DEV SANSKRITI VISHWAVIDYALAYA

Department of
Computer Science

SESSION 2018-19

PRACTICAL FILE

ON

OPERATING SYSTEM

SUBMITTED TO :

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BCA 1st sem.

Department of Computer Science,

DSVV, Haridwar

INDEX

Signature

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Task #1. Unix Basic Commands

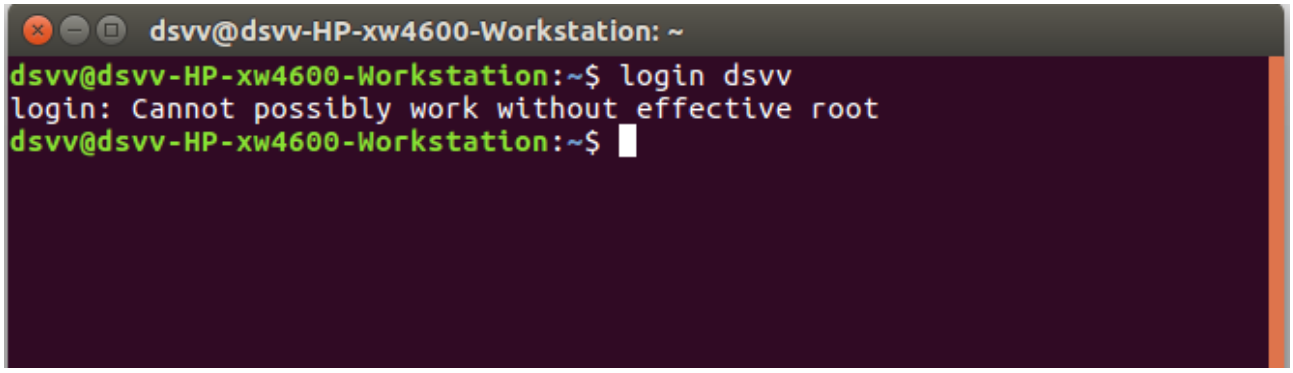
(i). Login and Logout :

login : This Command is used to login the user from computer.

Syntax : $ login <username>

Example : $ login dsvv

Output :

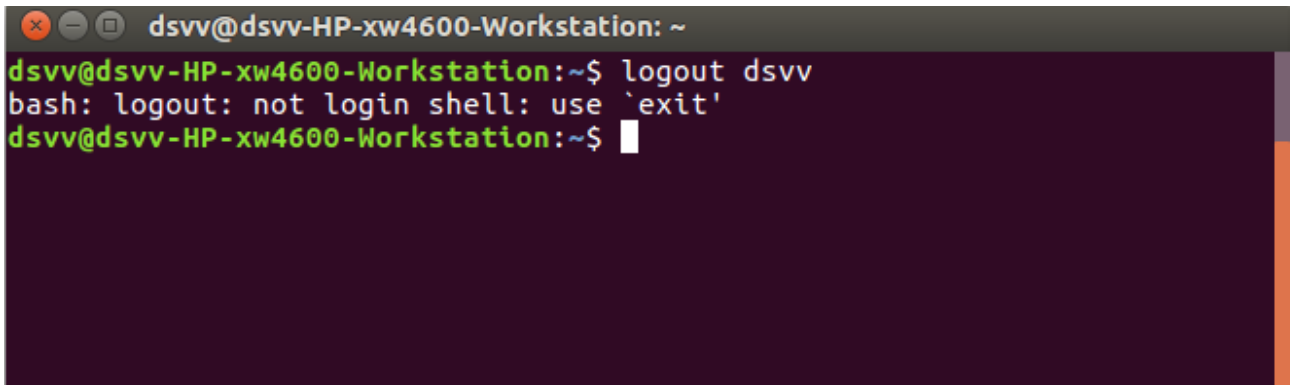


logout : This Command is used to log out the user from computer.

Syntax: $ logout <username>

Example : $ logout dsvv

Output :



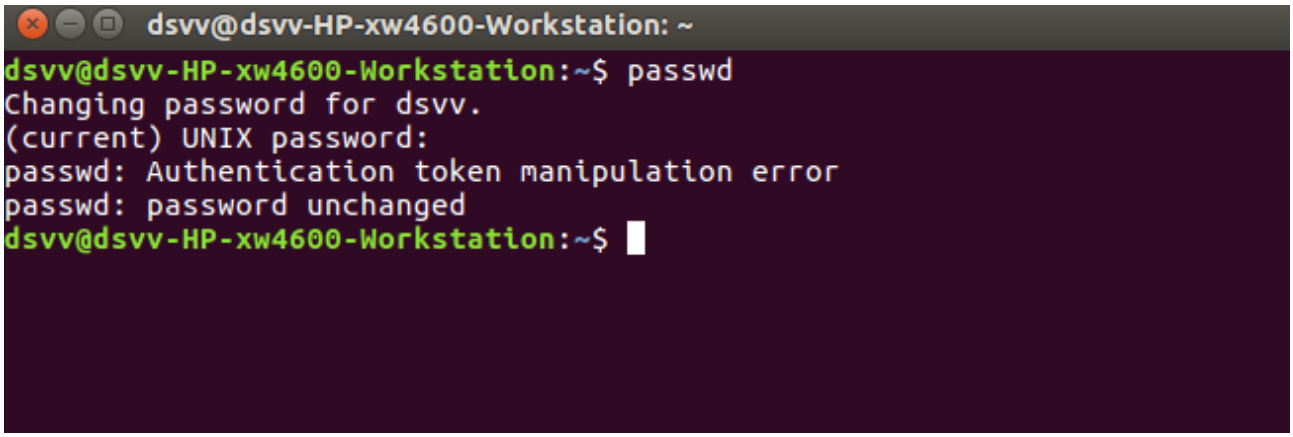
(ii). Password : This command is used to change the password of the currently login user or of the any account.

Syntax : $ passwd [options] [username]

Options:

-a : for all accounts
-d : delete the password of the named account
-e : forcely expire the password
-k : change password only if expired
-l : lock the password of the named account
-u : unlock the password of the named account
-s : status of the current password

Output **:**



(iii). shutdown and rebooting :

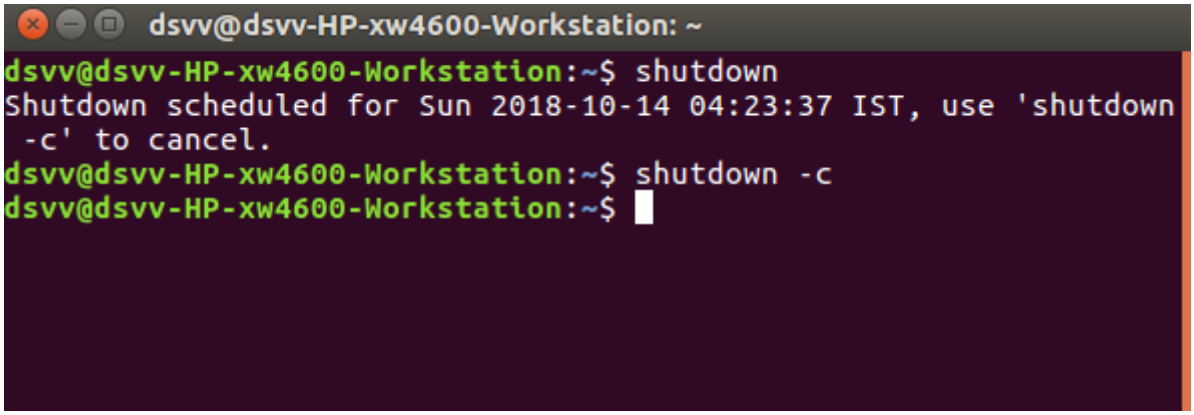
shutdown : This command is used to shutdown the computer.

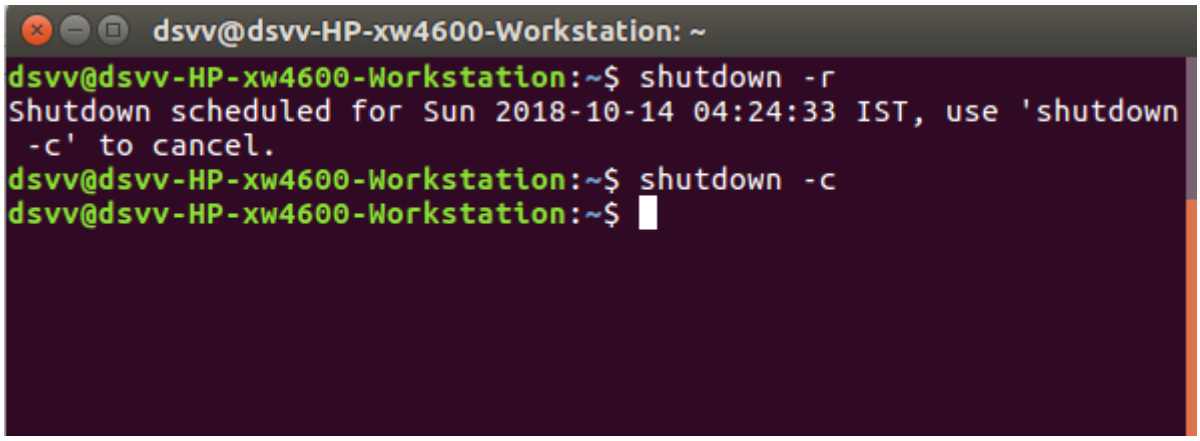
Syntax : $ shutdown [options]

options :

-P : power off
-r : reboot
-c : cancel a pending shutdown

Output :





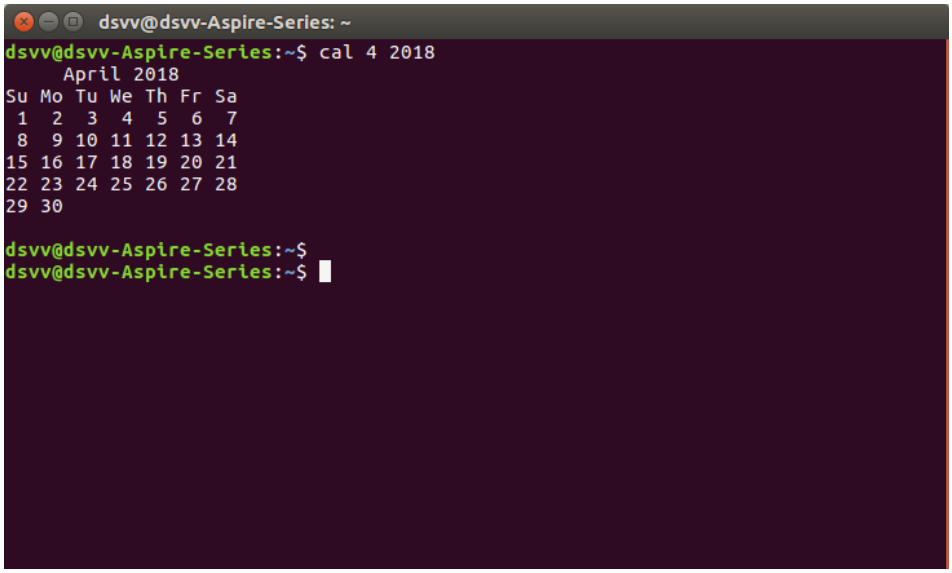
Task #2. Commands for basic utilities

(i). cal : This command is used to view the calender.

