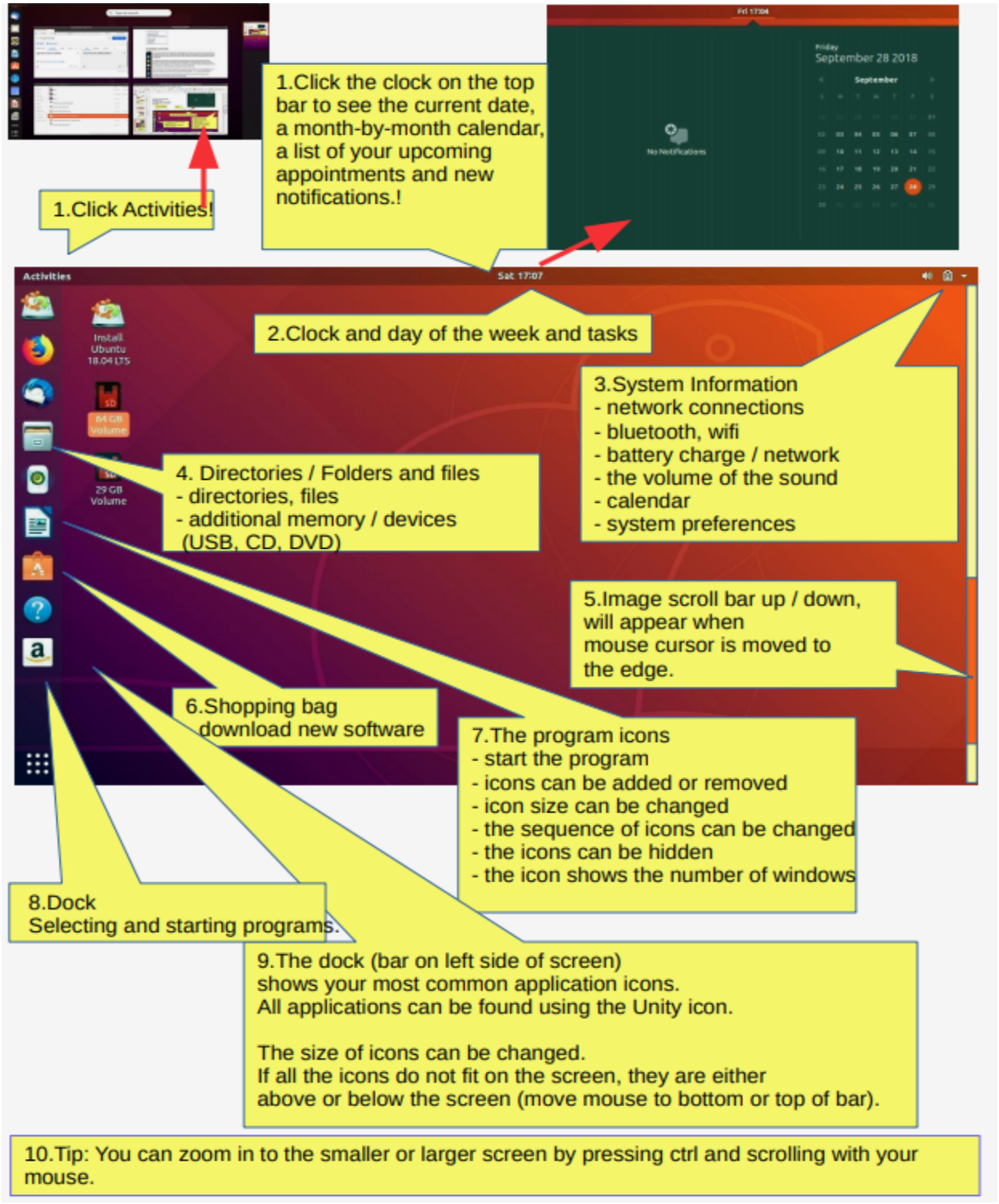
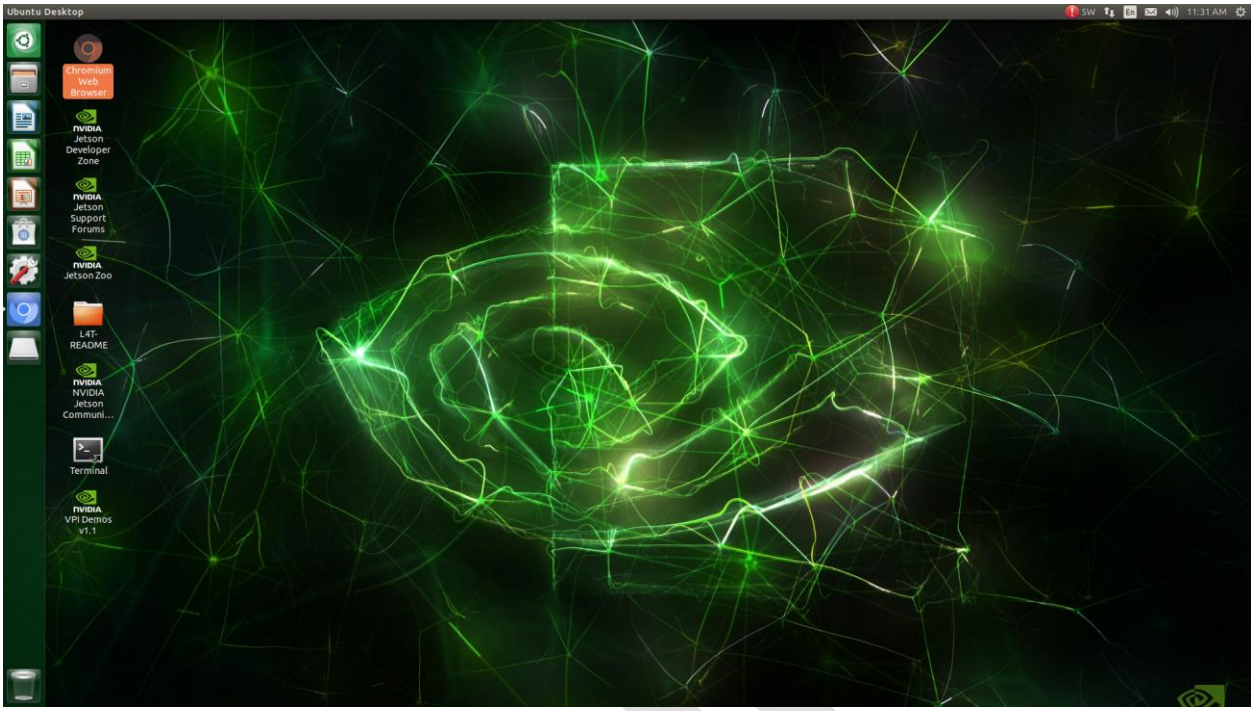
The Elements of Welcome Screen(Linux):



