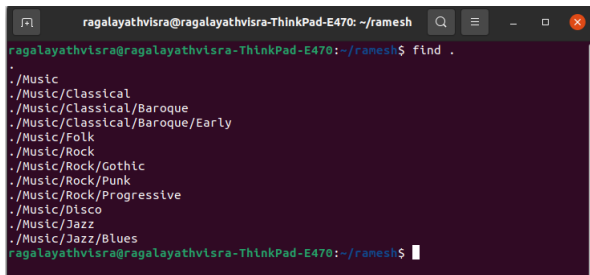
ragalayathvisra@ragalayathvisra-ThinkPad-E470: ~
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~$ ls
2021-02-03-Note-16-53.xopp      input.txt      Templates
Desktop                        Music          Untitled.ipynb
file                           node_modules   Videos
Documents                     package-lock.json  windows7
Downloads                     Pictures        zoom_amd64.deb
eclipse-workspace             Public
google-chrome-stable_current_amd64.deb  snap
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~$ mkdir zvs
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~$ ls
2021-02-03-Note-16-53.xopp      input.txt      Templates
Desktop                        Music          Untitled.ipynb
file                           node_modules   Videos
Documents                     package-lock.json  windows7
Downloads                     Pictures        zoom_amd64.deb
eclipse-workspace             Public         zvs
google-chrome-stable_current_amd64.deb  snap
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~$

```

- Creation of parent directories → A parent directory is a directory that is above another directory in the directory tree → use **-p** in place of option
- Example: mkdir -p /home/ragalayathvisra/Music/Melody
- Creation of multiple directories

## Basic Linux Commands:

- Creation of multiple directories
- Example: `mkdir dir1 dir2 dir3`
- Example: `mkdir -p Music/Jazz/Blues,Folk,Disco,Rock/Gothic,Punk,Progressive,Classical/Baroque/Early`  
→ check out `find .` command

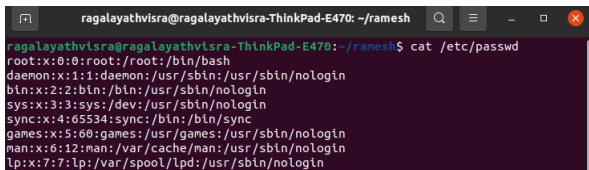


```
ragalayathvisra@ragalayathvisra-ThinkPad-E470: ~/ramesh
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~/ramesh$ find .
.
./Music
./Music/Classical
./Music/Classical/Baroque
./Music/Classical/Baroque/Early
./Music/Folk
./Music/Rock
./Music/Rock/Gothic
./Music/Rock/Punk
./Music/Rock/Progressive
./Music/Disco
./Music/Jazz
./Music/Jazz/Blues
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~/ramesh$
```

- Set Permissions when Creating a Directory:
- `-m` (`-mode`) option is used to create directory with permissions.
- Example: `mkdir -m 700 zvs`

## Basic Linux Commands:

- **cat: (concatenate)**
- This command allows the user to create single or multiple files, view content of file, concatenate files and redirect output in terminal or files
- Syntax: `cat [OPTION] [FILE]...`
- **Display content of the file using cat command**
- Example: `cat /etc/passwd`

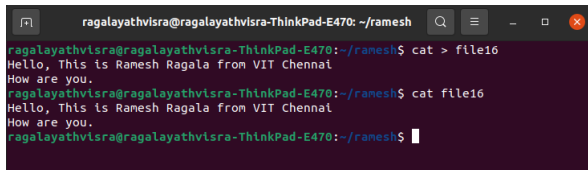
A terminal window with a dark purple background. The title bar shows the user 'ragalayathvisra' and the host 'ragalayathvisra-ThinkPad-E470'. The prompt is 'ragalayathvisra@ragalayathvisra-ThinkPad-E470: ~/ramesh'. The command 'cat /etc/passwd' has been executed, and the output is displayed as a list of system users: root, daemon, bin, sys, sync, games, man, and lp, each with their respective UID, GID, home directory, and shell.

```
ragalayathvisra@ragalayathvisra-ThinkPad-E470: ~/ramesh$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
```

- View the content of multiple files using cat command
- Example: `cat file-1 file-2`

## Basic Linux Commands:

- creation of file using cat command
- Example: `cat > file10` → CTRL+D for quit



```
ragalayathvisra@ragalayathvisra-ThinkPad-E470: ~/ramesh
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~/ramesh$ cat > file16
Hello, This is Ramesh Ragala from VIT Chennai
How are you.
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~/ramesh$ cat file16
Hello, This is Ramesh Ragala from VIT Chennai
How are you.
ragalayathvisra@ragalayathvisra-ThinkPad-E470:~/ramesh$
```