

A discussion of the BASH Shell, or the Linux command line.

The CLI (Command Line Interface) is another method to interface with the OS in addition to the GUI(Graphical User Interface).

Some GUI tools are no more than windows that create CLI calls and display the results (synaptic, apt)

Sometimes the GUI may be easier NetworkManager.

Sometimes the CLI can do the job eraser/faster How do you find all the files in your home directory that contain some item?

GUI open all the files you think have it in it.

CLI use the grep command

Another example is list all files that have "abc" as part of the name

(find -name "*abc*")

How much space are you using on disk?

(df -h)

Which file/directory is eating up all that space?

(du or back to find again)

You also have a "history" of the commands you have entered and you can look through it, or run the same command again with some changes.

This document was created by a command line program called vi or vim, and also with gedit in the GUI. Can you tell which did the edits?

Some commands that are useful;

```
$ pwd          # print working directory
                # ( where the heck am I )
$ cd           # change working directory
                # ( cd ~ will take you to your "home" dir)
$ cat SomeFile # output the contents of SomeFile to the display
$ ls           # List files ( some options to use -l is long,
                #
                # -t time order, -r reverse the order )
$ cp OldFile NewFile # copy OldFile to NewFile
$ rm TrashFile  # remove the file TrashFile from the system
$ mv OldFile NewFile # move OldFile to NewFile (aka rename )
$ tar          # copy files & directorys to another location,
                # possibly compressing
$ rsync        # used to keep a "backup of something"
                # may be used locally or over the network
$ find         # find files that match some criteria
```


What are the 10 biggest files on my home partition?

```
sudo du -ax /home | sort -nr | head --lines=10
```

What the heck is that junk??

The "|" is called a pipe character it says roughly take the output of the stuff on its left and feed it into the stuff on its right.

Do a diskusage (du) on the home directory, check all files but only check on one filesystem/partition.

Then sort the output in reverse numeric order on the first field.

Then output to the terminal only the first 10 lines.

What if I want to see ALL the files from above but in a text file?

```
sudo du -ax /home | sort -nr > ~/myDiskUsage
```

That new symbol ">" is a redirect character it says the output of this step should be placed in the file it is pointing to starting at the first line. I could also use a ">>" in some cases to say put the output at the end of the file.

There is a third redirect "<" that says take the contents of a file and input them to the command. I have not used it very often.

Where do you go for more information?

- 1 The commands help option usually either the command with a -h, or --help;
\$ cp --help
- 2 The "man pages" try the command "man" followed by the command you have questions about.
\$ man cp
- 4 The info command may provide some additional "info" about the command;
\$ info cp
- 5 Grab a book, or mag, and read about the command