Task – 1

Commands of Kali Linux

Created By

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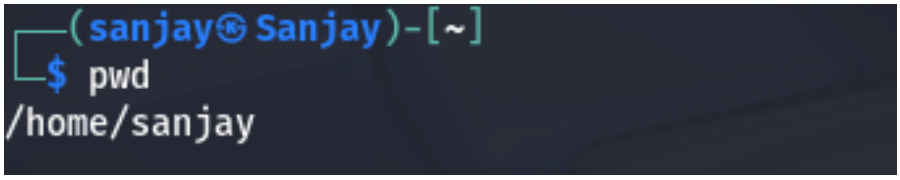
1. pwd:

Description:

The `pwd` command displays the complete path of the current working directory. It helps users understand their present location in the Linux filesystem. This is useful when navigating complex directory structures.

Command:



2. ls:

Description:

The `ls` command lists files and directories in the current location. It allows users to view available resources before performing operations. Different options can be used to display hidden or detailed file information.

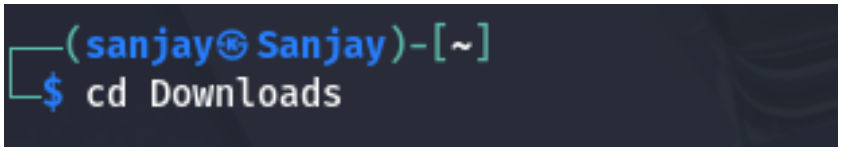
Command:

3. cd:

Description:

The `cd` command is used to change the current working directory. It allows navigation between folders in the Linux filesystem. Proper use of this command is essential for file management.

Command:



4. clear

Description:

The `clear` command removes all previous output from the terminal screen. It provides a clean workspace for executing new commands. This improves readability during long terminal sessions.

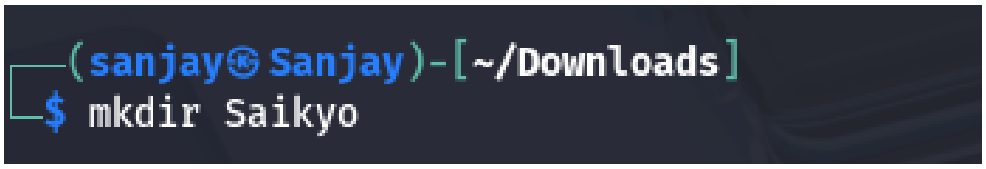
Command:

5. mkdir:

Description:

The `mkdir` command creates new directories in the filesystem. It helps organize files by grouping them into folders. Multiple directories can be created at once using options.

Command:



6. tree:

Description:

The `tree` command displays directories in a hierarchical tree format. It visually represents folder structure and subdirectories. This is useful for understanding project layouts.

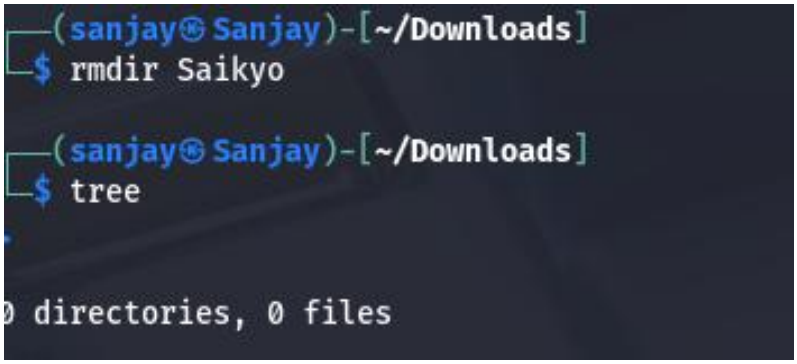
Command:

7. rmdir:

Description:

The `rmdir` command deletes empty directories. It prevents accidental deletion of directories containing files. This command ensures safe directory removal.

Command:



8. touch:

Description:

The `touch` command creates a new empty file. It can also update timestamps of existing files. This command is often used to quickly create files.

