FOSS LAB

ASSIGNMENT

Submitted by:

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ROLL NO: 26

S4 CS

Exp No:1
Date: 31/1/2019
Aim: To familiarize basic commands in linux

Command 1: man
Purpose of command: To know more about a particular page or command
Usage: man <page>
Sample i/p and o/p: iuser@user-Vostro-15-3568:~$ man man
                     Description about the man page

Command 2: pwd
Purpose of command: It will give the present working directory
Usage: pwd
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$ pwd
                  /home/user/arya

Command 3: cd
Purpose of command: To change the current directory
Usage: cd
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$ cd
                  user@user-Vostro-15-3568:~

Command 4: cd~
Purpose of command: Short cut to get back to you home directory
Usage: cd~
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$ cd~
                  user@user-Vostro-15-3568:~

Command 5: cd ..
Purpose of command: To go to the parent directory
Usage: cd ..
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$
                  user@user-Vostro-15-3568:~

Command 6: ls

Purpose of command: To list the contents of a directory
Usage: ls
Sample i/p and o/p: user@user-Vostro-15-3568:~/exm$ ls

                  a file1 file2

Command 7: ls -a
Purpose of command: All files are shown,including the hidden files
Usage: ls -a
Sample i/p and o/p: user@user-Vostro-15-3568:~/exm$ ls -a

              . .. a .as file1 file2

Command 8: ls -l
Purpose of command: Long listing of all files in a directory
Usage: ls -l
Sample i/p and o/p: user@user-Vostro-15-3568:~/exm$ ls -l
total 4
drwxrwxr-x 2 user user 4096 Feb 6 23:02 a
-rw-rw-r-- 1 user user   0 Feb 6 23:02 file1
-rw-rw-r-- 1 user user   0 Feb 6 23:02 file2

Command 9: mkdir
Purpose of command: To make a new directory
Usage: mkdir <name>
Sample i/p and o/p: user@user-Vostro-15-3568:~$ mkdir exm

                user@user-Vostro-15-3568:~

Command 10: rmdir
Purpose of command: To remove a dorectory
Usage: rmdir <name>
Sample i/p and o/p: user@user-Vostro-15-3568:~/exm$ ls
as file1 file2
user@user-Vostro-15-3568:~/exm$ rmdir as
user@user-Vostro-15-3568:~/exm$ ls
file1 file2

Command 11: touch
Purpose of command: To create an empty file
Usage: touch <name>
Sample i/p and o/p: user@user-Vostro-15-3568:~/exm$ touch file1

Command 12: rm
Purpose of command: To remove a file permenantly
Usage: rm <file name>
Sample i/p and o/p: user@user-Vostro-15-3568:~/exm$ rm file1
user@user-Vostro-15-3568:~/exm$ ls
a file2

Command 13: rm -i
Purpose of command: To prevent accidental removal of files
Usage: rm -i <file name>
Sample i/p and o/p: user@user-Vostro-15-3568:~/exm$ rm -i file2
rm: remove regular empty file 'file2'? yes
user@user-Vostro-15-3568:~/exm$ ls
a

Command 14: cp
Purpose of command: Copy a file/directory to another file/directory
Usage: cp <source file> <target file>
Sample i/p and o/p: user@user-Vostro-15-3568:~/exm$ cp file1 file2
user@user-Vostro-15-3568:~/exm$ cat file2
HEY im here!!

Command 15: mv
Purpose of command: Use to rename a file or to move the file to another
directory
Usage: mv <source file> <target file>
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$ ls
file1 file2
user@user-Vostro-15-3568:~/arya$ mv file1 file2
user@user-Vostro-15-3568:~/arya$ ls
file2

Command 16: cat
Purpose of command: This will show the contents in a file
Usage: cat <file name>
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$ cat file2
HELLO
IM HERE

Command 17: ln
Purpose of command: Create a symbolic link to a file

Usage: ln <file name> <file name>
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$ ln file2 a
user@user-Vostro-15-3568:~/arya$ cat a
HELLO
IM HERE

Command 18: locate
Purpose of command: A fast database driven file locator
Usage: locate <filename>
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$ locate file2
/home/user/arya/file2

Command 19: logout
Purpose of command: Logs the current user off the system
Usage: logout
Sample i/p and o/p:

Command 20: shutdown
Purpose of command: Shuts the system down
Usage: shutdown
Sample i/p and o/p:

Command 21: tree
Purpose of command: List contents of directory in a tree like form
Usage: tree <file name>
Sample i/p and o/p:user@user-Vostro-15-3568:~$ tree arya
arya
|-- a
`-- file2

0 directories, 2 files

Exp No:2
Date: 31/1/2019
Aim: Identifying the linux command for operations such as redirection,pipes,filters,job control,changing ownership/permissions of files/links/directory.

