* Sudo

-> All the demonstrations created have a user configured with sudo capabilities to Provide the user with administrative Priviledges when required.

-> sudo allows user to run Programs using the security Privileges of another user generally root (superuser).

* Turning off the Graphical Desktop

-> Linux distributions can start and stop the graphical desktop in various ways.

-> The exact method differs among distributions and between versions.

-> For the newer system-based distributions the display manager is run as a service and you can stop GUI desktop with the systemctl utility.

-> In addition most distribution will work with the telinit command as in

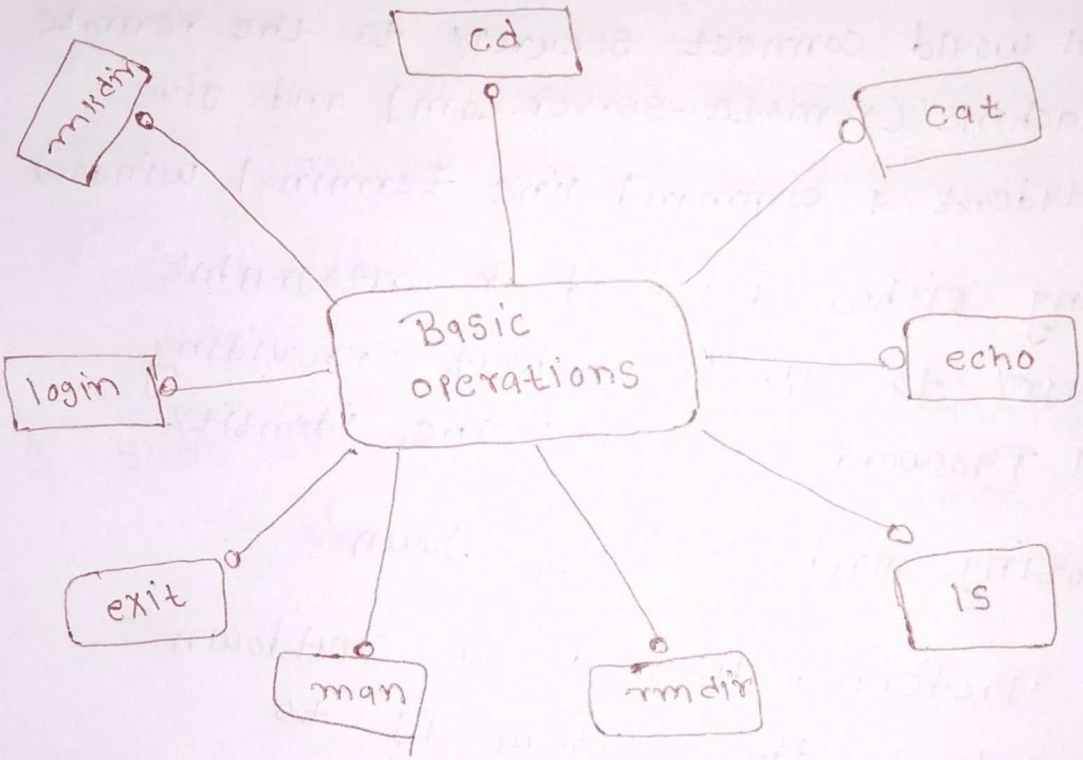
$ sudo systemctl stop gdm (or sudo telinit 3)
and restart it (after loggin into console)
$ sudo systemctl start gdm (or sudo telinit 5)

* Basic operations

-> The section include how to log in and log out from the system.

-> Restart or shut down the system.

-> Locate applications, access directories, identify absolute and relative paths and explore the file system.



* Logging in and out

-> An available text terminal will prompt for a username (with the string login) and Password.

-> when typing your password nothing is displayed on the terminal (not even * this).

→ After you have logged into the system, you can perform basic operation.

→ once your session is started, you can also connect and log into remote systems by using Secure SHell (SSH)
For example by typing ssh

student@remote-server.com

→ SSH would connect securely to the remote machine (remote-server.com) and give student a command line terminal window

→ using either password or cryptographic key to sign in without providing a password to varify the identity.

* Rebooting and Shutting Down

→ The Preferred method to shutdown or reboot the system is to use shutdown command.

→ This sends warning message and then Prevent further user from logging in.

→ The init process will then control shutting down or rebooting the system.

→ The halt and Poweroff commands issue shutdown -h to halt the system

→ reboot issue shutdown -r and cause the machine to reboot instead of just shutting down.

→ Both rebooting and shutting down from the command line require super user (root) access.

→ when administering a multi user system, you have the option of notifying all user Prior to shutdown.

```
$ sudo shutdown -h 10:00 "shutting down for scheduled maintenance."
```

* Locating Applications

→ Depending on the specifics of your particular distribution's Policy, Program and Software Packages can be installed in various directories.

→ In general, executable programs and scripts should live in the /bin, /bin/user, /sbin, /usr/sbin directories or somewhere under /opt.

→ They can also appear in /usr/local/sbin and /usr/local/sbin or in directory in user's account space such as /home/student/bin.

→ on the way to locate Programs is to employ the which utility.
For example to find out exactly where diff ~~Program~~ resides on the file system.

$ which diff

→ ~~user~~ /usr/bin/diff

NOTE :- If which does not find the program whereis is good alternative because it looks for Packages in broader range of directories.

$ whereis diff

→ diff: /usr/bin/diff

/usr/share/man/man1/diff.1.gz

/usr/share/man/man1p/diff.1p.gz

→ whereis command will locate man files packaged with the program.

* Accessing Directories

→ when you first log into a system or open a terminal

→ The default directory should be your home directories.

→ you can see the exact location by typing

echo $HOME.

→ However most Linux distributions open new graphical terminals $HOME/Desktop instead.

Command	Result
pwd	Display present working directory
cd ~ or cd	change to your home directory shortcut name is ~
cd..	change to parent directory (..)
cd-	change to Previous working directory