Command Line Basics

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1. **Command line interface (CLI)** -- a command line interface is a terminal where you type commands. It has no graphics, only text.
2. **Graphical user interface (GUI)** -- A GUI is a graphical front end for a CLI application. Basically a picture of what's happening so you can use it easier, since people are visual based a GUI will always be easier.
3. **Shell** -- A command line shell is basically the terminal, but it's called a shell. Shells come in many types, but they all involve terminals and commands.
4. **Bash** -- Bash is a scripting language. It's used to make scripts that can be run in the command line terminal. It's also the language used for the commands inside the terminal.
5. **Cd** -- Cd stands for Change Directory, it changes the directory you're in. For example if you're in the Desktop directory and want to go into the documents directory, assuming that's in the desktop directory just type 'cd Documents' while you're in Desktop.
6. **Ls/Dir** -- Ls and Dir both list the files and directories available wherever you happen to be. Ls is for Linux systems and Dir is for Windows systems.
7. **Pwd/Tree** -- Pwd prints the working directory aka the directory you're in at a given moment. Pwd is a Linux command. For Windows you can use tree or cd.
8. **Root** -- Root is the administrative user. Running something as root is the same as running something as administrator in Windows.
9. **Sudo** -- Also runs things as root, assuming the user is not the administrator.
10. **Touch** -- Touch is a Linux command that can create a new empty file or update timestamps.
11. **Cat** -- Cat is a command that reads a file and writes it to the command line. It can also be used to concatenate files.
12. **./** -- This is the command to run a program or script, assuming it's executable.
13. **Grep** -- The grep command is used for searching texts and files using regular expressions. Much like the Find utilities in GUI applications.

14. **Apt-get** -- The apt-get command is used to install software and modules, update them and remove them. The APT is the package manager in Linux, mostly in Debian and Ubuntu distros and distros relating to those, such as Linux Mint.
15. **More** -- Allows to see the contents of a text file. This is available in both Linux systems and Windows systems.
16. **Man** -- Man is the manual in Linux, it allows to read more information about a certain command and what it does.
17. **Help** -- Help lists all the commands and options you can use.
18. **Cp/Copy** -- Copies a file or directory to wherever the user specifies.
19. **Mv** -- Moves a file or directory.
20. **Rm/Del** -- Removes a file or directory. Del is for Windows, rm is for Linux.
21. **Mkdir/Md** -- Mkdir makes a new directory.
22. **Echo** -- Prints out whatever you write after echo.
23. **Set** -- Sets system and environment variables.
24. **Switch** -- A switch in command line commands is an option you can add to a command.
25. **Cls/Clear** -- Clears the screen. Clear is for Linux, cls is for Windows.
26. **Chmod --** The chmod command is used to alter file permissions. You can change whether a file can be read, written to and/or executed and by what user.
27. **Ifconfig/Ipconfig** -- Ifconfig shows network information. Things like MAC addresses, IP addresses, any wireless networks, adapters and so on. For windows use ipconfig, for linux use ifconfig.
28. **History -** The history command shows all the commands you have run in a particular session. You can search through them, run any command on that list and delete commands.
29. **Chown --** Chown changes the owner of a file or directory. Generally if you make a file or directory you are the owner of that file/directory. But not always. If you get files from other people or download from the internet, that will have a different owner in the properties. Some files might not be able to be read, written to, or executed unless you're the owner of that file.
30. **Id --** The id command shows the ids of all users and applications, should you need them for admin purposes or changing file permissions or anything like that.
31. **Last --** the last command lists all the users that have been logged in at a particular time, or the last time someone was logged in.

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32. **Locate --** the locate command helps find files of a specific name. Useful for when you need a particular file but don't know where it is.
33. **Lsof --** Lists all currently open files.
34. **Ps --** Shows all current running processes at a given time
35. **Uname --** prints system information, such as what OS someone is using, what version, etc
36. **Python --** This command launches the python shell. Here you can run commands in the python language
37. **Whoami --** Prints the current user, what you're logged in as
38. **Netstat --**Prints out even more network info, such as processes running on the network, port numbers, the status of these processes etc
39. **Ruby --** Another scripting language like Python. This command will allow you to write commands in the Ruby language.
40. **Nc --** Nc stands for netcat. It can listen in on connections using both TCP and UDP protocols. It can also open connections and send packets.
41. Ssh -- ssh can be used for remote connections and for logging in to other computers. It uses the OpenSSH client.

Sources:
https://opensource.com/article/18/6/history-command