1.**REDIRECTION**

Command 1: Symbol: >
Purpose of command: To output Linux-commands result to file.

Usage: ls> <file name>
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$ ls
a file2
user@user-Vostro-15-3568:~/arya$ ls> file
user@user-Vostro-15-3568:~/arya$ cat file
a
file
file

Command 2: Symbol- >>
Purpose of command: To output Linux-commands to End of a file
Usage: data >> <file name>
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$ ls
a file2
user@user-Vostro-15-3568:~/arya$ ls> file
user@user-Vostro-15-3568:~/arya$ cat file
a
file
file1

Command 3: Symbol- <
Purpose of command:To take input to Linux-commands from file instead of key board
Usage: linux-command < <file name>
Sample i/p and o/p: user@user-Vostro-15-3568:~/arya$ cat<file
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2.PIPES

Command 4: |
Purpose of command: Connect a string of commands via a pipe
Usage: Command1 | Command2
Sample i/p and o/p: user@user-Vostro-15-3568:~$ cd arya
user@user-Vostro-15-3568:~/arya$ ls | sort
a
file
file2

3.FILTER

Command 5:
Purpose of command: Linux command accepts its input dara from the standard input and produces its output on standard output.

Usage: sort < sname | uniq > u_name
Sample i/p and o/p: user@user-Vostro-15-3568:~$ sort < file | uniq > f1
user@user-Vostro-15-3568:~$ cat f1
anu
arya
krishna
user@user-Vostro-15-3568:~$ cat file
arya
anu
anu
krishna

4.JOB CONTROL

Command 6: &
Purpose of command: Appending an ampersand (&) to the commands runs the job in the background
Usage: <command> &
Sample i/p and o/p: user@user-Vostro-15-3568:~$ find:
`/var/lib/samba/private/msg.sock': Permission denied
find: `/var/lib/udisks2': Permission denied
find: `/var/lib/polkit-1': Permission denied
find: `/var/lib/sudo': Permission denied
find: `/var/lib/lightdm': Permission denied
find: `/var/lib/lightdm-data/lightdm': Permission denied
find: `/var/log/speech-dispatcher': Permission denied
find: `/var/log/samba/cores': Permission denied

Command 7: bg
Purpose of command: For sending the current for ground job to background
Usage: CTRL + Z
        <command> bg
Sample i/p and o/p: user@user-Vostro-15-3568:~$ find / -ctime -1 > tmp /
changed-file-list.txt bg
find: paths must precede expression: /
Usage: find [-H] [-L] [-P] [-Olevel] [-D help|tree|search|stat|rates|opt|exec]
[path...] [expression]

Command 8: jobs
Purpose of command: To list all the background jobs.
Usage: jobs
Sample i/p and o/p:

Command 9: fg
Purpose of command: To take a job from background to for ground
Usage: fg
Sample i/p and o/p: user@user-Vostro-15-3568:~$ fg
bash: fg: current: no such job

Command 10: kill %
Purpose of command: To kill a specific background job
Usage: kill %<job-number>
Sample i/p and o/p: user@user-Vostro-15-3568:~$ kill %1
bash: kill: %1: no such job

5.CHANGING OWNERSHIP

Command 11: chown
Purpose of command: To change the owner of a particular file or directory
Usage: chown <new owner> <file name>
Sample i/p and o/p: user@user-Vostro-15-3568:~$ ls -l file2
-rw-rw-r-- 2 user user 12 Feb 8 20:20 file2
user@user-Vostro-15-3568:~$ chown root file2
chown: changing ownership of 'file2': Operation not permitted

Command 12: chgrp
Purpose of command: To change the group of a file or directory
Usage: chgrp <new group> <file name>

6.CHANGING PERMISSIONS

Command 13: chmod
Purpose of command: To set the permissions on a file
Usage: chmod {a,u,g,o} {+,-} {r,w,x}