Syntax : $ cal[[month]year]

Example: cal 4 2018

Output :

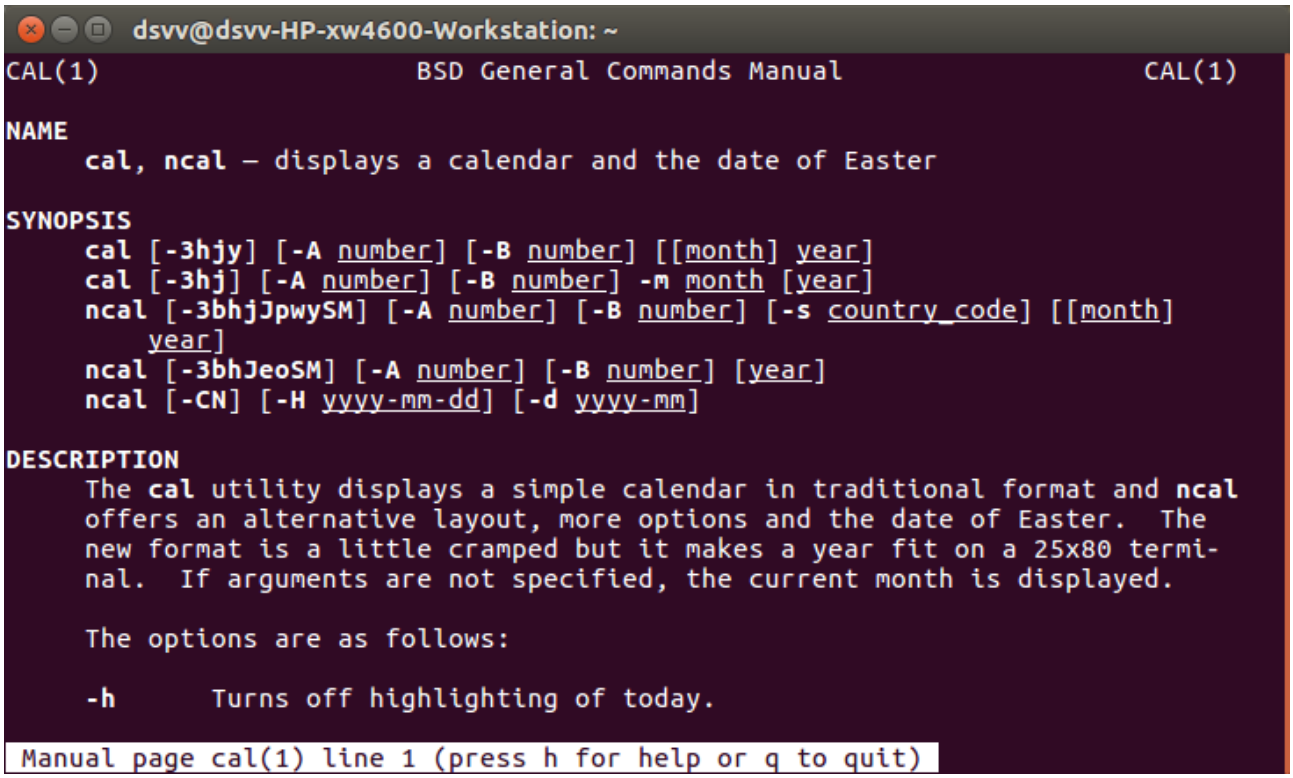


(ii).manual : This command is used to check the various options available for the commands and all the details about command.

Syntax : $ man <command name>

Example: $ man cal

Output:



(iii). date and time: This commond is used to display the current date and time. It also displays or calculate a date in the format we specify.

Syntax :$ date[+format]

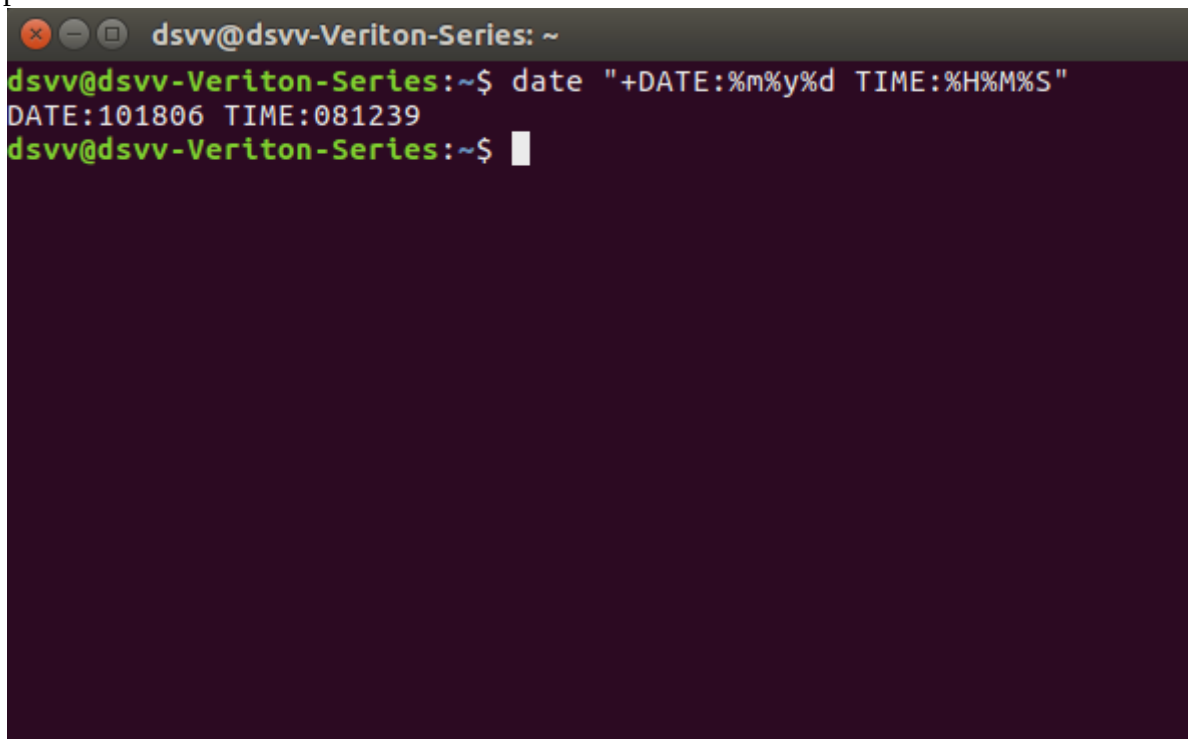
or, $ date +%d%m%y

Or, $date +DATE%d%y%m

or, $"+DATE:%m%d%y%n TIME:%H%M%S"

Example : $ date "+DATE:%m%d%y%n TIME:%H%M%S"

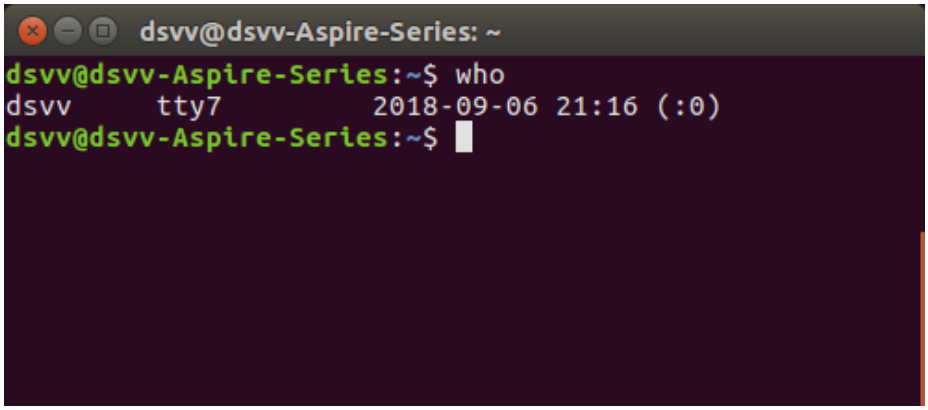
Output:



(iv). **who** : This command displays the list of users currently logged in.

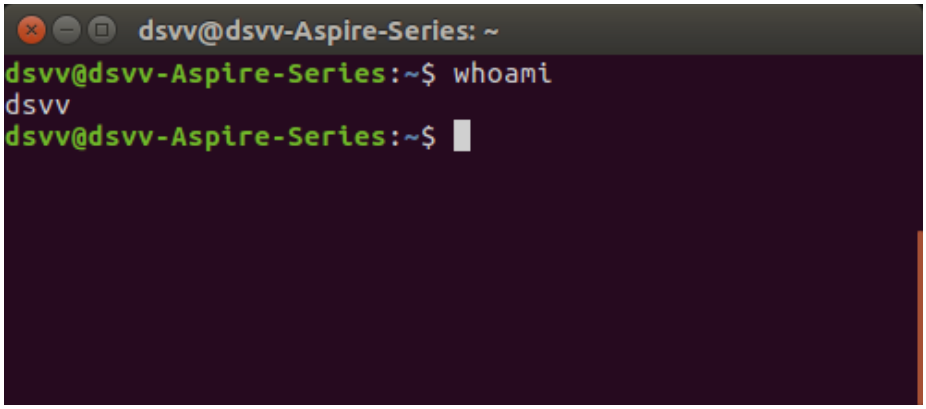
Syntax : who[option]...[file][arg1]
Example : $ who

Output:



whoami : This command displays the user id of the currently logged in user.
Syntax : whoami[option]
Example : list currently logged in user
$ whoami

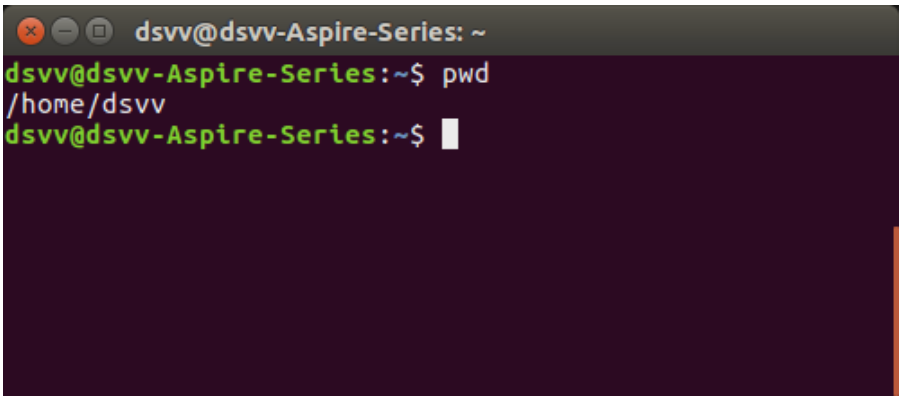
Output:



(v). **pwd** : This command will display the present working directory.
Syntax : pwd[option]

