**INTRODUCTION TO LINUX COMMANDS:**

**MAN:**

* **man:** stands for manual and is used to display the user manual for different commands and programs.
* This helps to understand how a command works,its options and examples.
* Contains so much info.
* Syntax: **man <command>**
* Ex: man ls
* **man -f <command>:** display a brief description of a command and the manual section it belongs to.
* Helpful when u want to quickly check the command without opening a full command.
* **man -k <keyword>:** this will always display all manual pages related to that keyword.

**Ls**

* **ls:** command used to list the files and directories.
* One of the most commonly used commands to check the files.
* Syntax: **ls**
  + **ls -l:** used to display the description of the files in the long format.
  + **ls -a:** used to display the hidden files.
  + **ls -lt:** lists the files by using the modification time (newest to oldest).
  + **ls -r:** used to list the files and directories in reverse order.

**cd**

* **cd:** change directory, used to navigate between the directories.
* Used to navigate from one folder to the other in the file system.
* Syntax:**cd**
  + **cd..:** used to move one level up in the directory**.**
  + **cd:** moves to the home directory.
  + **cd /:** moves to the root directory(top most directory in the Linux).

**pwd**

* **pwd:** print working directory in linux used to display the current directory of the current working directory.
* Syntax: **pwd**.

**mkdir**

* **mkdir:** used to create a new folder in the file system.
* Syntax: **mkdir <folder name>.**
  + **mkdir <folder name>:** used to create a new folder in the file system in the current location.
  + **mkdir dir1 dir2 dir3:** used to create multiple directories in the current location.
  + **mkdir -p parent/child/grand child:** used to create nested directories.

**rmdir**

* **rmdir:** used to remove an existing folder in the file system.
* Syntax: **rmdir <folder name>**
  + **rmdir <folder name>:**used to delete an existing folder in the file system only if it empty.
  + **rmdir dir1 dir2 dir3:** used to delete multiple directories in the current location only if it empty.
  + **rm -rf d1 d2:** forces the deletion of the directories and it’s content recursively without asking for confirmation.

**cp:**

* **cp:** copies the file into the other folder/directory. It creates a duplicate of the file.
* Syntax: **cp [options] source destination.**

**touch**

* **touch:** touch command is used to create an empty file or if the file exists, then opens the file in the write mode and updates the timestamps.
* Syntax: **touch filename**
  + **touch filename:** touch command is used to create an empty file or if the file exists, then opens the file in the write mode and updates the timestamps.
  + **touch file1 file2 file3:** creates multiple files at a time.
  + **touch -t yyyymmdd filename:** “-t” option in touch allows you to set a custom timestamp.

**ln**

* **ln:** a part of ln commands.
* It is used to create links.
* Link is basically a pointer to another file.
* 2 types:
  + Soft Link
  + Hard Link
* Hard Link: Hard links are very rare.
  + They have a few limitations.
  + You can’t link to the directories and can’t link to the external filesystems.
* Soft Link/Symbolic link: Soft links are more powerful.
* Can be able link to the directories and file systems.

**gzip:**

* **gzip:** compresses the file and replaces the original file with the compressed file.
* Syntax: **gzip filename**
  + Compress the multiple files: **gzip file1 file2 file3**
  + Compress the file without replacing by creating a duplicate: **gzip -k file**
  + Compress the file without replacing by creating a duplicate: **gzip -k file1 file2 file3**
  + Uncompress the file: **gunzip file**
  + Uncompress the multiple files: **gunzip file1 file2 fil3**
  + Uncompress the file without removing .gz file

**tail:**

* The tail command in Linux used to display the last few lines in the file.
* Syntax: **tail options filename**
  + **tail -n number filename:** displays last ‘n’ number of lines
  + **tail -c number filename:** displays last few number of bytes

**wc:**

* Wc command in linux is used to count the no.of lines, words, characters and bytes in a file.
* Syntax: **wc options filename**
  + **wc -l filename:** counts the no.of files
  + **wc -w filename:** counts the no.of words
  + **wc -m filename:** counts the no.of characters
  + **wc -c filename:** counts the no.of bytes

**grep:**

* Used for searching for text or patterns within the file.
* It supports regular expressions
* Syntax: **grep option pattern filename**
  + **grep -i “is” filename:** ignores for the lines that contains is in the file.
  + **grep -r “is” directory:** searches for the lines that contains is in the file and directories recursively.
  + **grep -n “is” filename:** returns the no.of lines for the lines that contain it in the file.
  + **grep -o “is” filename:** returns only words instead of whole line.
  + **grep -c “is” filename:** returns only no.of matching lines.

**sort:**

* sorts the lines of the textfiles in an order.
* Syntax: **sort filename**
  + **sort -r filename:** sorts the file in reverse order.

**uniq**

* uniq in linux used to filter the duplicate lines.
* Syntax: **uniq options filename**
  + **uniq -c filename:** counting the occurrences.

**diff**

* diff command in linux used to compare 2 files.
* Syntax: **diff file1 file2**

**echo:**

* Prints the text
* Syntax: **echo text**

**umask**

* umask is a command in linux that controls file permissions assigned to newly created files and directories.
* Syntax: **umask**

**du**

* du command in Linux is used to estimate the file usage of directories or files.
* Syntax: **du option file/directory**
  + **du /path/to/directory:** shows the disk storage of all the sub directories.

**df:**

* df command in linux is used to display the available space in the directory.
* Syntax: **df**