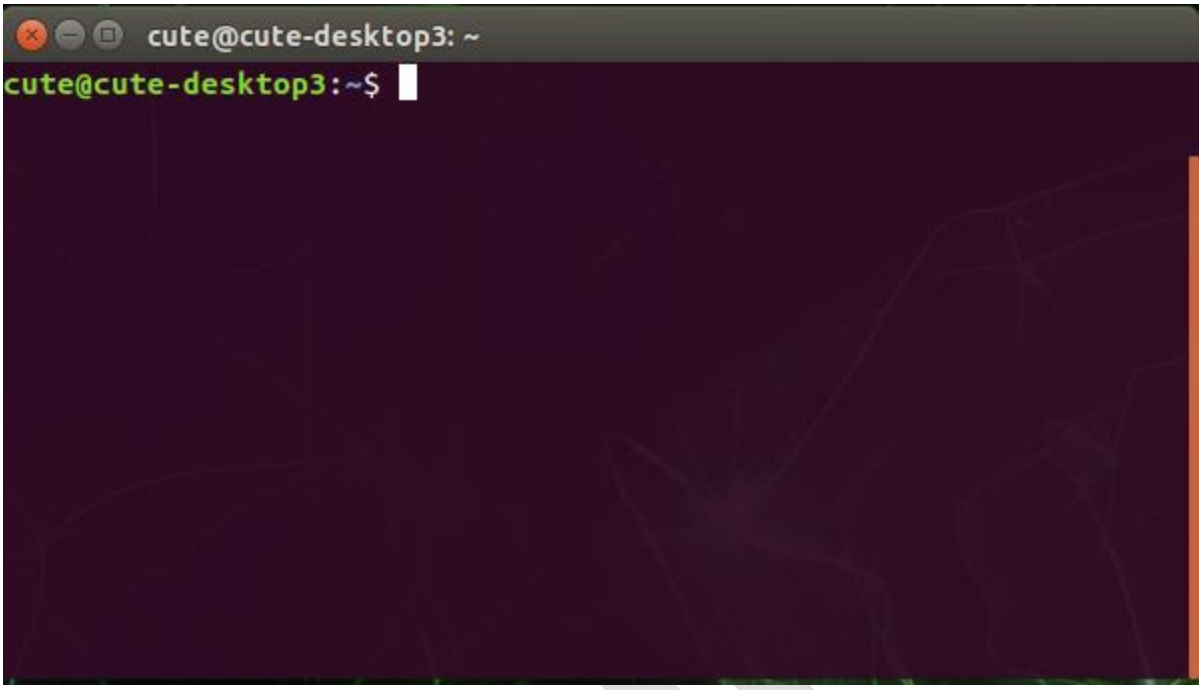
For Ubuntu Details: https://www.ubuntutor.com/ubuntu18eng/Ubuntu%201804%20english.pdf
Commands : https://web.njit.edu/~alexg/courses/cs332/OLD/S2020/s20hand3/Linux-Tutorial.pdf

The Desktop screen of Jetson nano after Login:



In the Dock Click on Green Icon (Search your Computer) -> Type Terminal

Launch(Click/Enter) Terminal



Unix/Linux Command can be executed in the terminal.