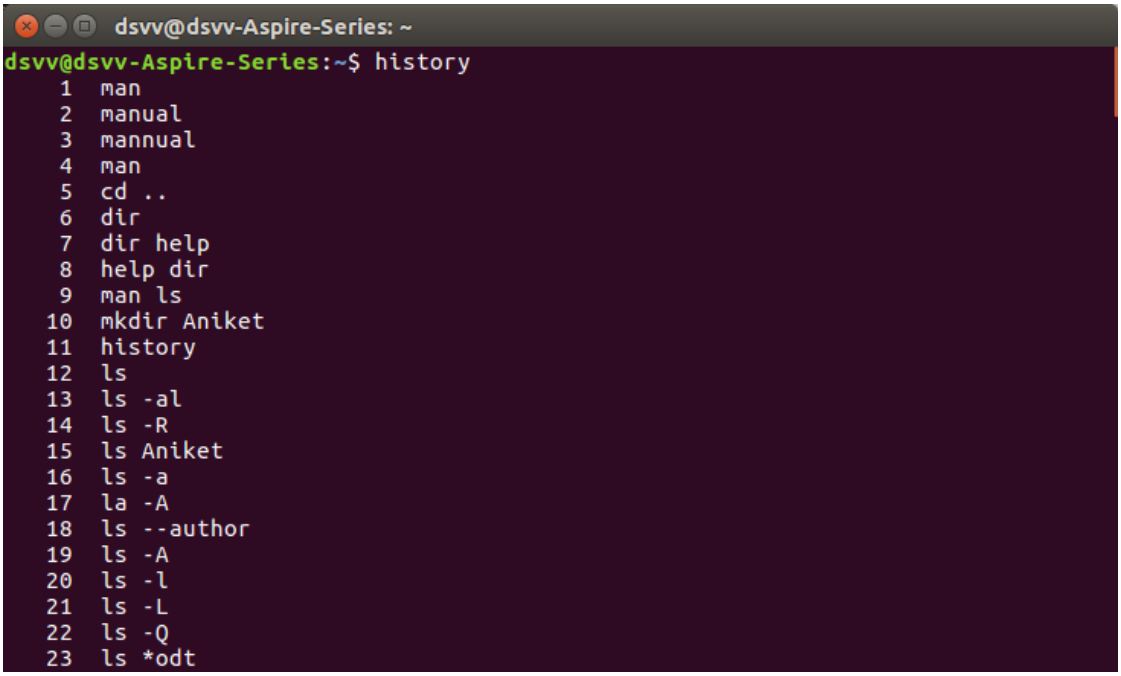
Example: $ pwd

Output:



(vi). history : This command show you all the commands that you have used in the current terminal session.
Syntax : $ history

Output:



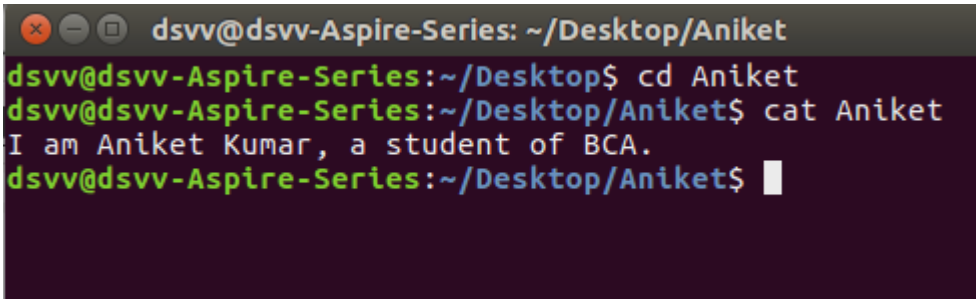
Task #3. Commands for basic utilities

(i). Cat commands : This command is used for file handling, such as creating a file, opening a file, appending a file,etc.
Syntax : $ cat [options]

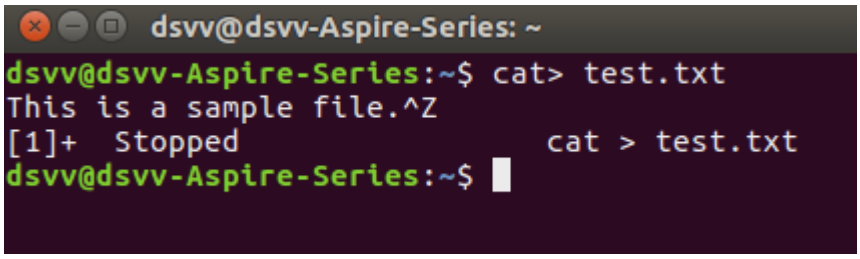
Various options of cat command are:

.**cat :** used to open a file :

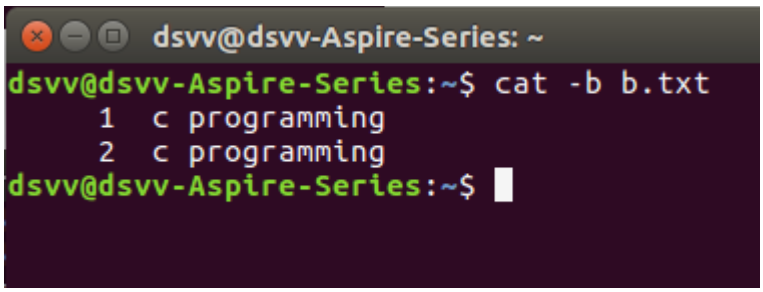
Output:



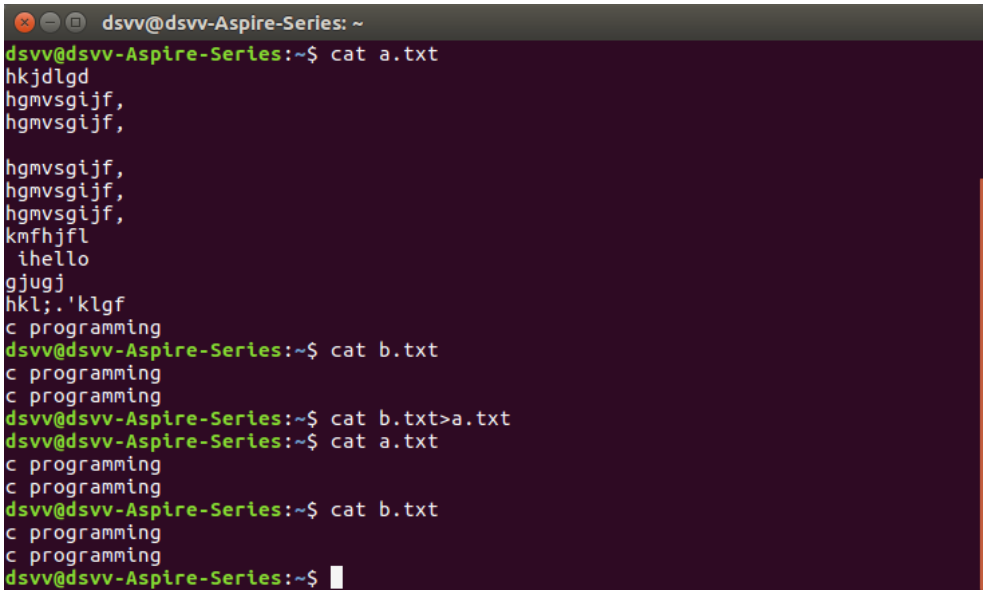
cat> filename : creates the file.
Example : cat> test.txt
Output:



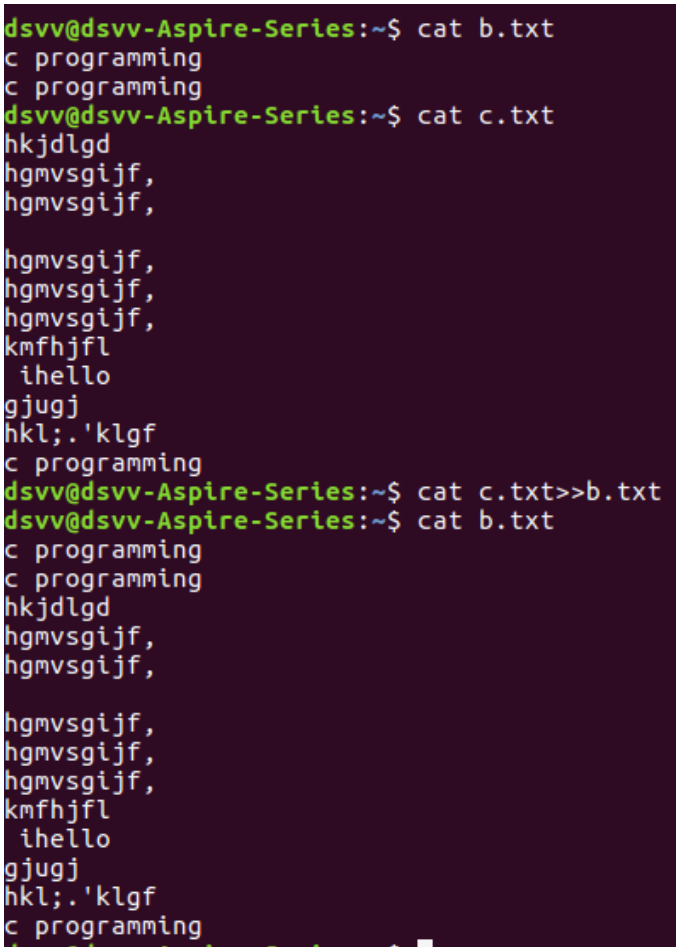
cat -b : opens the file and displays the contents with line numbers.
Example : cat -b b.txt
Output :



cat file1>file2 : Append/Replace one file into another.
Example: cat b.txt>cat a.txt
Output:



cat file1>>file2 : To add one file into another.
Example: cat c.txt>>cat b.txt
Output:

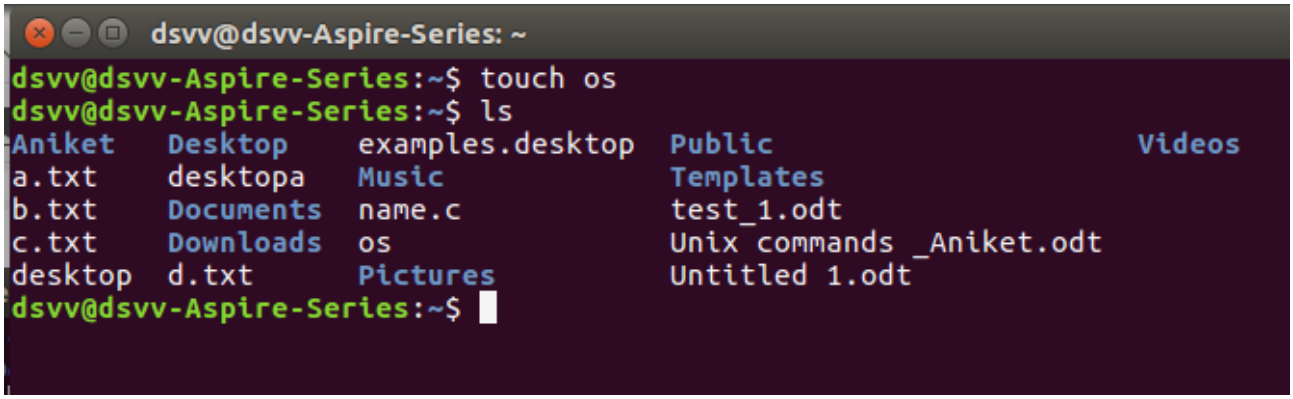


(ii). touch : This command is used to create any file.

