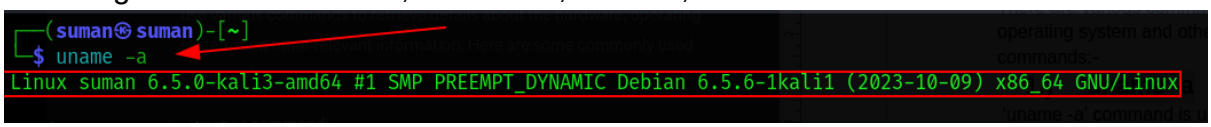
System Information

There are various commands in linux to retrieve details about the hardware, operating system and other relevant information. Here are some commonly used commands:-

1.) uname -a

‘uname -a’ command is used for to displays the detailed system information including the kernel version, hostname, release, architecture etc.

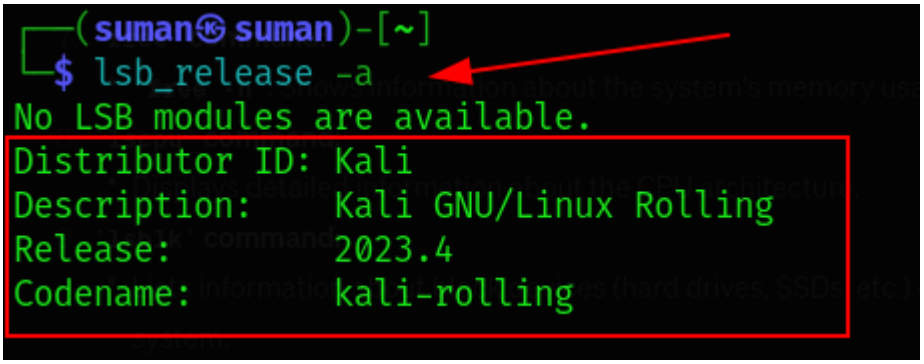


In this output from the ‘uname-a’ command it provides various details about the linux system . Here’s the detailed information:-

1. **Kernel version:** `6.5.0-kali3-amd64`
2. **Hostname:** `suman`
3. **Kernel Release Date:** `Debian 6.5.6-1kali1 (2023-10-09)`
4. **Architecture:** `x86_64`
5. **GNU/Linux:** `GNU project and uses linux kernel.`

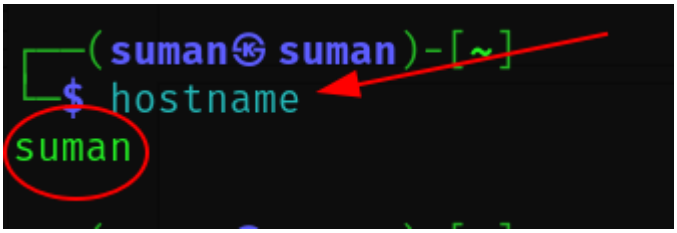
2.) lsb_release -a

‘lsb_release -a’ command provides information about the Linux distribution and version.



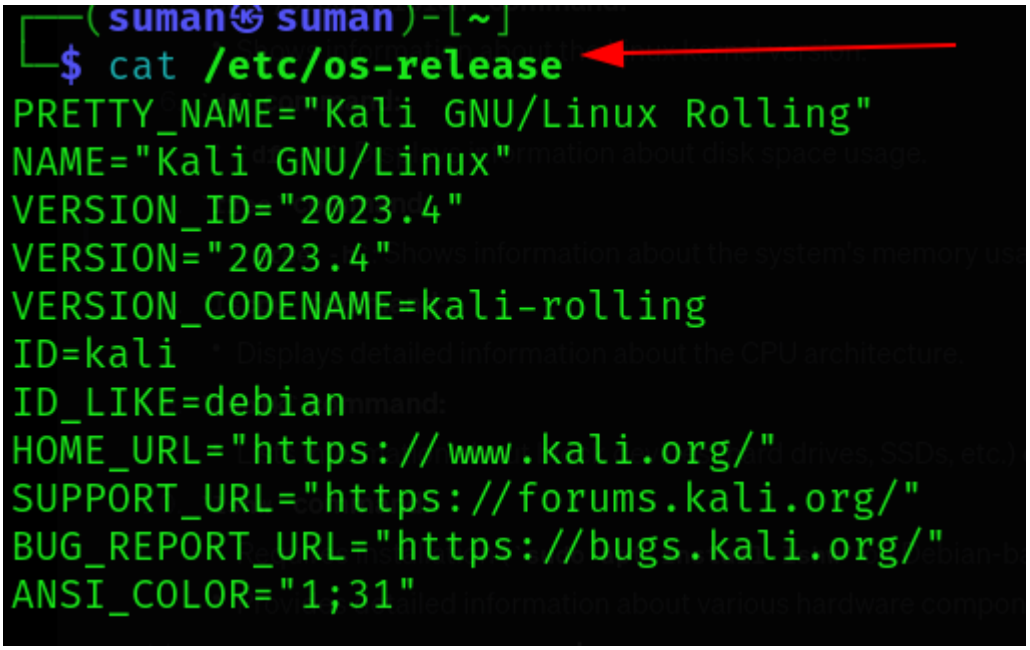
3.) hostname

‘hostname’ command display the name of the host system.



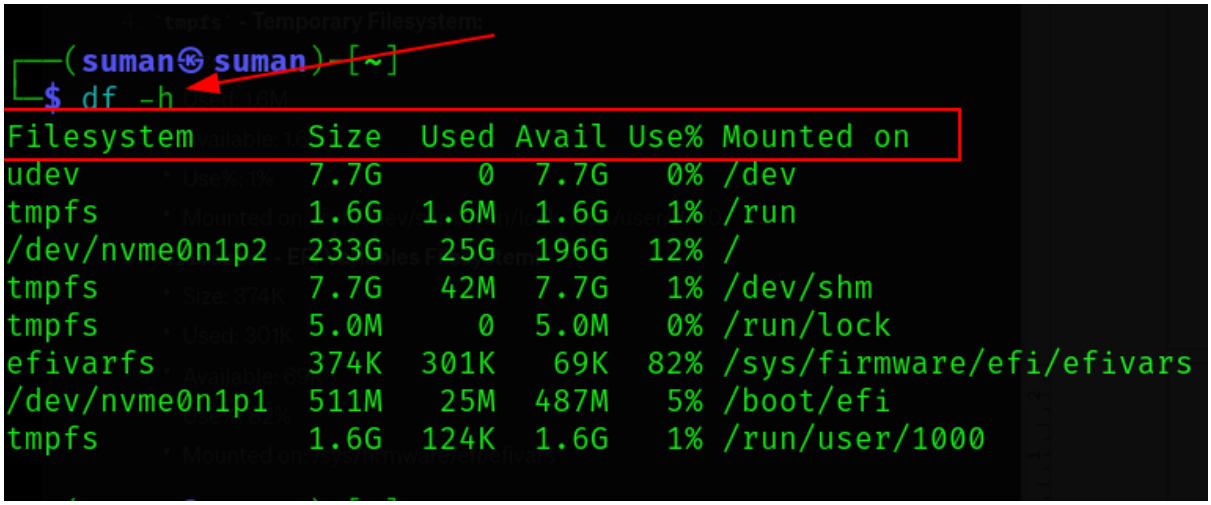
4.) Cat /etc/os-release

This commands shows the information from the '/etc/os-release' file, including the distribution name, version, and ID.



5.) df -h

This command is used to display the information about disk space usage on linux system.

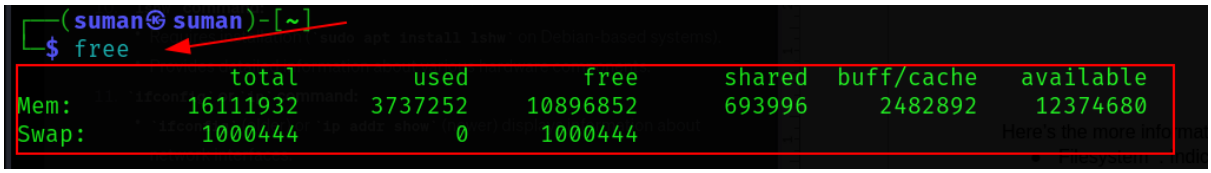


Here's the more information of this output:-

- Filesystem : Indicates the name of the file system.
- Size : Represents the total size of the file system.
- Used : Displays the amount of disk space used.
- Avail : Shows the available(free) disk space.
- Use% : Indicates the percentage of disk space used.
- Mounted on : The directory where the file system is mounted.

6.) Free

'free' command nis used to get information system's memory usage.

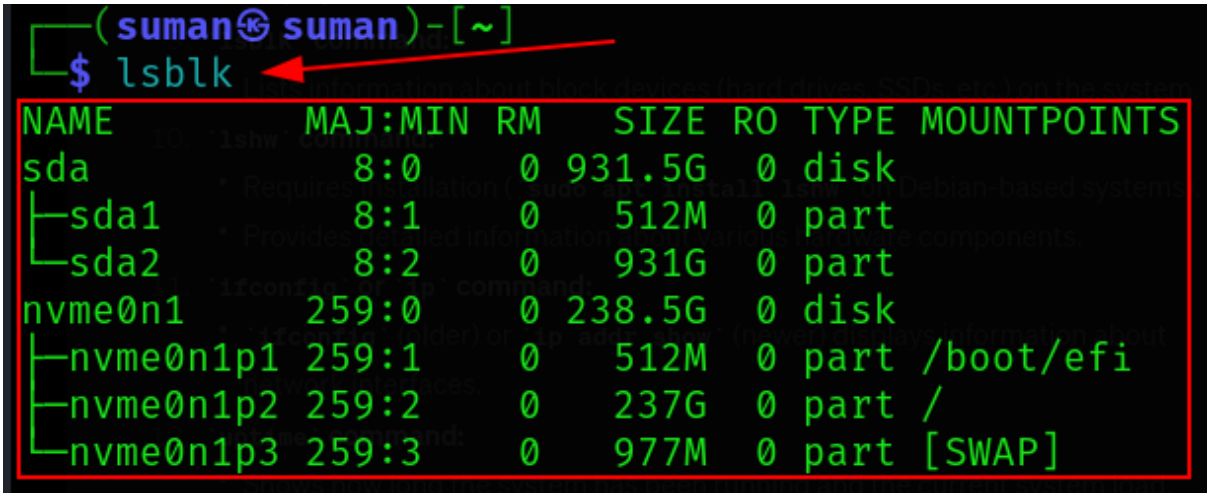


Here's the detailed information about the output (system's memory usage):-

- total : total RAM available in the system in this case, it's 16,111,932kb
- Used : amount of ram currently in use. IN this case it's 3,737,252 kb
- free : amount of free ram . In this case it's 10,896,852 kb
- shared : used memory can be shared among multiple processes. In this case it's 693,996 kb
- buff/cache : memory used for file system buffers and cache. In this case, it's 2,482,892 kb
- available : an estimate of how much memory is available for starting new applications, without swapping. In this case, its's 12,374.680 kb.

7.) lsblk

This command is used to list information about block devices(hard drives, SSDs, etc.) on the system.



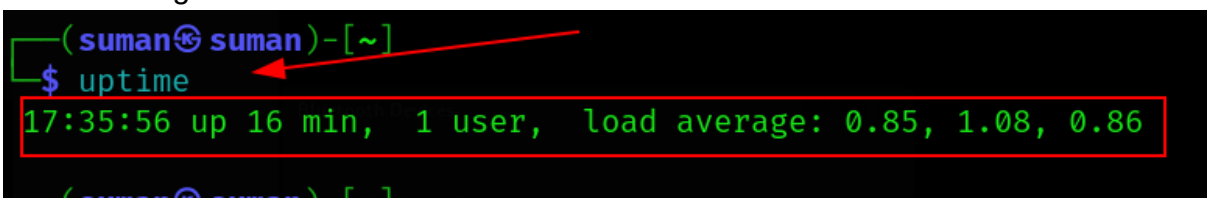
Here's the breakdown of the output:-

- ❖ sda:
  - A disk with a total size of 931.5 GB
  - Contains tow partitions:
    - ➢ sda1: 512 MB in size.
    - ➢ sda2: 931 GB in size.

- ❖ nvme0n1:
  - Another disk with a total size, mounted at '/boot/efi'.
  - Contains three partitions:
    - ➢ **nvme0n1p1** : 512 MB in size, mounted at '/boot/efi'.
    - ➢ **nvme0n1p2:** 237 GB in size, mounted at /.
    - ➢ **nvme0n1p3:** 977 MB in size, used as swap space.

8.) uptime

The 'uptime' command provides information about how long the system has been running .



Here' the breakdown of this output:-

- **17:35:56:** The current time.
- **up 16 min:** The system has been up and running for 16 minutes.
- **1 user:** There is currently 1 user logged into the system.
- **load average: 0.85, 1.08, 0.86:** The system load averages for the last 1, 5, and 15 minutes, respectively.