IMPORTANT: The Nano runs on Linux and it is case sensitive (Uname ≠ uname) U caps and u small will be distinct.

Everything in Linux is file,including your devices like camera, keyboard, monitor etc. Directories are special files, these are places where you put other files. On Mac and Windows they are called folders. The Path in Linux is represented as words connected by the **"/"** character. The " **/** " is called the root of the file system. The path that starts with **"/"** is called absolute path (eg. ***/home/cute***) and the path which starts with **' . ' or ' .. '** is called a relative path (eg. **./etc/config.sh)**

PS: Unlike on Windows, they use a "\", just to be different. e.g. C:\User\Desktop

$ sign will be used to show before text is command, to use them do not copy the $ sign angular bracket are used < > to denote possible value

To check system details
$ uname -a

Here ***uname*** is *command* name and **-a** is called option that is passed to command.

Basic UNIX commands

Wild Characters :

~ "tilde" indicates your home directory: /home/you
* "star": wildcard, matches anything
? wildcard, matches any one character
& run a job in the background, or redirect errors
> , <, >> I/O redirection

Print name of the "current working directory"
$ pwd

```
cute@cute-desktop3:~$ pwd
/home/cute
```

The **ls** command lists the contents of your current working directory
$ ls

```
cute@cute-desktop3:~$ ls
Desktop    Downloads         Music     Public     Videos
Documents  examples.desktop  Pictures  Templates
```

PS:The Blue color shows the given file is a directory.

The command cat to create a file (tTo end the input press ctrl+D keys)
$echo > list.txt

```
cute@cute-desktop3:~$ cat > list.txt
ahmed
rimaz
zahir, yusuf
Aamir
```

The command cat (concatenate) can be used to display the contents of a file on the screen.
$ cat list.txt

```
cute@cute-desktop3:~$ cat list.txt
ahmed
rimaz
zahir, yusuf
Aamir
cute@cute-desktop3:~$
```

To clear screen
$ clear

Making Directories (mkdir)

$ mkdir <dir_name>

```
cute@cute-desktop3:~$ ls
Desktop     Downloads         list.txt  Pictures  Templates
Documents   examples.desktop  Music     Public    Videos
cute@cute-desktop3:~$ mkdir test
cute@cute-desktop3:~$ ls
Desktop     Downloads         list.txt  Pictures  Templates  Videos
Documents   examples.desktop  Music     Public    test
cute@cute-desktop3:~$
```

Changing Directory

$ cd <path_of directory or directory name>

```
cute@cute-desktop3:~$ cd /home/cute/test/
cute@cute-desktop3:~/test$ pwd
/home/cute/test
cute@cute-desktop3:~/test$ cd ..
cute@cute-desktop3:~$ pwd
/home/cute
cute@cute-desktop3:~$ cd ./test
cute@cute-desktop3:~/test$
```

The directories '. ' is current directory and ' .. ' is parent directory

To move a file

$ mv /src_path/file.txt ../dest_path/file.txt

- same name, different directory

```
cute@cute-desktop3:~$ ls
Desktop     Downloads         list.txt  Pictures  Templates  Videos
Documents   examples.desktop  Music     Public    test
cute@cute-desktop3:~$ mv list.txt ./test
cute@cute-desktop3:~$ ls
Desktop     Downloads         Music     Public    test
Documents   examples.desktop  Pictures  Templates  Videos
cute@cute-desktop3:~$
```

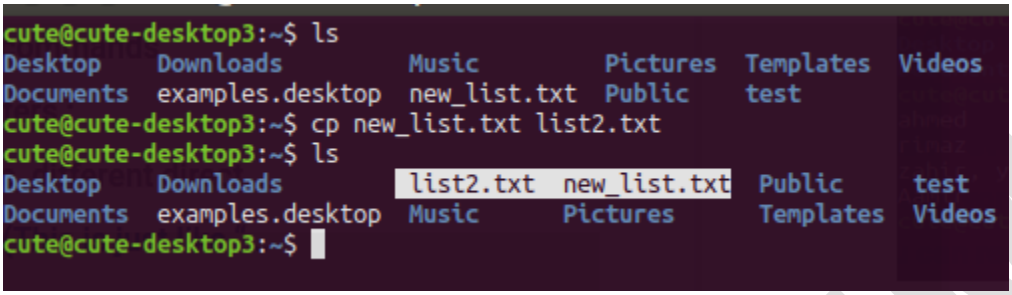
To rename a file.