Syntax: $ touch <filename>

Example: $ touch os

Output :

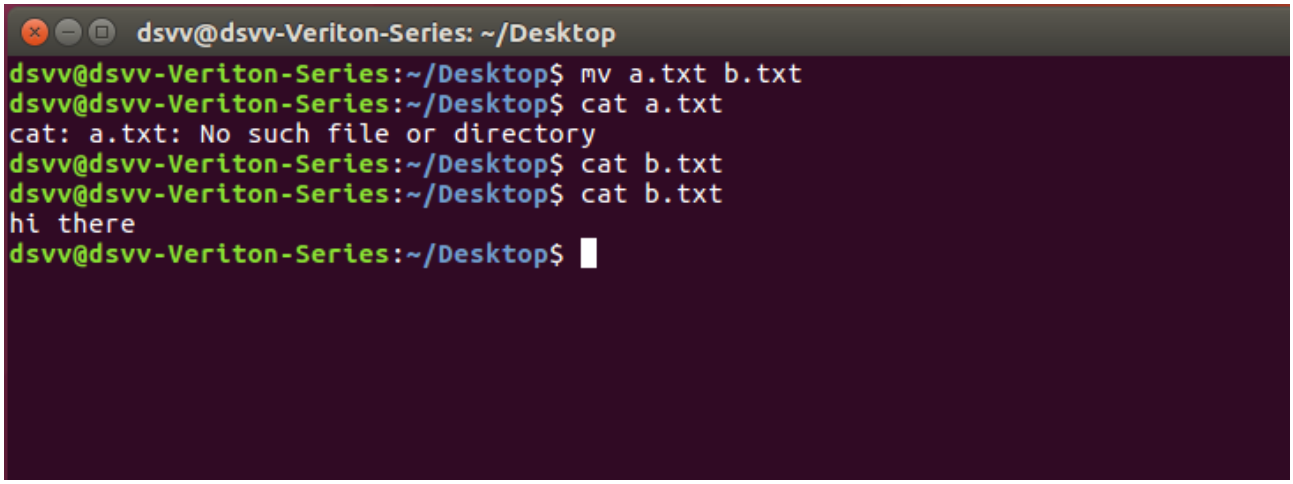


(iii). mv : This command is used rename the filename.

Syntax: $ mv <old filename> <new filename>

Example : mv a.txt b.txt

Output :

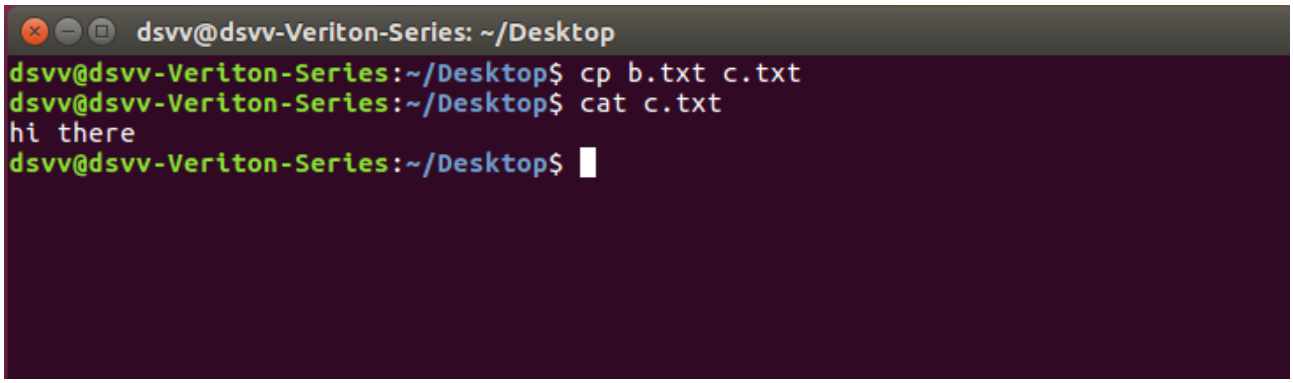


(iv). cp : This command is used to copy a file to another file.

Syntax : $ cp <source file> <destination fiile>

Example : cp b.txt c.txt

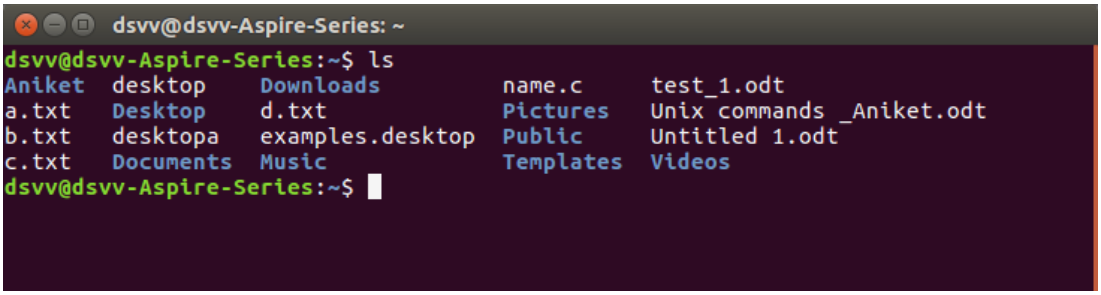
Output :



(v). **ls** – It is used to list all the directories and subdirectories present in that folder.

Syntax: $ ls [options]

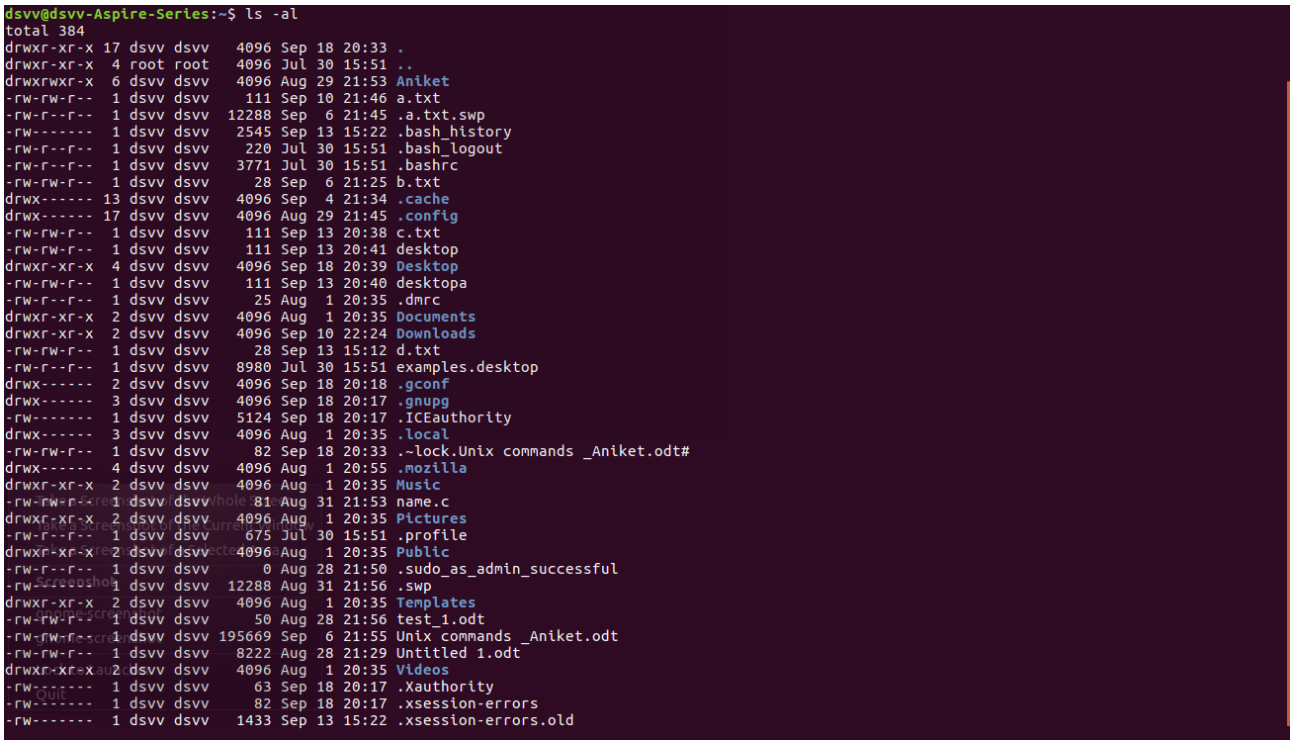
Output :



options :

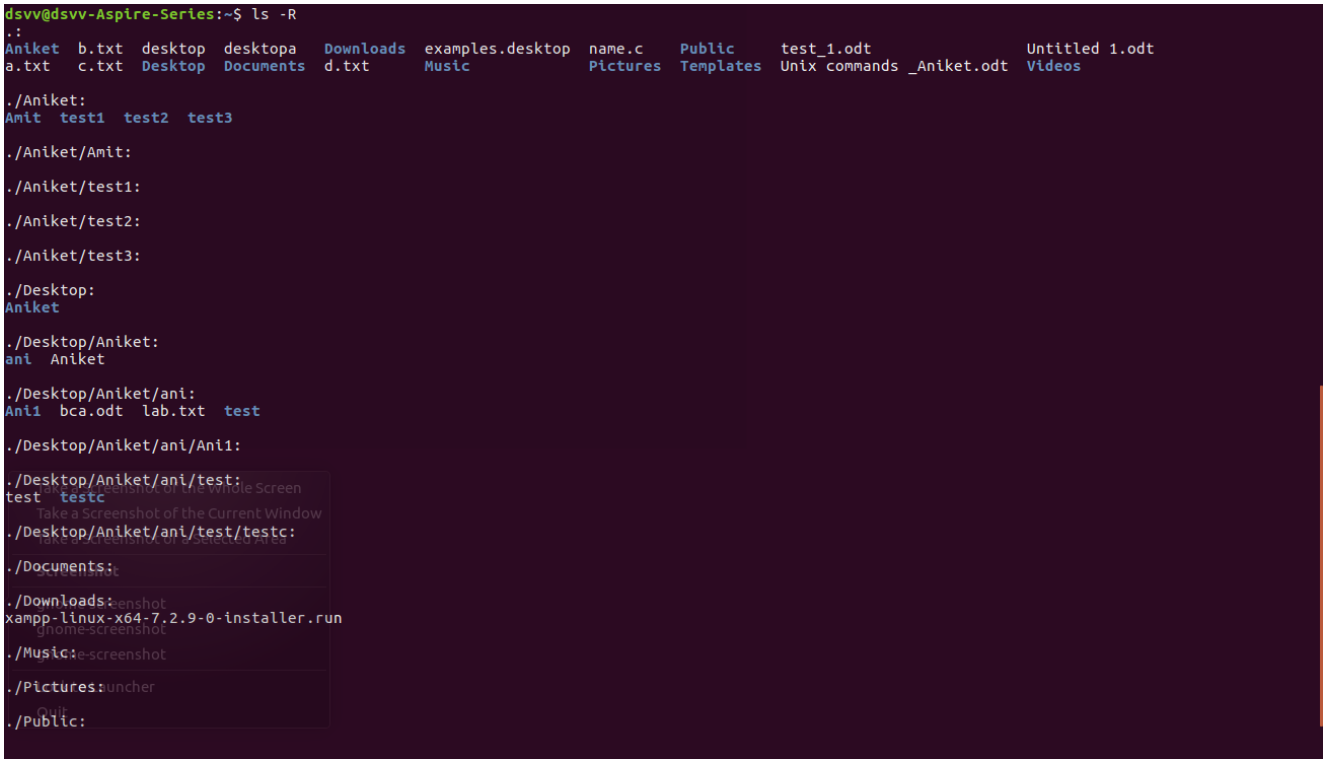
(a) **ls -al**

Output :



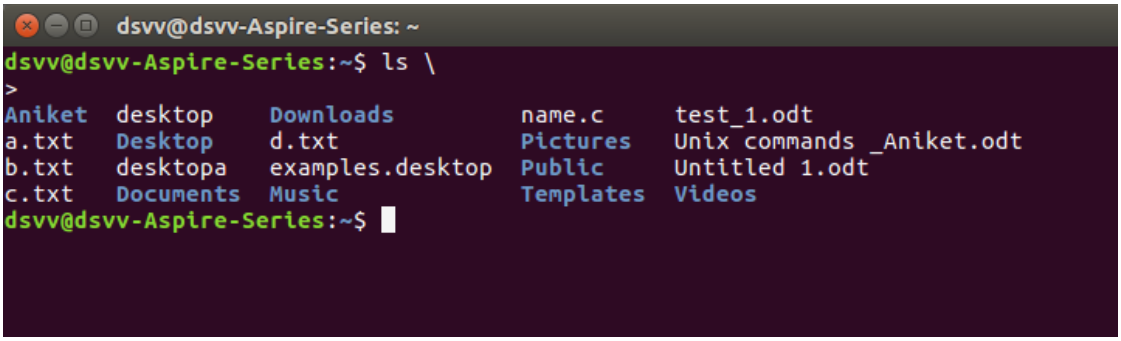
(b) **ls -R** : to display directories with subdirectories.