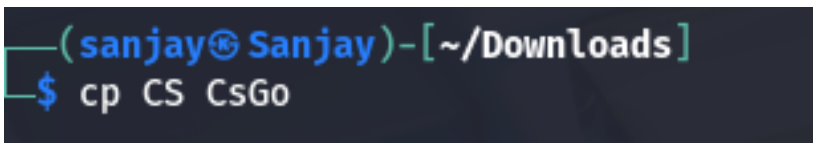
Command:

9. cp:

Description:

The `cp` command copies files or directories from one location to another. It is commonly used for backups and duplication. Options allow recursive copying and permission preservation.

Command:

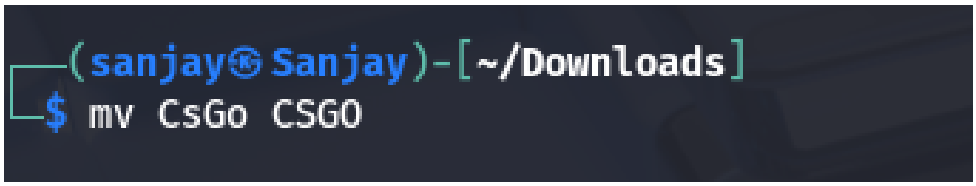


10. mv:

Description:

The `mv` command moves or renames files and directories. It helps reorganize the filesystem efficiently. The same command is used for both moving and renaming.

Command:



11. rm:

Description:

The `rm` command permanently deletes files or directories. It should be used carefully as deletion cannot be undone. Options allow recursive and forced deletion.

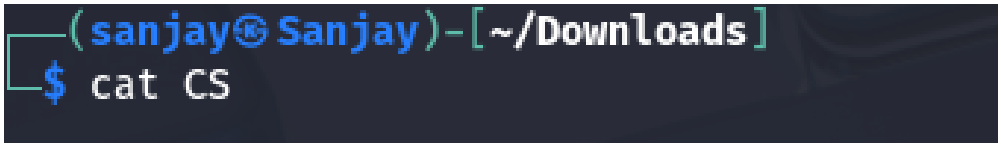
Command:

12. cat:

Description:

The `cat` command displays the contents of a file on the terminal. It is useful for viewing small text files. Multiple files can also be combined using this command.

Command:



13. more:

Description:

The `more` command shows file content one screen at a time. It helps users read large files without scrolling overflow. Navigation is limited to forward movement.

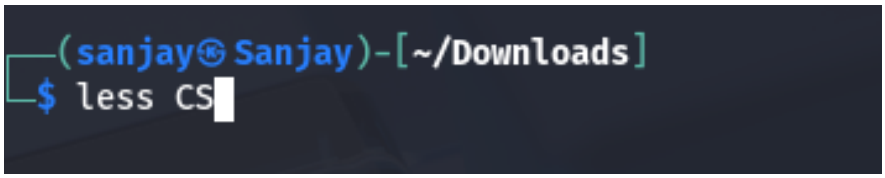
Command:

14. less:

Description:

The `less` command provides an advanced file viewer. It allows forward and backward scrolling with search functionality. This command is preferred for large files.

Command:

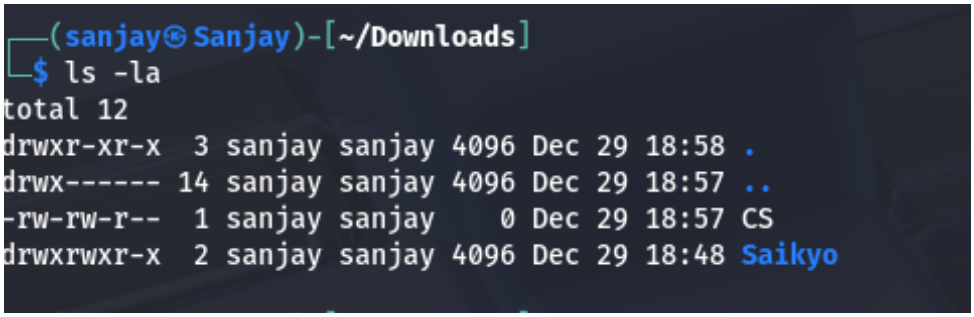


15. ls -la:

Description:

The `ls -la` command displays all files including hidden ones with details. It shows permissions, ownership, size, and modification time. This command is helpful for auditing files and directories.

