

## Lab 02 Shell Commands

### 1. Sudo

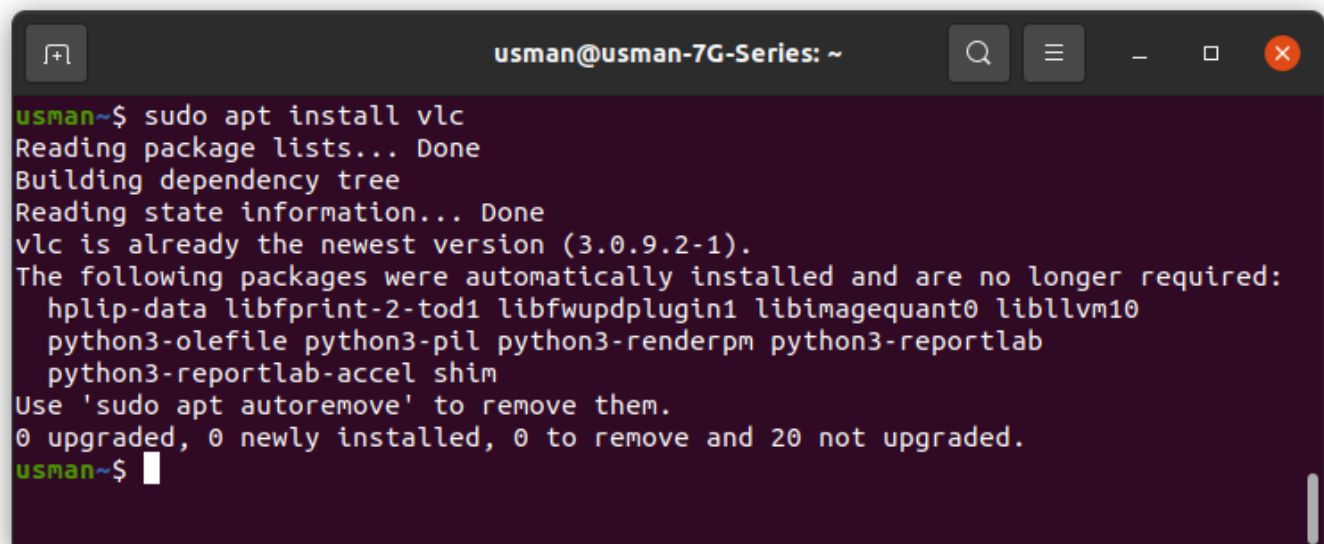
sudo (SuperUser DO) Linux command allows you to run programs or other commands with administrative privileges, just like “Run as administrator” in Windows.