Output :



(c) **ls / :** list out all root directories.

Output :



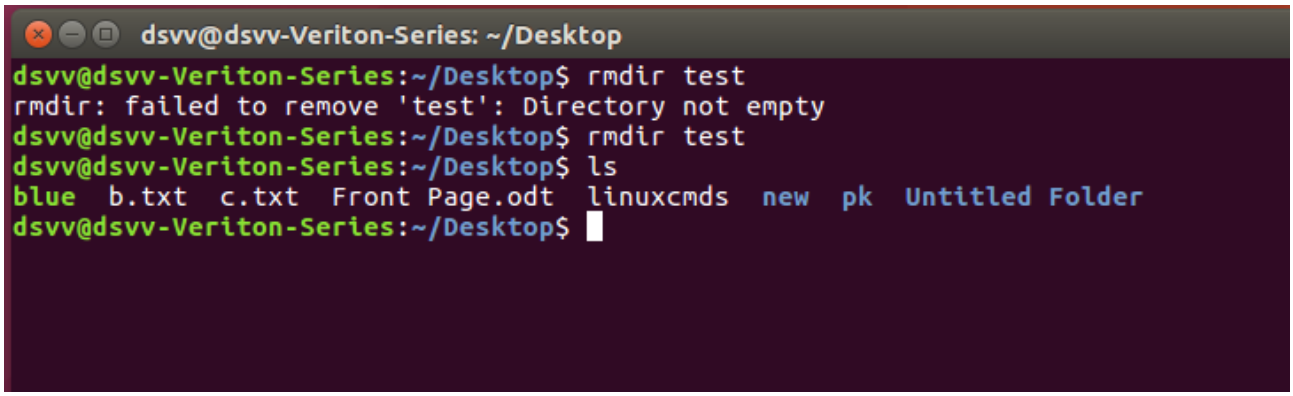
(vi). rmdir : This command is used to remove the directory.

Syntax : $ rmdir [options] [directory name]

option : -p : remove directory and its ancestors

Example : $ rmdir test

Output :

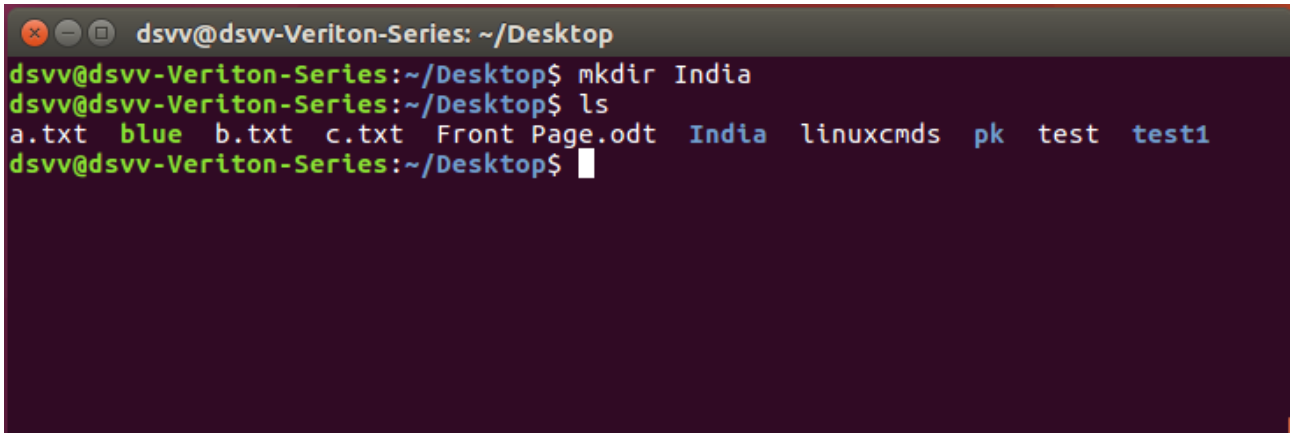


(vii). mkdir : This Command is used to create a directory.

Syntax : $ mkdir

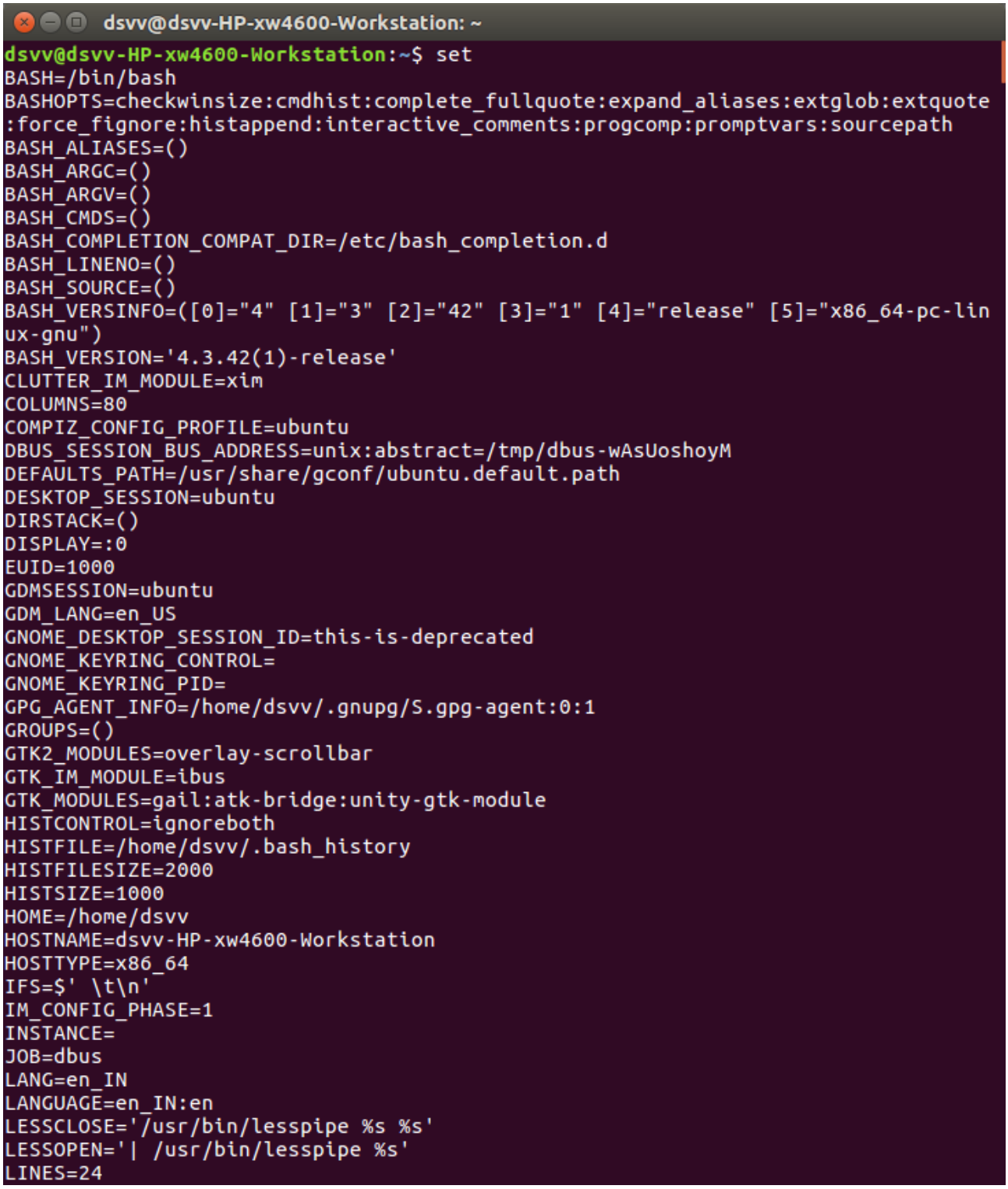
Example : $ mkdir India

Output :



Task #4 : Commands for identifying UNIX shell

set : This command is used for listing all the shell variables.
Syntax : $ set | more
Output :



Task #5 : commands to change file and directory access permissions

chmode : This command is used to change the access permission of files and directories.

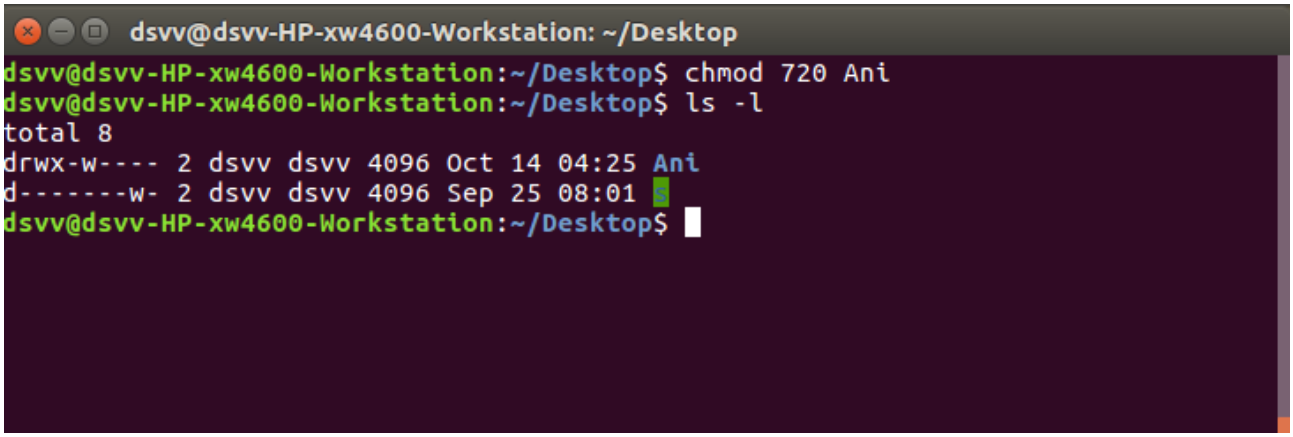
Syntax : chmod[permissions]….[file name]
Example: chmod 720 test.odt

options :
Read : 4 or -r
Write : 2 or -w
execute: 1 or -x

+ : add the permissions
- : remove the permissions
= : overwrite the permissions

acronyms: user – u
group – g
other – o

Output:

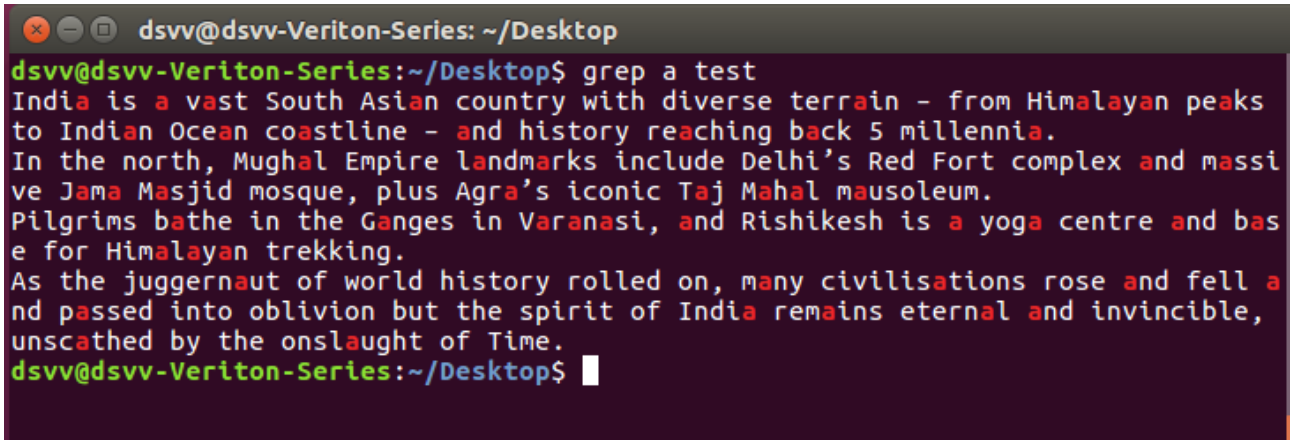


Task #6 : Using pipes and filters and meta characters

(i). grep : This command is used for searching any word or string in a file.
Syntax : $ grep <word/string> filename

Other option : $ cat filename|grep <word/string>

Output:



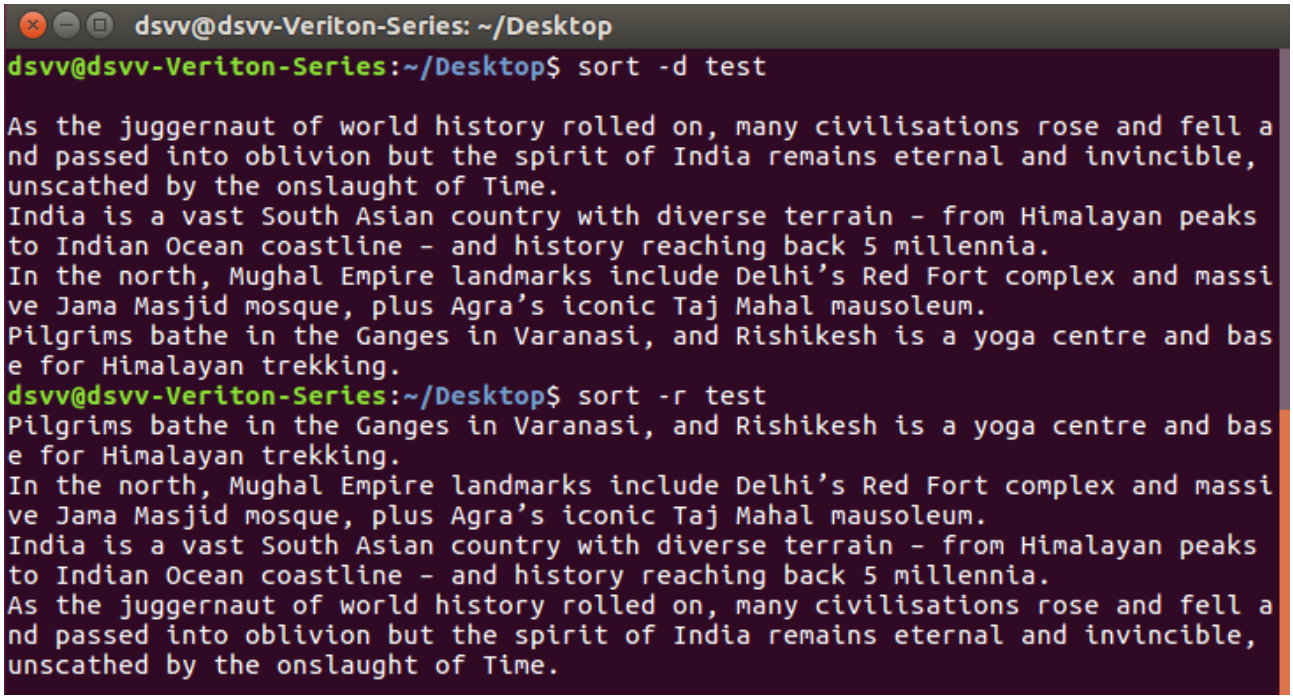
(ii). sort : This command is used for arranging the files.

Syntax : $ sort [options]

Options:

-d: dictionary order
-f: ignore case
-g: general numeric sort
-M: month sort
-h: human numeric order
-n: numeric sort
-R: random sort
-r: reverse order

Output:



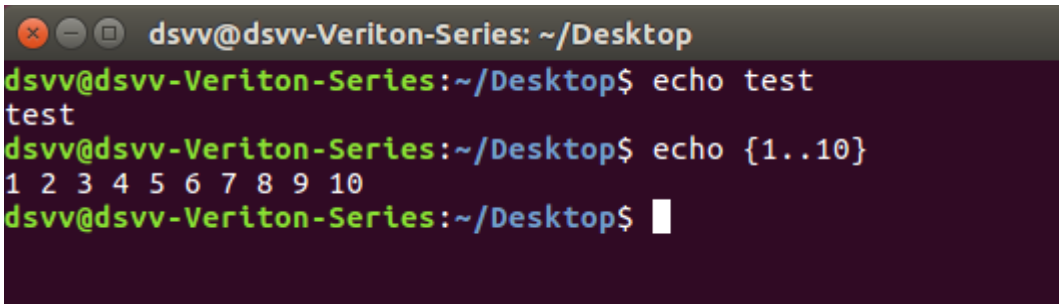
(iii). Regular expressions: They are special characters, which help to search data matching complex patterns and are shortened as **regexp|regex**

Basic Regular expressions:
. : replaces any character
^ : matches the start of string
$: matches the end of string
* : matches up 0 or more times the preceding character
\ : represent special character
() : groups regular expression
? : matches up exactly one character

Interval Regular expression
{n}
- number of times the letter appeared.
Syntax: cat filename|grep -E l/{2}

Braces Regular expression
To print/display anything.
Syntax: echo{}

Output:

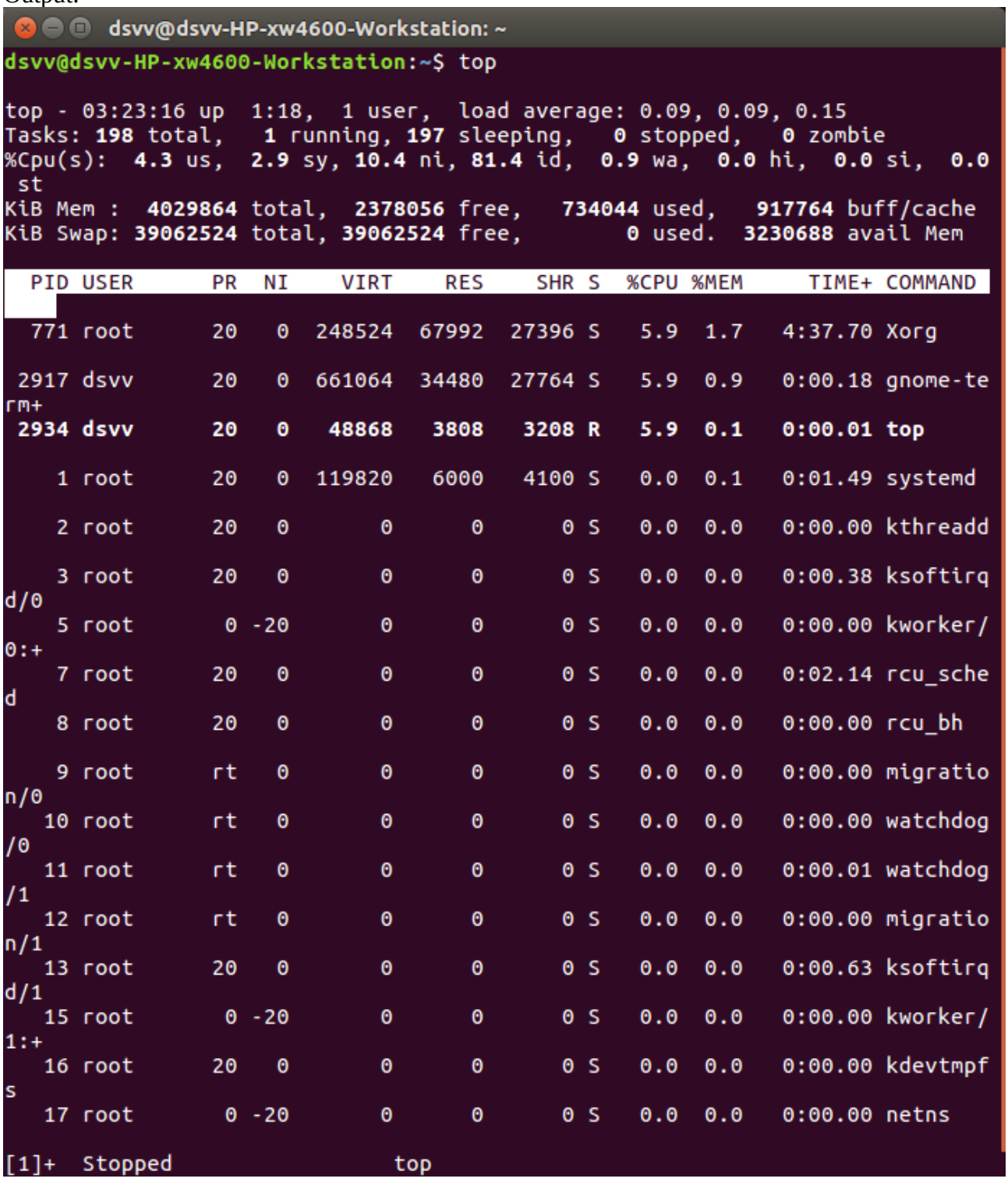


Task #7 Command to deal with processes

(i). top : This command is used for listing the current running processes.

