

Examples of basic commands:

```
[root@naggar-Inspiron:~]# date
[root@naggar-Inspiron:~]# cal
[root@naggar-Inspiron:~]# cal 2016
[root@naggar-Inspiron:~]# cal 3
[root@naggar-Inspiron:~]# cal 3 2016
[root@naggar-Inspiron:~]# whoami
[root@naggar-Inspiron:~]# cal 3; whoami
```

Shell basics:

```
[root@naggar-Inspiron:~]# clear                (or Ctrl+L)
[root@naggar-Inspiron:~]# pwd                  (print working dir)
```

Changing dir (Absolute Path & Relative Path):

```
[root@naggar-Inspiron:~]# cd /home/naggar/Downloads
```

```
[root@naggar-Inspiron:~]# cd ~                (go to the home directory of the user)
[root@naggar-Inspiron:~]# cd -                (go to the previous directory)
[root@naggar-Inspiron:~]# cd ..              (up one level)
[root@naggar-Inspiron:~]# cd ../..          (up two levels)
```

list files:

```
[root@naggar-Inspiron:~]# ls
[root@naggar-Inspiron:~]# ls -l
[root@naggar-Inspiron:~]# ls -a              (all files and directories including
hidden ones)
[root@naggar-Inspiron:~]# ls --all
[root@naggar-Inspiron:~]# ls -l -a
[root@naggar-Inspiron:~]# ls -la
[root@naggar-Inspiron:~]# ls -la /home
[root@naggar-Inspiron:~]# ls -R              (Recursive)
```

Getting help

1- using --help command:

```
[root@naggar-Inspiron:~]# ls --help
```

2- man pages:

```
[root@naggar-Inspiron:~]# man passwd
[root@naggar-Inspiron:~]# man 1 passwd
[root@naggar-Inspiron:~]# man 5 passwd
```

-Popular system administration topics are in sections 1 (user commands),
5 (file formats), and 8 (administrative commands).

Viewing file content:

```
[root@naggar-Inspiron:~]# cat /etc/passwd
[root@naggar-Inspiron:~]# more /etc/passwd
[root@naggar-Inspiron:~]# head /etc/passwd
[root@naggar-Inspiron:~]# head -n 3 /etc/passwd
[root@naggar-Inspiron:~]# head -3 /etc/passwd
[root@naggar-Inspiron:~]# head /etc/passwd -n 3
[root@naggar-Inspiron:~]# tail /etc/passwd
[root@naggar-Inspiron:~]# tail -n 3 /etc/passwd
[root@naggar-Inspiron:~]# tail -3 /etc/passwd
[root@naggar-Inspiron:~]# tail /etc/passwd -n 3
```

File and Dir Manipulation:

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Creating files:

```
[root@naggar-Inspiron:~]# touch file1 FILE1      (case sensitive)
[root@naggar-Inspiron:~]# touch /home/naggar/Documents/file
[root@naggar-Inspiron:~]# touch "file 1"
[root@naggar-Inspiron:~]# touch file 1
[root@naggar-Inspiron:~]# touch file\ 1
```

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Create directories:

```
[root@naggar-Inspiron:~]# mkdir dir1 dir2 dir3
[root@naggar-Inspiron:~]# mkdir -p dir4/dir5/dir6      (create dir parents)
[root@naggar-Inspiron:~]# mkdir 'mohammed alnaggar'
[root@naggar-Inspiron:~]# mkdir "mohammed alnaggar"
[root@naggar-Inspiron:~]# mkdir mohammed\ alnaggar
```

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Copy files and directories:

```
[root@naggar-Inspiron:~]# cp file1 file2      (creates file2)
[root@naggar-Inspiron:~]# cp file1 ~/Documents/
[root@naggar-Inspiron:~]# cp file1 file2 file3 ~/Documents/      (last argument
must be a directory)
[root@naggar-Inspiron:~]# cp -r /etc/ dir1      (copy non-empty
directory)
[root@naggar-Inspiron:~]# cp -r /etc/* dir1      (copy the
contents of the directory)
```

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Move files and directories:

```
[root@naggar-Inspiron:~]# mv file1 new_file1      (to rename the
file1)
[root@naggar-Inspiron:~]# mv file1 file2 file3 /root/Documents/      (last argument
must be a directory)
[root@naggar-Inspiron:~]# mv dir1 dir2 dir3 dir4      (last argument
must be a directory)
```

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Remove files and directories:

```
[root@naggar-Inspiron:~]# rm file1      (interactive
by default for the root)
[root@naggar-Inspiron:~]# rm -f file1 file2 file3      (force
remove)
[root@naggar-Inspiron:~]# rm -d dir1      (removes an
empty directory)
[root@naggar-Inspiron:~]# rmdir dir1      (removes an
empty directory)
[root@naggar-Inspiron:~]# rm -rf dir1      (removes a
non-empty directory)
```

File globbing (wildcard) (pattern matching):

```
[root@naggar-Inspiron:~]# touch delta ahmed baker cast dog easy echo charlie alfa
bravo
[root@naggar-Inspiron:~]# ls a*      (Only file names beginning with "a")
[root@naggar-Inspiron:~]# ls *a      (Only file names ending with "a")
[root@naggar-Inspiron:~]# rm -f a*
[root@naggar-Inspiron:~]# ls *a*      (Only file names containing "a")
```

```
[root@naggar-Inspiron:~]# ls [!a]*    (Only file names where first character is not
"a")
[root@naggar-Inspiron:~]# ls [ac]*
[root@naggar-Inspiron:~]# ls ???*
[root@naggar-Inspiron:~]# ls ?????
[root@naggar-Inspiron:~]# touch file1 file2 file3 file4 file11 file12 file111 filea
fileb fileab fa fab fabc
[root@naggar-Inspiron:~]# ls f?
[root@naggar-Inspiron:~]# ls f??
[root@naggar-Inspiron:~]# ls file[a-c]
```

Command history:

```
[root@naggar-Inspiron:~]# cat .bash_history
[root@naggar-Inspiron:~]# history
```

Multi commands in one line:

```
[root@naggar-Inspiron:~]# ls ; date ; cal
[root@naggar-Inspiron:~]# ls && date
[root@naggar-Inspiron:~]# ls /etc/passwd
[root@naggar-Inspiron:~]# head <ESC>.    (to use the last argument)
```