7.LINKS

Command 14: ln -s
Purpose of command: To create softlink
Usage: ln -s <Full path of original file> <Full path of soft link file>
Sample i/p and o/p: user@user-Vostro-15-3568:~$ ln -s file2 b
user@user-Vostro-15-3568:~$ cat b
HELLO WORLD

Command 15: ln
Purpose of command: To create a hard link.
Usage: ln <Full path of original file> <Full path of hard link file>
Sample i/p and o/p: user@user-Vostro-15-3568:~$ ln file2 ac
user@user-Vostro-15-3568:~$ cat ac
HELLO WORLD

Command 16:
Purpose of command: Let you give a file another name, but doesn't link the file
by inode.
Usage: ln -s <file1> <file2>
Sample i/p and o/p: user@user-Vostro-15-3568:~$ ln -s file2 ad
user@user-Vostro-15-3568:~$ cat ad
HELLO WORLD

Exp No : 3
Date : 8/2/2019
**Aim : To familiarize advanced linux commands such as curl, wget, ftp , ssh
and grep**

Command 1: curl
Purpose of command: It is a tool to transfer data from or to a server
Usage: culr -I <url of the server>
Sample i/p and o/p: user@user-Vostro-15-3568:~$ curl https://google.com
<HTML><HEAD><meta http-equiv="content-type"
content="text/html;charset=utf-8">
<TITLE>301 Moved</TITLE></HEAD><BODY>
<H1>301 Moved</H1>
The document has moved
<A HREF="https://www.google.com/">here</A>.
</BODY></HTML>

Command 2: wget
Purpose of command: To download a file from the web
Usage: wget <url of the server>
Sample i/p and o/p: user@user-Vostro-15-3568:~$ wget
http://cc.iiti.ac.in/docs/linuxcommands.pdf
--2019-02-08 15:54:48-- http://cc.iiti.ac.in/docs/linuxcommands.pdf
Resolving cc.iiti.ac.in (cc.iiti.ac.in)... 14.139.35.18, 125.21.19.18

Connecting to cc.iiti.ac.in (cc.iiti.ac.in)|14.139.35.18|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 469423 (458K) [application/pdf]
Saving to: 'linuxcommands.pdf'

100%[====================================>] 4,69,423
447KB/s   in 1.0s

2019-02-08 15:54:50 (447 KB/s) - 'linuxcommands.pdf' saved
[469423/469423]

Command 3: ftp
Purpose of command: It is the simplest file transfer protocol to exchange files to
and from a remote   computer or network
Usage:
Sample i/p and o/p: %
226 Transfer complete.
local: tmul.out remote: tmul.out
1882 bytes sent in 0.0095 seconds (1.9e+02 Kbytes/s)
ftp> ls
200 PORT command successful.
150 Opening ASCII mode data connection for file list.
tmul.out
226 Transfer complete.
9 bytes received in 0.0021 seconds (4.3 Kbytes/s)
ftp> mput *
mput Makefile? y
200 PORT command successful.
150 Opening ASCII mode data connection for Makefile.
226 Transfer complete.
Connected to nordsieck.cs.colorado.edu.
220 nordsieck FTP server (Version 5.53 Tue Aug 25 10:46:12 MDT 1992)
ready.
Name (nordsieck.cs.colorado.edu:yourlogin): yourlogin
331 Password required for yourlogin.
Password:
230 User yourlogin logged in.
ftp> cd HPSC/exercises
250 CWD command successful.
ftp> ls
200 PORT command successful.

550 No files found.
ftp> put tmul.out
200 PORT command successful.
150 Opening ASCII mode data connection for tmul.out.
Makefile
tmul.out   local: Makefile remote: Makefile
1020 bytes sent in 0.0062 seconds (1.6e+02 Kbytes/s)
mput tmul.out? n
ftp> quit
221 Goodbye.
%   ls
  . . .   ftp nordsieck.cs.colorado.edu

  . . .

Command 4: ssh
Purpose of command: ssh command provides a secure encrypted connection
between two hosts over an insecure network.
Usage: ssh username hostaddress/name
Sample i/p and o/p: ssh s1726@192.168.99.5

Command 5: grep
Purpose of command: To search a given file or pattern given by the user
Usage: cat<file name> | grep^ <letter or word>
Sample i/p and o/p: user@user-Vostro-15-3568:~$ cat file | grep ^a
arya
anu
anu