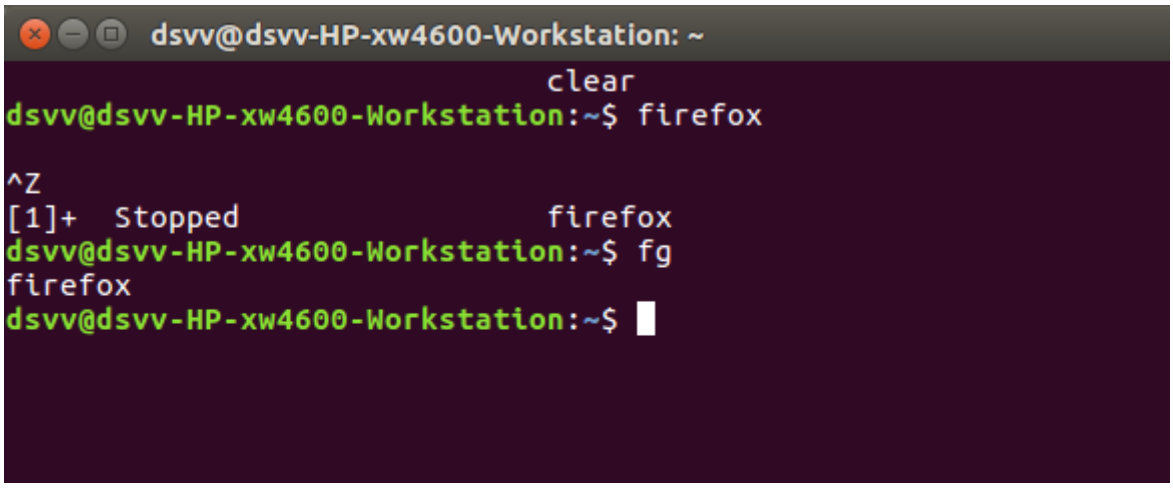
Syntax: $ top

Output:



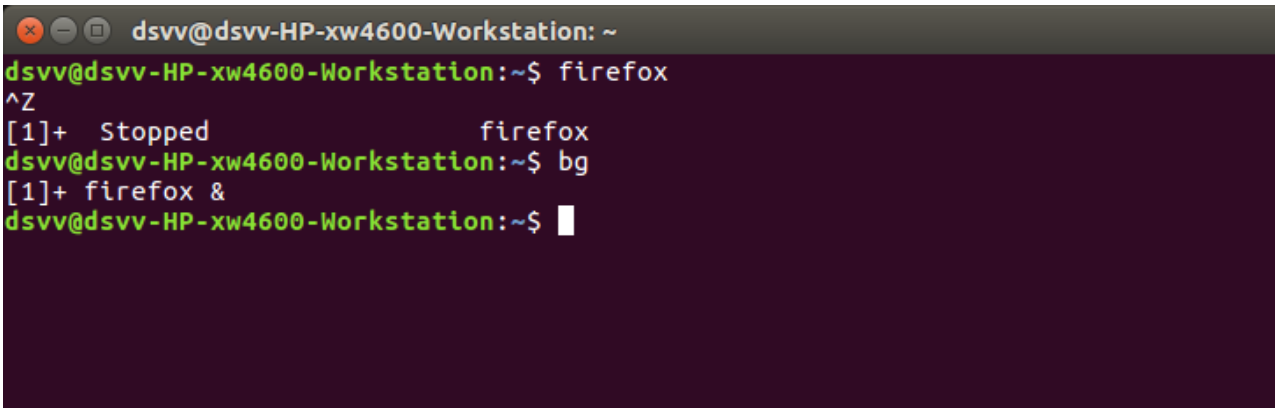
(ii). fg : This command is used to check foreground processes.
Syntax : $ fg

Output:



bg: This command is used to check background processes

Syntax : $ bg
Output:

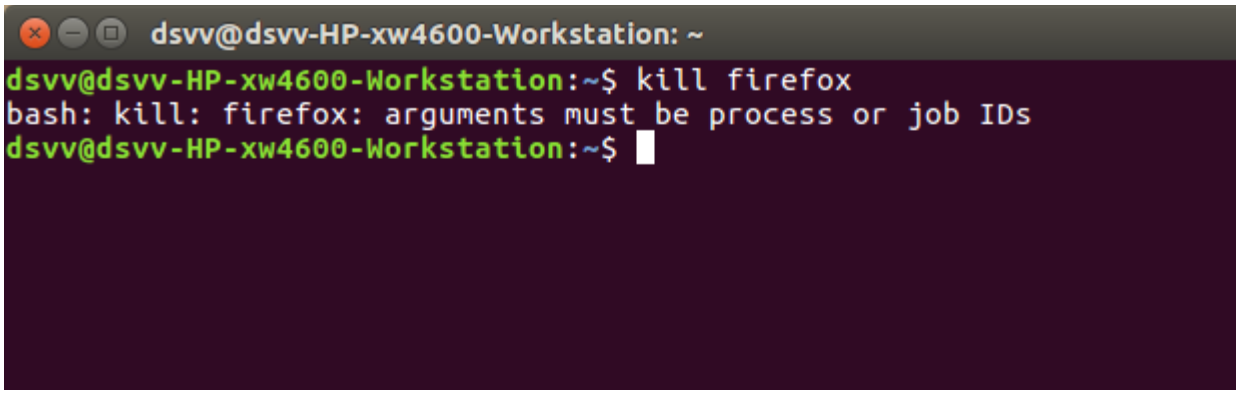


(iii). kill : This command is used for stopping a process.

Syntax: $ kill <PID>

Example : $ kill firefox

Output:

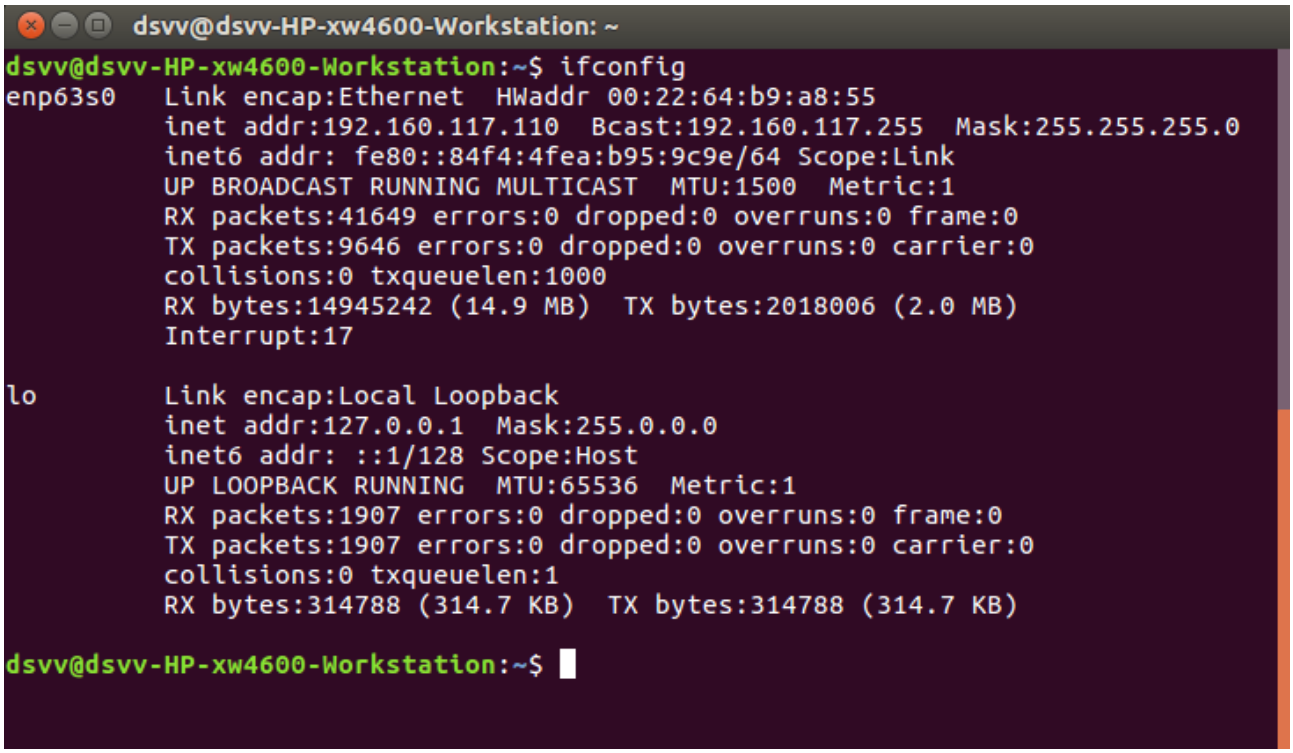


Task #8 : Commands for Communication

(i). ifconfig : This command is used to see the addres. (physical as well as logical).

Syntax : $ ifconfig

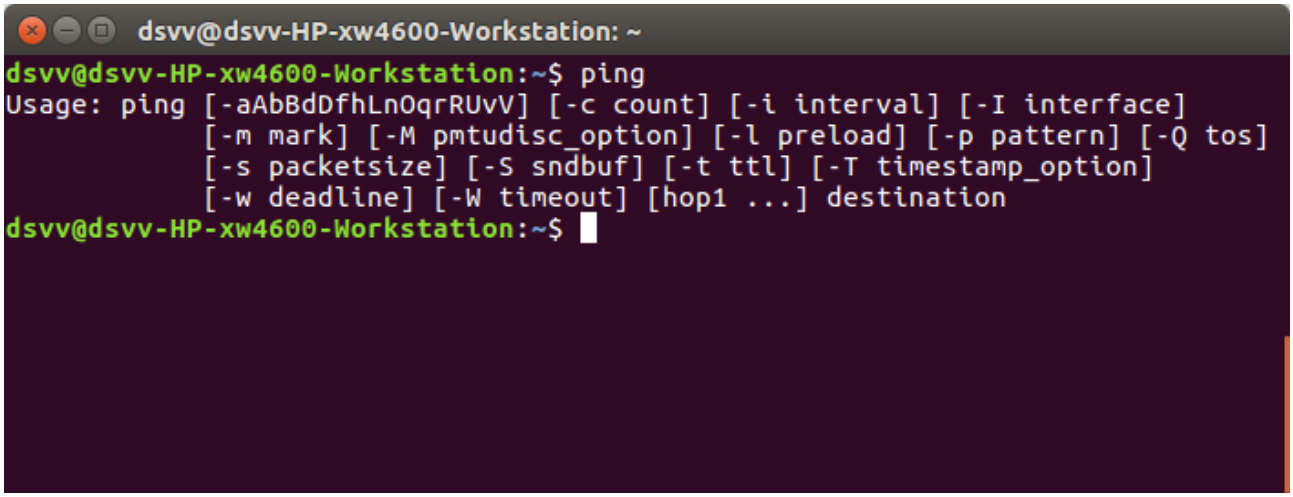
Output:



(ii). ping : This command is used to see ping time of any IP address or hostname.