### 2. Apt

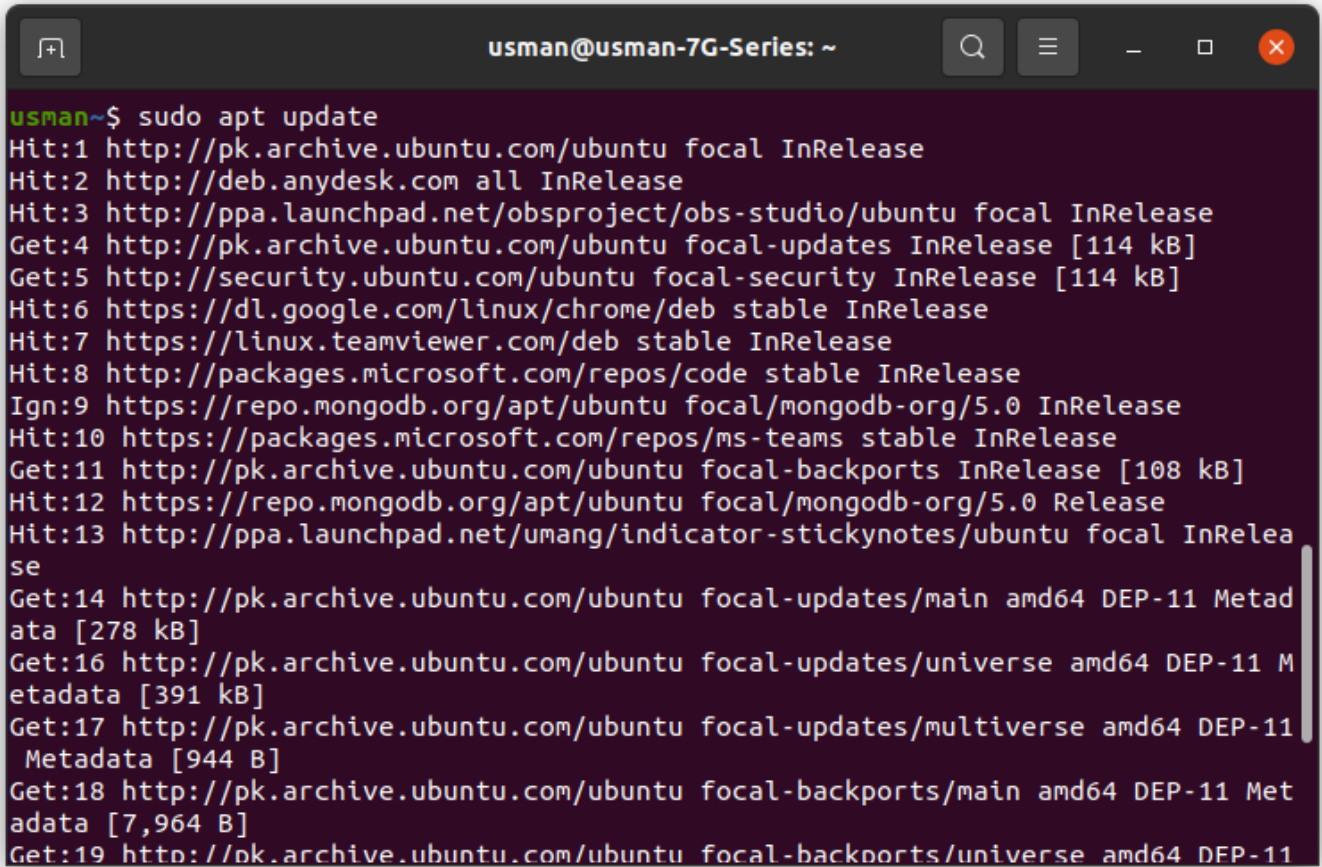
The apt command is a powerful command-line tool, which works with Ubuntu’s Advanced Packaging Tool (APT) performing such functions as installation of new software packages, upgrade of existing software packages, updating of the package list index, and even upgrading the entire Ubuntu system.

Some examples of popular uses for the apt utility:

```
sudo apt install vlc
```



```
usman@usman-7G-Series: ~  
usman~$ sudo apt install vlc  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
vlc is already the newest version (3.0.9.2-1).  
The following packages were automatically installed and are no longer required:  
  hplip-data libfprint-2-tod1 libfwupdplugin1 libimagequant0 libllvm10  
  python3-olefile python3-pil python3-renderpm python3-reportlab  
  python3-reportlab-accel shim  
Use 'sudo apt autoremove' to remove them.  
0 upgraded, 0 newly installed, 0 to remove and 20 not upgraded.  
usman~$
```



```
usman~$ sudo apt update
Hit:1 http://pk.archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://deb.anydesk.com all InRelease
Hit:3 http://ppa.launchpad.net/obsproject/obs-studio/ubuntu focal InRelease
Get:4 http://pk.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:5 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Hit:6 https://dl.google.com/linux/chrome/deb stable InRelease
Hit:7 https://linux.teamviewer.com/deb stable InRelease
Hit:8 http://packages.microsoft.com/repos/code stable InRelease
Ign:9 https://repo.mongodb.org/apt/ubuntu focal/mongodb-org/5.0 InRelease
Hit:10 https://packages.microsoft.com/repos/ms-teams stable InRelease
Get:11 http://pk.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Hit:12 https://repo.mongodb.org/apt/ubuntu focal/mongodb-org/5.0 Release
Hit:13 http://ppa.launchpad.net/umang/indicator-stickynotes/ubuntu focal InRelease
Get:14 http://pk.archive.ubuntu.com/ubuntu focal-updates/main amd64 DEP-11 Metadata [278 kB]
Get:16 http://pk.archive.ubuntu.com/ubuntu focal-updates/universe amd64 DEP-11 Metadata [391 kB]
Get:17 http://pk.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 DEP-11 Metadata [944 B]
Get:18 http://pk.archive.ubuntu.com/ubuntu focal-backports/main amd64 DEP-11 Metadata [7,964 B]
Get:19 http://pk.archive.ubuntu.com/ubuntu focal-backports/universe amd64 DEP-11
```