Command:



16. uname -a:

Description:

The `uname -a` command displays complete system information. It includes kernel version, system name, and architecture. This command helps identify system configuration.

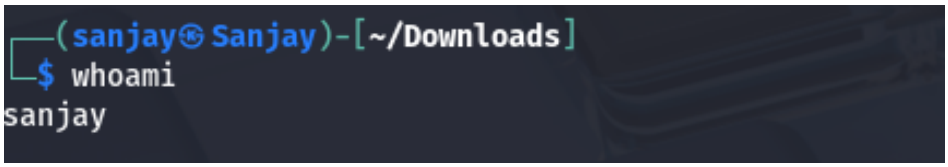
Command:

17. whoami:

Description:

The `whoami` command displays the currently logged-in username. It is useful in multi-user environments. This command helps confirm user identity.

Command:

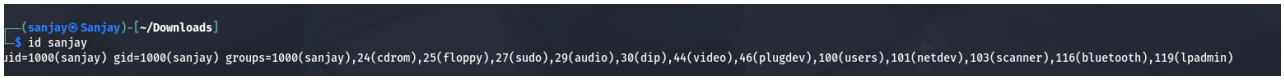


18. id:

Description:

The `id` command displays user and group identification details. It shows UID, GID, and associated groups. This is helpful for permission and access management.

Command:



19. top:

Description:

The `top` command displays real-time system processes. It shows CPU, memory usage, and running tasks. This command helps monitor system performance.

Command:

```
┌──(sanjay㉿Sanjay)-[~/Downloads]
└─$ top

top - 19:17:09 up 39 min,  1 user,  load average: 0.10, 0.19, 0.18
Tasks: 227 total,   1 running, 224 sleeping,   0 stopped,   2 zombie
%Cpu(s):  4.1 us,  2.5 sy,  0.0 ni, 93.1 id,  0.0 wa,  0.0 hi,  0.3 si,  0.0 st
MiB Mem :   3127.3 total,    994.2 free,   1521.9 used,    849.1 buff/cache
MiB Swap:   2652.0 total,   2652.0 free,      0.0 used.   1605.4 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
   2662 sanjay    20   0  530916  12392   7224 S   5.3   0.4   0:55.26 speech-dispatch
   1891 sanjay    20   0 4150612 556568 171316 S   5.0  17.4   2:37.39 gnome-shell
   1754 sanjay     9 -11  106076  15156   8948 S   0.7   0.5   0:15.16 pipewire
   1801 sanjay     9 -11  181972  21492   8792 S   0.7   0.7   0:07.42 pipewire-pulse
   3146 sanjay    20   0  569708  66228  53568 S   0.7   2.1   0:06.92 gnome-terminal-
    163 root      20   0       0      0      0 I   0.3   0.0   0:02.80 kworker/u512:4-events_unbound
    555 root      20   0  113732   9860   8280 S   0.3   0.3   0:03.38 vmtoolsd
   2004 sanjay    20   0  579656 105860  87936 S   0.3   3.3   0:03.51 vmtoolsd
   2678 sanjay    20   0   24528   9428   5680 S   0.3   0.3   0:01.07 sd_espeak-ng
  14929 sanjay    20   0 1213592  84868  41000 S   0.3   2.7   0:05.49 orca
      1 root      20   0   24912  15088  10916 S   0.0   0.5   0:31.05 systemd
      2 root      20   0       0      0      0 S   0.0   0.0   0:00.02 kthreadd
```

20. htop:

Description:

The `htop` command is an enhanced version of `top`. It provides a color-coded and interactive interface. This makes process monitoring easier.