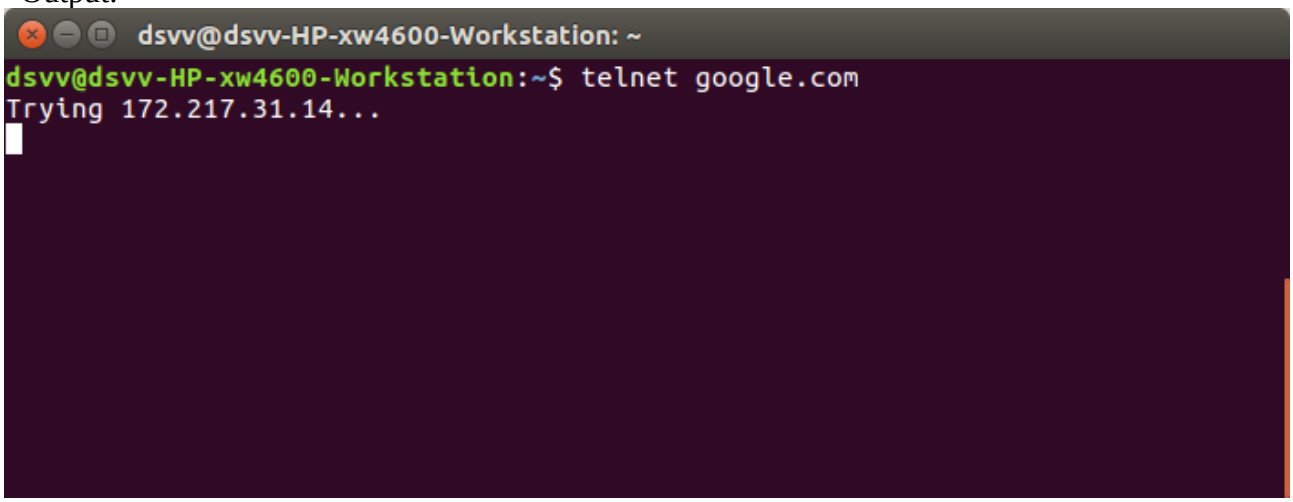
Syntax : $ ping <IP address / hostname>
Example: $ ping

Output:



(iii). telnet : This command is used for connecting to IP address or hostname.
Syntax: $ telnet <IP address / hostname>
Example: telnet google.com

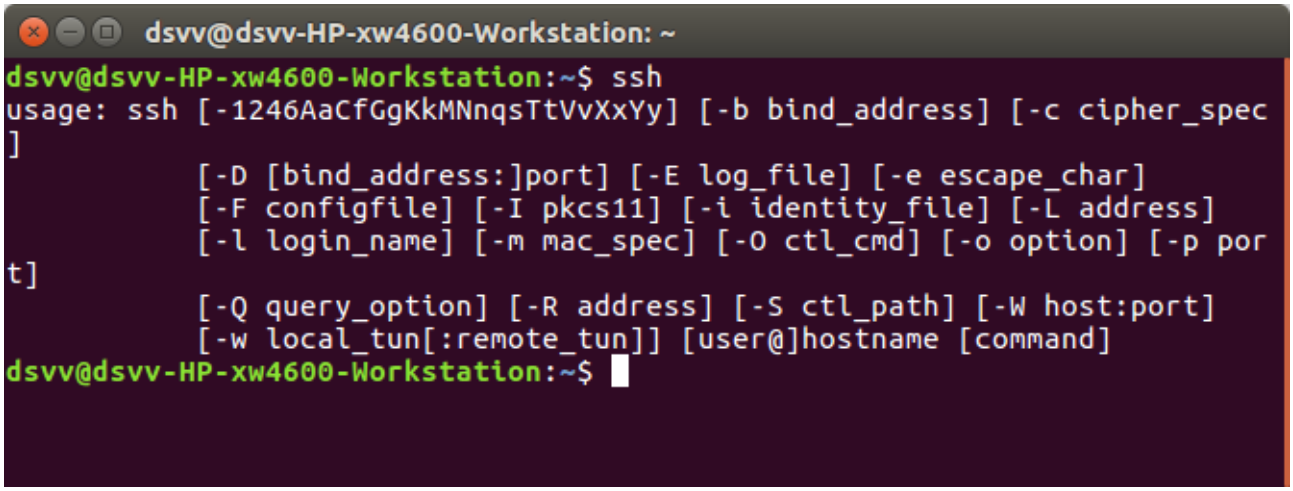
Output:



(iv). ssh : This command is similar to telnet and is used for connecting to IP address or hostname. It is more secure than telnet.

Syntax : $ ssh <IP address/host name>

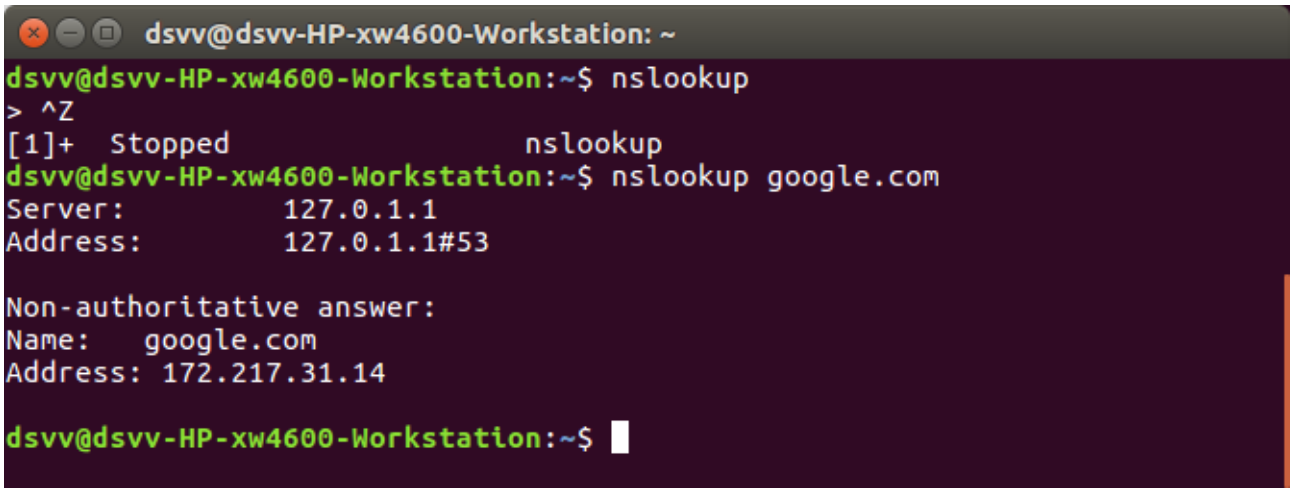
Output:



(v). nslookup : This command is used for identifying IP address of the hostname.

Syntax: $ nslookup <hostname>

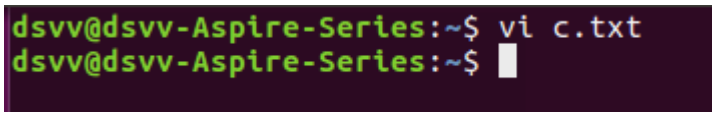
Output:



Task #9: Commands for Vi editor

Syntax : vi <filename>
Example : vi c.txt

Output:



To go into insert mode : i
To go into command mode : **Esc**

To exit from the vi editor : wq (in command mode)
[w is used for saving the file]

Cursor movement commands :

move the cursor one character left : **h**
move the cursor one character right : **l**
move the cursor one line up : **k**
move the cursor one line down : **j**
:n (n=line no.) or **nG** : cursor goes to the specified line.
$:- move the cursor to the end of the current line.
o :- It will move the cursor in beginning of the current line.
w:- It will move the cursor one word forward.
b :- it will move the cursor one word backward.

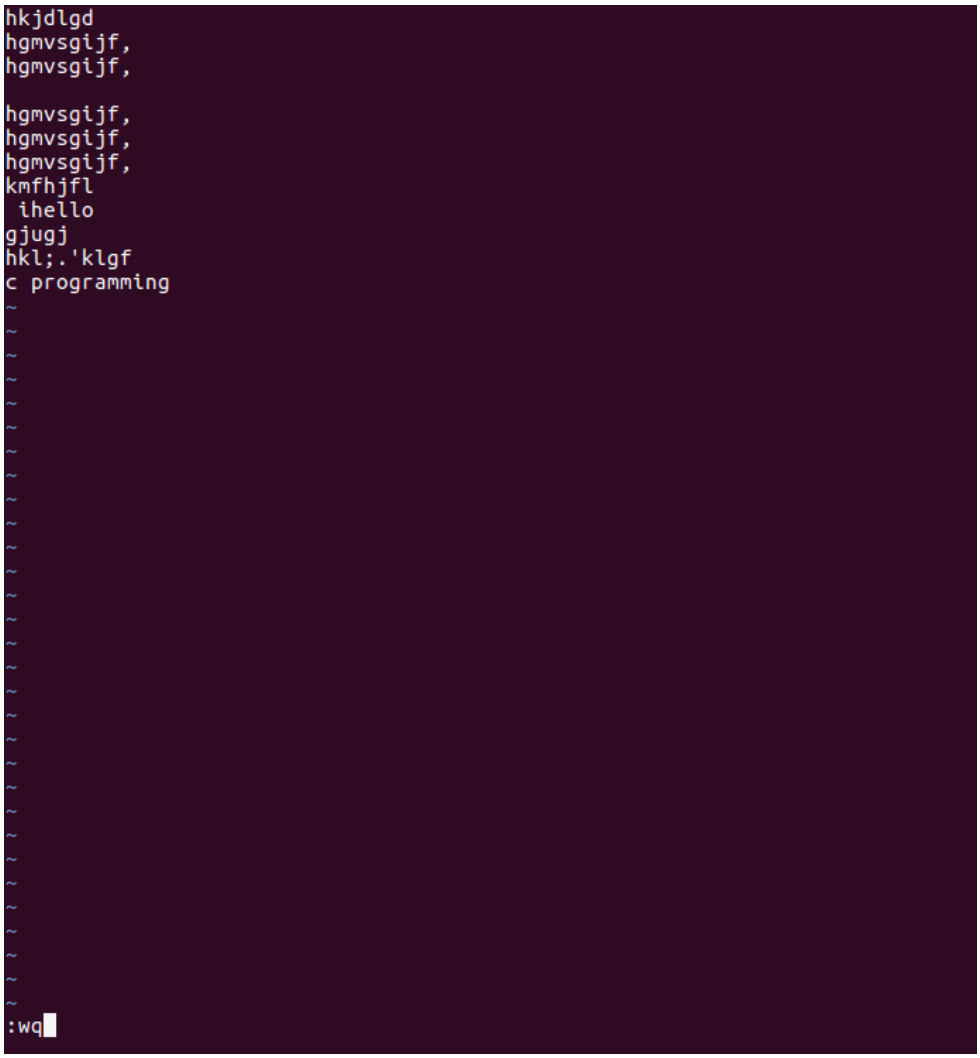
Text deletion commands :

x : deletion of one character
dw : delete one word
db : delete one word backward
yy : copy content (current line)
p : paste downward
P : paste upward
u : undo
U : redo

a : append the text following the current cursor position
A : append the text to the end of the current line.

Vi:

Output:


hkjdlgd
hgmvsgijf,
hgmvsgijf,
hgmvsgijf,
hgmvsgijf,
hgmvsgijf,
kmfhjfl
ihello
gjugj
hkl;.'klgf
c programming
:wq

Task #10 : List of environment variables in Linux/Unix

(i). accessing variable values : This command is used to see the value of a variable.
Syntax : $ echo $variable_name
Example : $ echo $var

(ii). Create Variable : This command is used for creating a variable.
Syntax : $ variable_name=value
Example : $ var = 123

(iii). Delete Variable : This command is used for deleting a variable.
Syntax : $ unset variable_name
Example : $ unset var

Output: