Mawlana Bhashani Science and Technology University

Lab-Report

Lab Report No: 02
Lab Report Name: Basic Command of Linux Operating System
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Name of the Lab Report: Basic Command of Linux Operating System

1. **What is Linux command?**

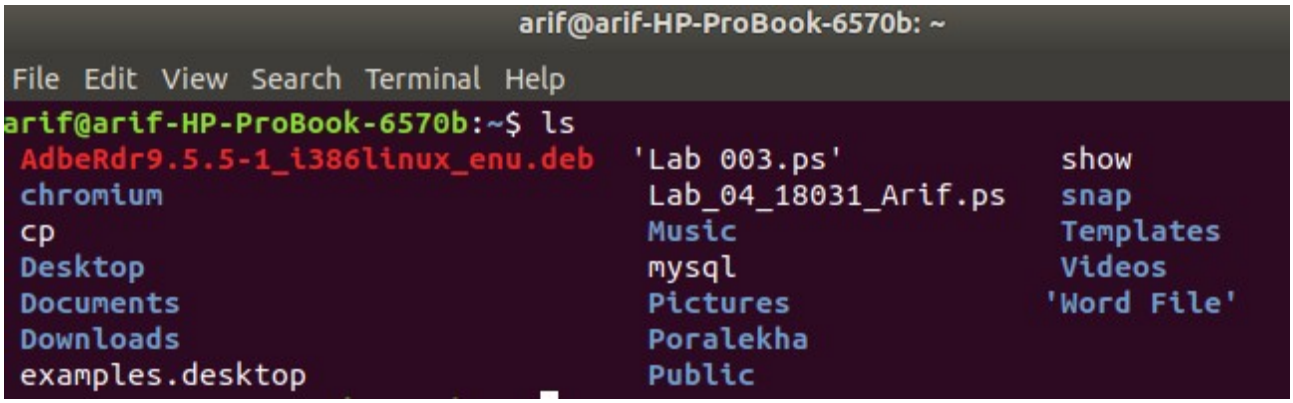
Answer: Linux is a Unix-Like operating system. All the Linux/Unix commands are run in the terminal provided by the Linux system. This terminal is just like command prompt of Windows OS. Linux/Unix commands are case-sensitive, terminal can be used to accomplish all Administrative tasks. This includes package installation, file manipulation, and user management. Linux terminal is user-interactive. The terminal outputs the results of commands which are specified by the user itself.

2. **Describe the operation of Linux basic command(screenshot)**

Answer : The operation of basic Linux command is given below :

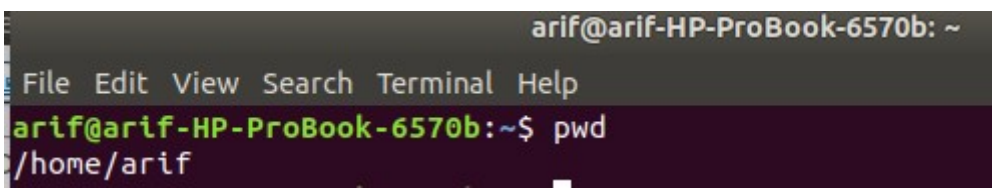
1) ls : ls command is used for listing contents of a directory. It works as dir command.

Example :



2) pwd : pwd command displays the name of current/working directory as below.

Example:



3) chmod: chmod command is used to change/update file access permissions like this .

Example:

```
Usage: chmod [OPTION]... MODE[,MODE]... FILE...
  or:  chmod [OPTION]... OCTAL-MODE FILE...
  or:  chmod [OPTION]... --reference=RFILE FILE...
Change the mode of each FILE to MODE.
With --reference, change the mode of each FILE to that of RFILE.

  -c, --changes          like verbose but report only when a change is made
  -f, --silent, --quiet  suppress most error messages
  -v, --verbose          output a diagnostic for every file processed
      --no-preserve-root  do not treat '/' specially (the default)
      --preserve-root    fail to operate recursively on '/'
      --reference=RFILE  use RFILE's mode instead of MODE values
  -R, --recursive        change files and directories recursively
      --help     display this help and exit
      --version  output version information and exit

Each MODE is of the form '[ugoa]*([-+=]([rwxXst]*|[ugo]))+|[-+=][0-7]+'.

GNU coreutils online help: <http://www.gnu.org/software/coreutils/>
Full documentation at: <http://www.gnu.org/software/coreutils/chmod>
or available locally via: info '(coreutils) chmod invocation'
```

4) df: df command is used to show file system disk space usage as follows.

Example:

```
Filesystem     1K-blocks    Used Available Use% Mounted on
sysfs                  0       0         0    - /sys
proc                   0       0         0    - /proc
udev              479464       0    479464   0% /dev
devpts                 0       0         0    - /dev/pts
tmpfs             100668    1544     99124   2% /run
/dev/sda1       30830500 5998968  23242388  21% /
securityfs             0       0         0    - /sys/kernel/security
tmpfs             503336       0    503336   0% /dev/shm
tmpfs               5120       4      5116   1% /run/lock
tmpfs             503336       0    503336   0% /sys/fs/cgroup
cgroup                 0       0         0    - /sys/fs/cgroup/unified
cgroup                 0       0         0    - /sys/fs/cgroup/systemd
pstore                 0       0         0    - /sys/fs/pstore
cgroup                 0       0         0    - /sys/fs/cgroup/net_cls,net_prio
cgroup                 0       0         0    - /sys/fs/cgroup/hugetlb
```

5) du: du command is used to show disk space usage of files present in a directory as well as its sub – directories .

Example :

```
4.0K    ./Documents
4.0K    ./Templates
4.0K    ./Downloads
12K     ./.cache/update-manager-core
20K     ./.cache/ibus/bus
24K     ./.cache/ibus
4.0K    ./.cache/libgweather
4.0K    ./.cache/evolution/memos/trash
8.0K    ./.cache/evolution/memos
4.0K    ./.cache/evolution/tasks/trash
8.0K    ./.cache/evolution/tasks
4.0K    ./.cache/evolution/addressbook/trash
8.0K    ./.cache/evolution/addressbook
4.0K    ./.cache/evolution/calendar/trash
8.0K    ./.cache/evolution/calendar
4.0K    ./.cache/evolution/sources/trash
8.0K    ./.cache/evolution/sources
4.0K    ./.cache/evolution/mail/trash
8.0K    ./.cache/evolution/mail
52K     ./.cache/evolution
176K    ./.cache/gnome-software/fwupd/remotes.d/lvfs
180K    ./.cache/gnome-software/fwupd/remotes.d
184K    ./.cache/gnome-software/fwupd
456K    ./.cache/gnome-software/odrs
708K    ./.cache/gnome-software/shell-extensions
```

6) mkdir: mkdir command is used to create single or more directories, if they do not already exist (this can be overridden with the –p option).

Example:

```
mkdir (GNU coreutils) 8.28
Copyright (C) 2017 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by David MacKenzie.
```

7) passwd : passwd command is used to create or update passwords for user accounts, it can also change the account or associated password validity period.

Example:

```
Changing password for anika.
(current) UNIX password:
```

8) rm : rm command is used to remove files or directories.

Example:

```
Usage: rm [OPTION]... [FILE]...
Remove (unlink) the FILE(s).

  -f, --force           ignore nonexistent files and arguments, never prompt
  -i                    prompt before every removal
  -I                    prompt once before removing more than three files, or
                          when removing recursively; less intrusive than -i,
                          while still giving protection against most mistakes
      --interactive[=WHEN]  prompt according to WHEN: never, once (-I), or
                          always (-i); without WHEN, prompt always
      --one-file-system  when removing a hierarchy recursively, skip any
                          directory that is on a file system different from
                          that of the corresponding command line argument
      --no-preserve-root  do not treat '/' specially
      --preserve-root   do not remove '/' (default)
  -r, -R, --recursive   remove directories and their contents recursively
  -d, --dir             remove empty directories
  -v, --verbose         explain what is being done
      --help     display this help and exit
      --version  output version information and exit
```

9) ln : ln command is used to create a soft link between files using the –s flag .

Example :

```
ln (GNU coreutils) 8.28
Copyright (C) 2017 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by Mike Parker and David MacKenzie.
```

10) tar : tar command is a most powerful utility for archiving files in Linux.

Example :

```
tar (GNU tar) 1.29
Copyright (C) 2015 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
```

11) cd : cd stands for change directory and it does the same as it name stands for.

Example :

```
Desktop    Downloads          Music     Public     Videos
Documents  examples.desktop   Pictures  Templates
```

Conclusion: In this Lab, we learnt about the basic command of linux. We are apply this command in linux to do many types of task, basically huge types of operations. So, this lab report is very helpful for starting this operating system.