Command:

```
┌──(sanjay㉿Sanjay)-[~/Downloads]
└─$ htop
```

21. ps aux:

Description:

The `ps aux` command lists all running processes. It provides detailed process information. This command is useful for troubleshooting.

Command:

```
┌──(sanjay㉿Sanjay)-[~/Downloads]
└─$ ps aux
USER         PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root           1  0.0  0.4  24912 15088 ?        Ss   18:37   0:01 /sbin/init splash
root           2  0.0  0.0      0     0 ?        S    18:37   0:00 [kthreadd]
root           3  0.0  0.0      0     0 ?        S    18:37   0:00 [pool_workqueue_release]
root           4  0.0  0.0      0     0 ?        I<   18:37   0:00 [kworker/R-rcu_gp]
root           5  0.0  0.0      0     0 ?        I<   18:37   0:00 [kworker/R-sync_wq]
root           6  0.0  0.0      0     0 ?        I<   18:37   0:00 [kworker/R-kvfree_rcu_reclaim]
root           7  0.0  0.0      0     0 ?        I<   18:37   0:00 [kworker/R-slub_flushwq]
root           8  0.0  0.0      0     0 ?        I<   18:37   0:00 [kworker/R-netns]
root          13  0.0  0.0      0     0 ?        I<   18:37   0:00 [kworker/R-mm_percpu_wq]
```

22. kill:

Description:

The `kill` command terminates a process using its PID. It helps stop unresponsive or unwanted processes. Proper usage prevents system instability.

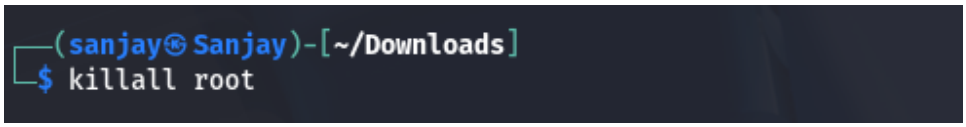
Command:

23. killall:

Description:

The `killall` command terminates processes by name. It stops all instances of a given process. This simplifies process management.

Command:

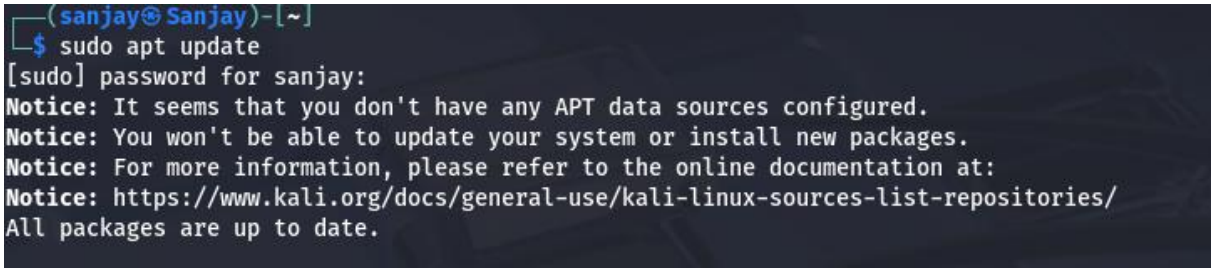


24. apt update:

Description:

The `apt update` command refreshes the package list. It retrieves the latest package information. This is required before installing updates.

Command:



25. apt upgrade:

Description:

The `apt upgrade` command updates installed packages. It installs newer versions of existing software. This helps maintain system security.

Command:

26. apt install:

Description:

The `apt install` command installs new software packages. It downloads packages from official repositories. Dependencies are handled automatically.

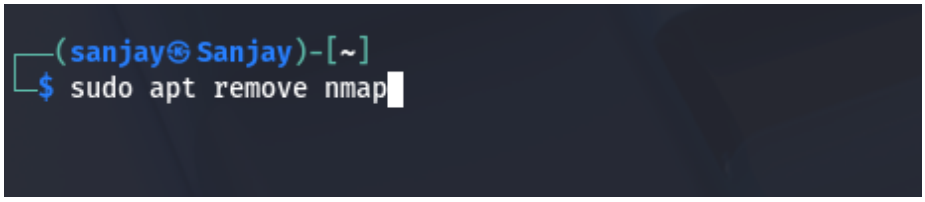
Command:

27. apt remove:

Description:

The `apt remove` command uninstalls software packages. It removes the program but keeps configuration files. This helps free system space.

Command:

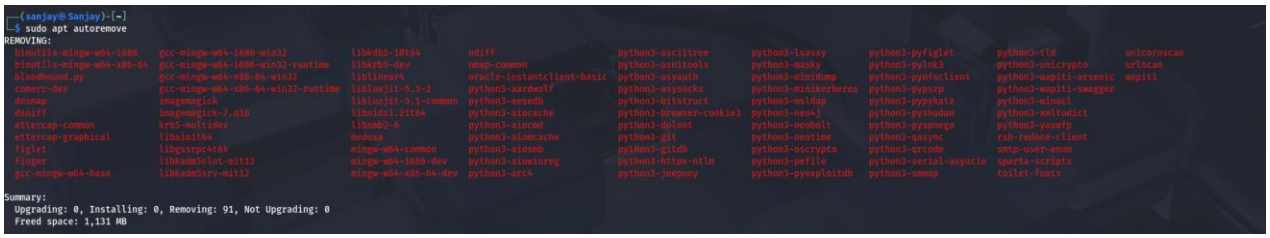


28. apt autoremove:

Description:

The `apt autoremove` command removes unused dependencies. It cleans up packages no longer required. This improves system efficiency.

Command:

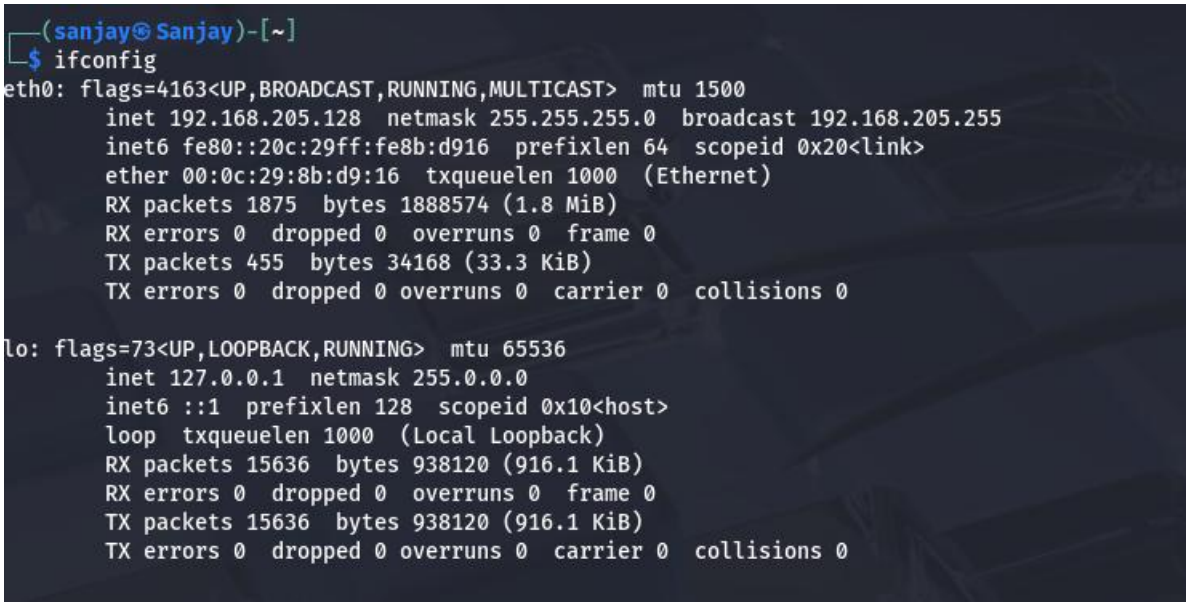


29. ifconfig:

Description:

The `ifconfig` command displays network interface details. It shows IP address, MAC address, and status. This command helps diagnose network issues.