### 3. pwd

pwd (print working directory) Ubuntu command displays the full pathname of the current working directory.

### 4. ls

ls (list) command lists all files and folders in your current working directory. You can also specify paths to other directories if you want to view their contents.

### 5. mkdir

mkdir (make directory) command allows you to create a new directory.

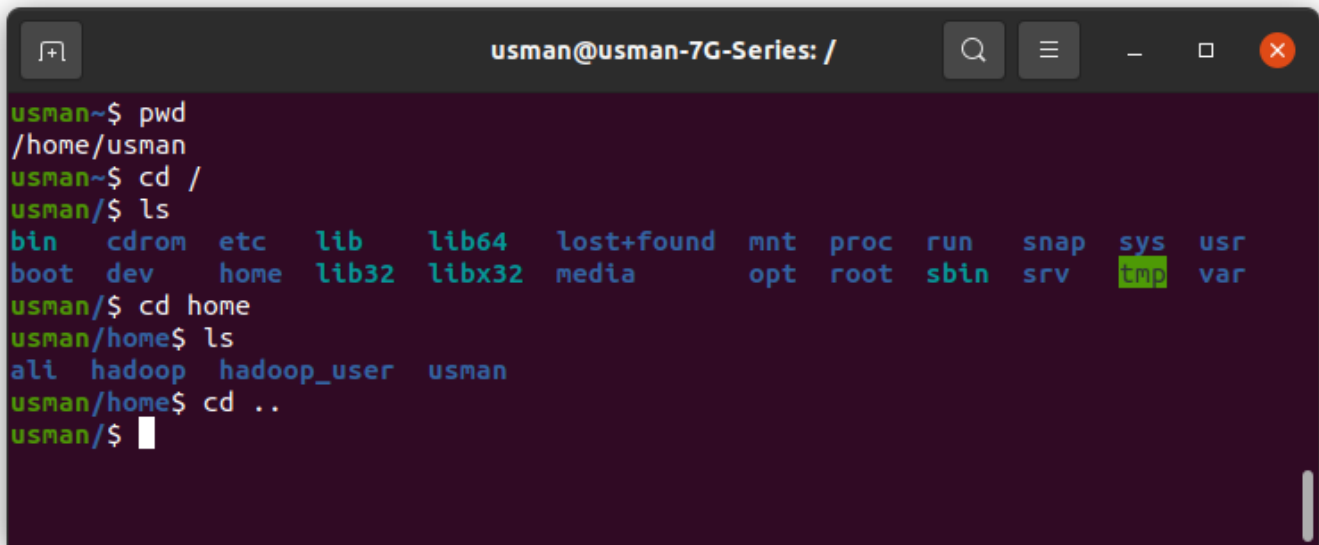
### 6. touch

touch is one of the standard Ubuntu Linux commands used to create any kind of file in the current working directory.

## 7. cd

cd (change directory”) Linux command also known as chdir used to change the current working directory. It’s one of the most used basic Ubuntu commands. Using this command is easy, just type cd followed by the the folder name. You can use full paths to folders or simply the name of a folder within the directory you are currently working. Some common uses are:

- cd / – Takes you to the root directory.
- cd home – Open home folder in current directory.
- cd .. – Takes you up one directory level.

A terminal window titled 'usman@usman-7G-Series: /' with standard Ubuntu window controls. The terminal shows the following commands and output:

```
usman~$ pwd
/home/usman
usman~$ cd /
usman/$ ls
bin  cdrom  etc  lib  lib64  lost+found  mnt  proc  run  snap  sys  usr
boot  dev  home  lib32  libx32  media  opt  root  sbin  srv  tmp  var
usman/$ cd home
usman/home$ ls
ali  hadoop  hadoop_user  usman
usman/home$ cd ..
usman/$
```

## 8. cp

cp (copy) Linux command allows you to copy a file. You should specify both the file you want to be copied and the location you want it copied to – for example, cp xyz /home/usman/pf would copy the file “xyz” to the directory “/home/usman/pf”.

## 9. mv

mv (move) command allows you to move files. The usage is the same as cp – for example mv xyz /home/usman/pf would move the file “xyz” to the directory “/home/usman/pf”.

## 10.rm

rm (remove) command removes the specified file.

## 11. man

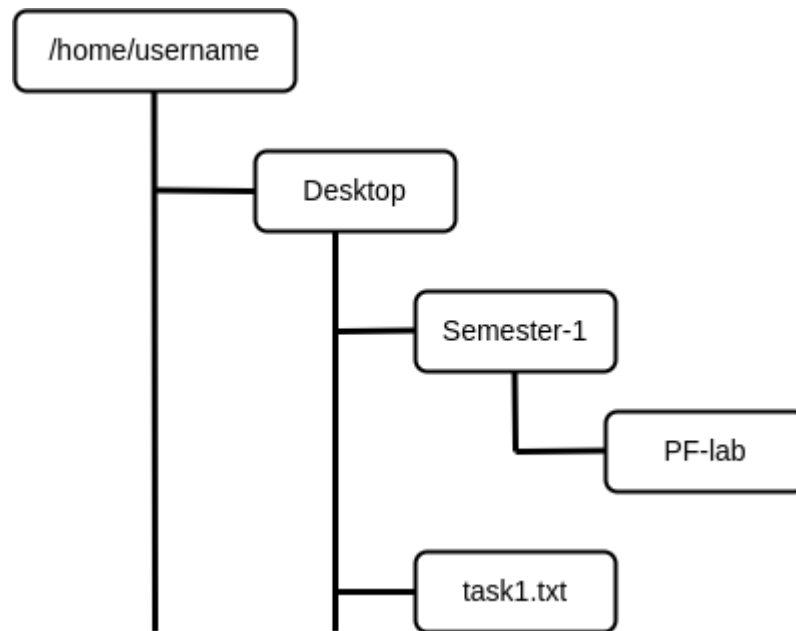
man command displays a “manual page”. Manual pages are usually very detailed, and it’s recommended that you read the man pages for any command you are unfamiliar with.

To further ease up your skill, these Ubuntu Terminal keyboard shortcuts would help.

Ubuntu Terminal Shortcuts	Function
<b>Ctrl + Alt + T</b>	<b>Open new terminal</b>
<b>Ctrl + A</b>	<b>Move cursor to beginning of line</b>
<b>Ctrl + E</b>	<b>Move cursor to end of line</b>
<b>Ctrl + U</b>	<b>Clears the entire current line</b>
<b>Ctrl + L</b>	<b>Clears the terminal output</b>
<b>Up/Down Arrow keys</b>	<b>To scroll through your command history, allowing you to quickly execute the same command multiple times</b>

## Practice

Create the following hierarchy using commands as shown below:



After creating the above hierarchy do the following:

1. Now copy the `task1.txt` from `Desktop` to `PF-lab` Directory.
2. Create a copy of this `task1.txt` with name `task1-1.txt` in `PF-lab` Directory
3. Now move `task1-1.txt` to `Desktop`
4. Delete `task1-1.txt` from `Desktop`
5. Change path to home directory