$ mv oldname.txt newname.txt

```
cute@cute-desktop3:~$ ls
Desktop     Downloads         Music     Public    test
Documents   examples.desktop  Pictures  Templates  Videos
cute@cute-desktop3:~$ mv ./test/list.txt ./new_list.txt
cute@cute-desktop3:~$ ls
Desktop     Downloads         Music         Pictures  Templates  Videos
Documents   examples.desktop  new_list.txt  Public    test
cute@cute-desktop3:~$ cat new_list.txt
ahmed
rimaz
zahir, yusuf
Aamir
cute@cute-desktop3:~$
```

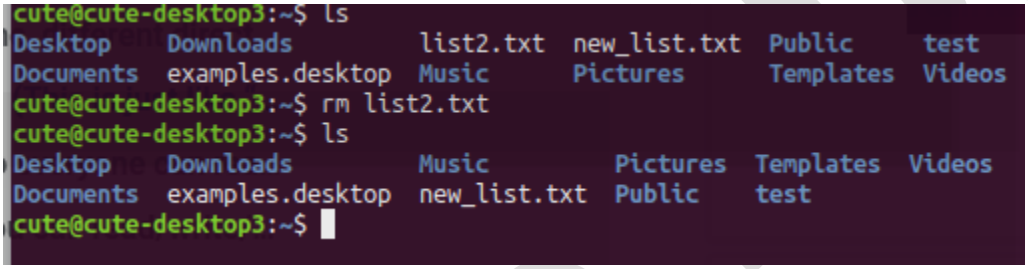
To copy file (This is just like “mv” except it does not delete the original)

$ cp test1/file.txt ../test2/file.txt



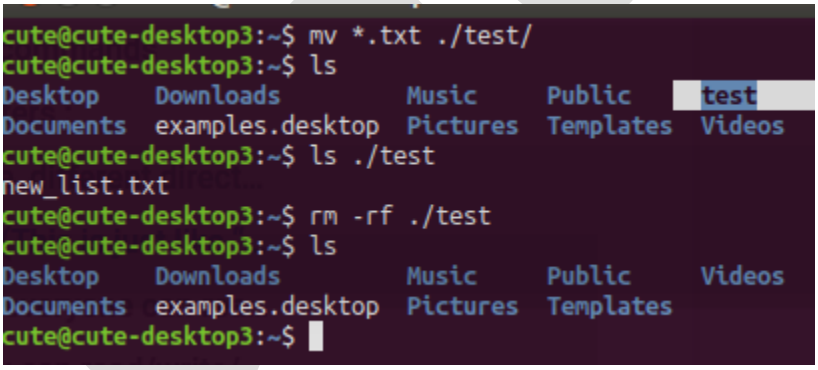
Remove a file forever. **There is no “undelete”**

$ rm < filename>



Forcefully remove directory

rm –rf <path_to_your_directory> /dir_name/



To change the “permission” of a file chmod

(Types are a - all, u - user g - group, ‘ + ‘ to add permission, ‘ - ‘ is to remove permissions
Permissions: x - execute, r - read, w - write)

$ chmod a+r filename.txt

- make it so everyone can read it

$ chmod u+rwx filename.txt

- make it you can read/write/execute it

$ chmod –R u+rw /some/random/place

- make it so you can read/write everything under a directory

HELP: Getting help can be done using man command, usage **man <cmd_name> eg.**

$ man ls

Above command will show help on **ls** command

To Reboot system (sudo is used for running command as root user that is superuser/admin and require password of user)

$ `sudo reboot`

`The sudo apt-get update command is used to download package information from all configured sources.`

$ sudo apt-get update

$ sudo su <username> to change user

Environment Variables

Some of the environment variables are :

$USER - Your login name
$HOME - Path name of your home directory
$HOSTNAME - Name of the computer you are using
$PATH - Directories the shell searches to find commands
$SHELL – The shell you are using (should be bash!)

Environment variables are displayed using the env command.

$ env

To check the value of a specific environment variable (eg. for path variable)

$ echo $PATH

wget is a web client (not a browser). It can be used to download files from web and ftp sites. copy link of the source <url> and use it as shown:

$ wget https://web.njit.edu/~alexg/courses/cs332/OLD/S2020/s20hand3/Linux-Tutorial.pdf

Extracting from zip or tar file
$ gunzip filename.gz
$ tar -zxvf filename.tar.gz

Search through directories, find files
$ find ./ -name ifilname_to search*.txt

Check how much space is left on disks
$ df