Command:

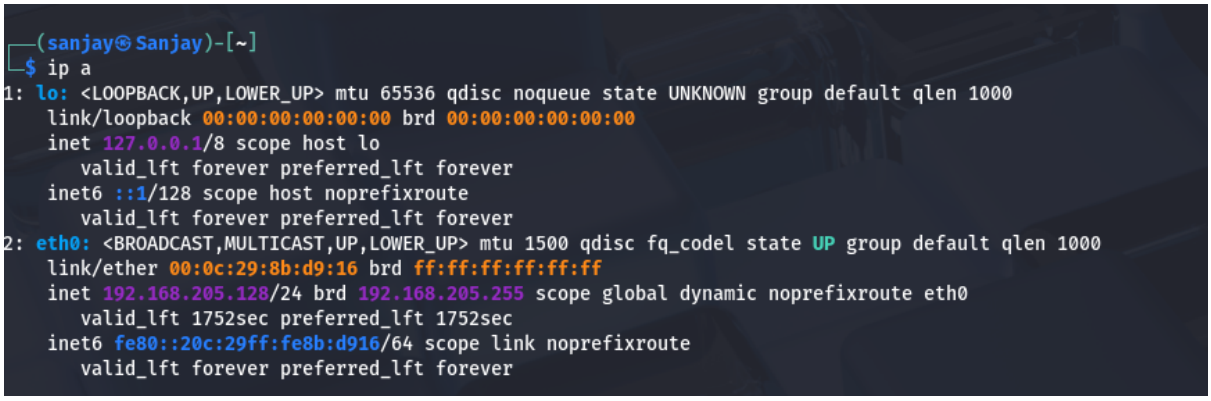


30. ip a:

Description:

The `ip a` command shows detailed IP configuration. It is a modern replacement for `ifconfig`. This command provides advanced network information.

Command:

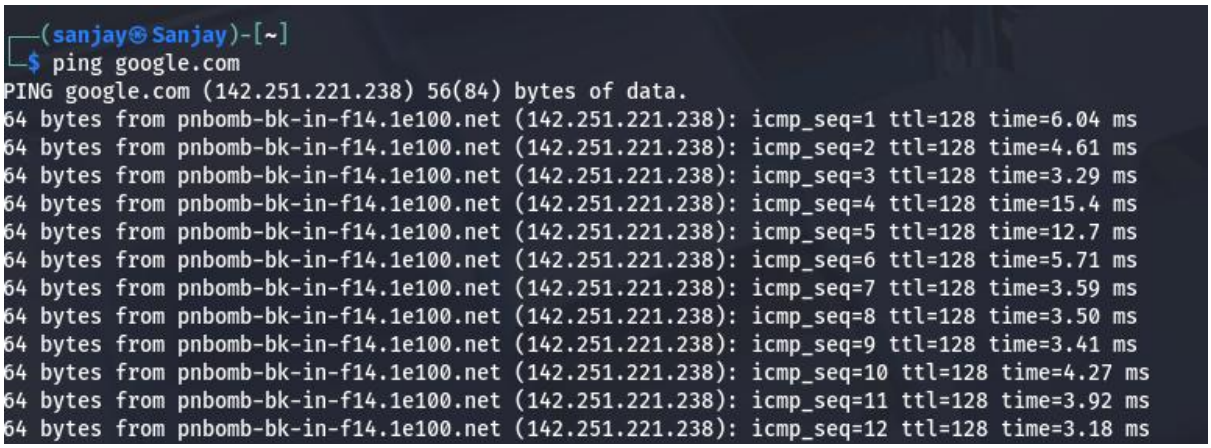


31. ping:

Description:

The `ping` command tests network connectivity. It sends packets to a target host. This helps verify network availability.

Command:



32. netstat -tuln:

Description:

The `netstat -tuln` command displays active ports. It shows listening services and connections. This helps identify open network services.

Command:

```
┌──(sanjay㉿Sanjay)-[~]
└─$ netstat -tuln
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp6       0      0 :::1716                 :::*                    LISTEN
udp6       0      0 :::1716                 :::*
```

33. ss -tuln:

Description:

The `ss -tuln` command shows socket statistics. It is faster and more efficient than `netstat`. This command helps analyze network connections.

Command:

34. nmcli:

Description:

The `nmcli` command manages network connections. It interacts with NetworkManager services. This command is useful for configuring networks.

Command:

```
┌──(sanjay㉿Sanjay)-[~]
└─$ nmcli dev status
DEVICE  TYPE      STATE                   CONNECTION
eth0    ethernet  connected               Wired connection 1
lo      loopback  connected (externally)  lo
```

35. wget:

Description:

The `wget` command downloads files from the internet. It supports HTTP, HTTPS, and FTP protocols. This command is commonly used for file retrieval.

Command:

```
┌──(sanjay㉿Sanjay)-[~]
└─$ wget https://example.com/file.zip
```

36. curl:

Description:

The `curl` command transfers data from URLs. It supports multiple protocols and options. This command is useful for API testing.

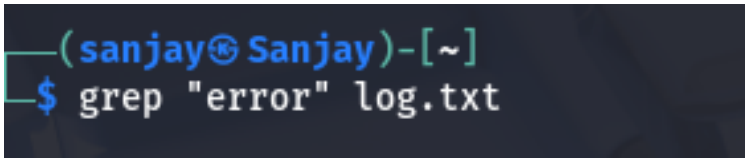
Command:

37. grep:

Description:

The `grep` command searches text patterns in files. It helps locate specific content quickly. This command supports regular expressions.

Command:

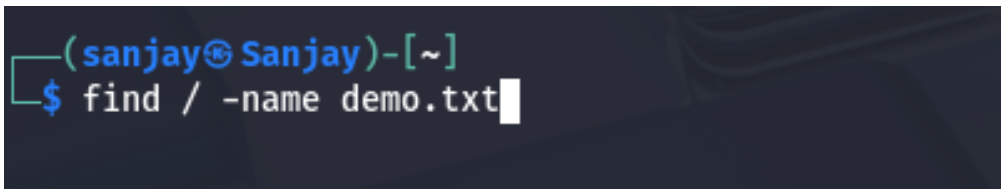


38. find:

Description:

The `find` command searches files in directories. It uses different conditions like name and size. This command is powerful for file discovery.

Command:



39. locate:

Description:

The `locate` command finds files quickly. It uses a prebuilt database for searching. Results may not include recent files.

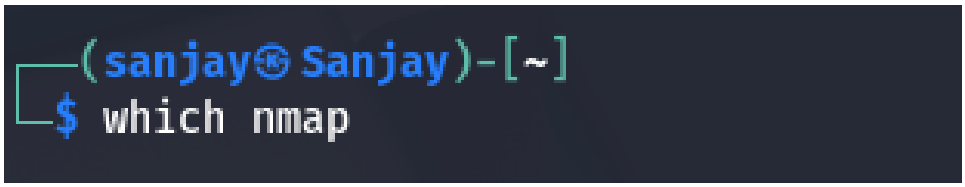
Command:

40. which:

Description:

The `which` command shows the path of a command. It helps identify executable locations. This ensures correct command execution.

Command:

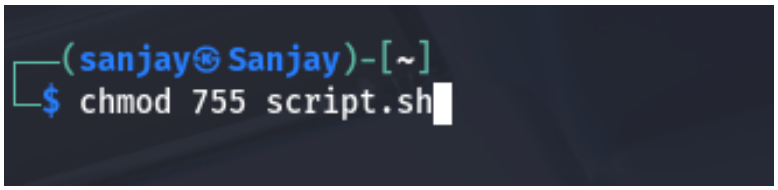


41. chmod:

Description:

The `chmod` command modifies file permissions. It controls read, write, and execute access. This command is critical for security.

