Experiment - 1

Aim :- Introduction to Linux Operating System (Ubuntu 16.04 LTS) terminal and its basic instructions.

Theory :-

What is Linux ?
Linux is a Kernel created by Linus Torvalds, as an open source project.
Linux is often used for OS that uses the Unix like operating system Kernel.
It is a free open source OS, developers have access to all Linux source code, and are permitted under the license conditions to modify and distribute it.

What is a linux shell or terminal ?
Shell is a program that allows the user to access the terminal. Terminal is used to run command.
Shell is a command process that allows you to control the computer via commands typed into a text interface.

Types of Linux :- Linux has a no. of different versions to suit nearly any type of user. These versions are called distributions (or distros.).
The most popular Linux distributions are- Ubuntu, Linux Mint, Arch Linux, Fedora, openSUSE, Debian, Mandriva, Deepin, Red Hat Linux, etc.

Linux Commands :-

pwd :- It gives you the path of the present working directory.
Syntax :- pwd

ls :- List files and/or directories.
Syntax :- ls

cd :- Change the current working directory to the directory provided as argument.
Syntax :- cd Desktop

mkdir :- To create a directory (make directory).
Syntax :- mkdir dirname

rmdir :- It can only be used to delete an empty directory.
Syntax :- rmdir dirname

rm :- To delete a directory containing files or to delete a file.
Syntax :- rm filename or rm -r dirname.

touch :- It is used to create a file. It can be anything, from an empty txt file to an empty zip file.
Syntax :- touch new.txt

man :- It shows the manual pages of the command.
Syntax :- man cd - It shows the manual pages of cd.

cp :- It is used to copy files. It takes two arguments : The first is the location of the file to be copied, the second is where to copy.
Syntax :- cp file1 file2

mv :- It is used to move files. It takes the two arguments, just like the cp command.
Syntax :- mv file1 file2

echo :- It helps us move some data, usually text into a file.
Syntax :- echo some text >> filename.txt

cat :- To display the contents of a file.
Syntax :- cat filename

sudo :- sudo stands for "Super User Do." So, if you want any command to be done with admin or root previleges, you can use the sudo command.

df :- To see the available disk space in all the partitions.
Syntax :- df or df -m (To show in megabytes)

du :- To know the disk usage of a file in your system.
Syntax :- df filename or df foldername

tar :- It can be used to compress and uncompress different types of tar archives.

uname :- To show the information about the system your Linux distro is running.
Syntax :- uname -a

apt-get :- It is used to install packages.
Syntax :- sudo apt-get install packagename

chmod :- To make a file executable and to change the permissions granted to it in Linux.
Syntax :- chmod 755 filename (To give root permissions)

ping :- To check your connection to a server.
Syntax :- ping server_name e.g., ping google.com

ln :- Used for creating link between files.
Syntax :- ln filename linkname

chown :- chown command allows you to change the ownership and group of a file.
Syntax :- chown root : root filename

find :- It lets you search for files in a directory as well as its sub-directories.
Syntax :- find filename

locate :- To locate a file in a system, just like the search command in Windows.
syntax :- locate -i fileword

grep :- Filter text which matches a regular expression.
Syntax :- grep 'expression' filename

free :- It shows the system memory usage.
Syntax :- free -h

date :- It displays or sets the system date and time.
syntax :- date or date --set = "27 JAN 2019 8:00:00"

Passwd :- Used to create or update passwords for user accounts
Syntax :- Passwd

ps :- Report the status of a process or processes.

mount :- Mount a file system so that its data may be accessed.

su :- Used to switch to another user ID or become a root during a login session.
Syntax :- su username