Command:

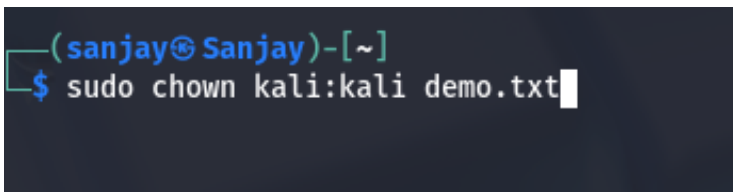


42. chown:

Description:

The `chown` command changes file ownership. It assigns new user and group ownership. This helps manage access rights.

Command:



43. ln -s:

Description:

The `ln -s` command creates symbolic links. It acts as a shortcut to files or directories. This helps in file organization.

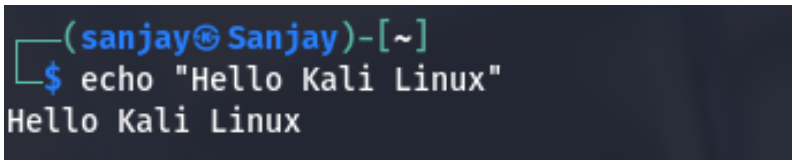
Command:

44. echo:

Description:

The `echo` command prints text to the terminal. It is commonly used in scripts. This command displays variables and messages.

Command:

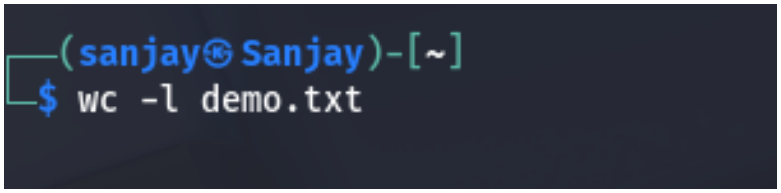


45. wc:

Description:

The `wc` command counts file content. It shows line, word, and character counts. This is useful for text analysis.

Command:

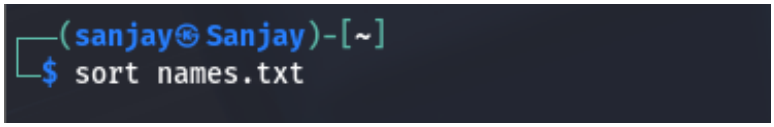


46. sort:

Description:

The `sort` command arranges file content. It sorts lines alphabetically or numerically. This helps organize data.

Command:

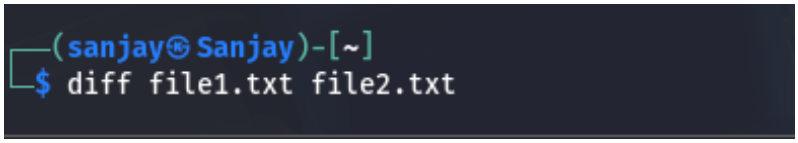


47. diff:

Description:

The `diff` command compares two files. It highlights differences line by line. This is useful for version comparison.

Command:



48. sed:

Description:

The `sed` command edits text streams. It performs search and replace operations. This command is powerful for automation.

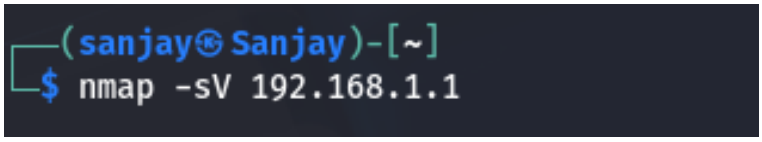
Command:

49. nmap:

Description:

The `nmap` command scans networks and hosts. It identifies open ports and services. This command is widely used in penetration testing.

Command:



50. msfconsole:

Description:

The `msfconsole` command launches Metasploit Framework. It provides tools for exploitation and testing. This command is essential for ethical hacking.

Command: