1. What is the significance of locking a user account? Demonstrate locking and unlocking of a user account from the terminal.

```
[root@archlinux tetroner]# passwd -l om
passwd: password changed.
[root@archlinux tetroner]# passwd -S om
om L 2024-02-29 7 50 0 -1
[root@archlinux tetroner]# cat /etc/shadow | grep om
systemd-oom:!*:19634::::::
om:!$y$j9T$/HpoiECnxB66R40dwMKzS0$u4OxzmhYWpW1dQJiq1cpfxWwTUQwK
Gq7eiDAu26Z0N0:19782:7:50:0:::
[root@archlinux tetroner]# exit
exit

~   1:42:56
$ su om
Password:
su: Authentication failure

~   1:43:06
$ su
Password:
[root@archlinux tetroner]# passwd -u om
passwd: password changed.
[root@archlinux tetroner]# exit
exit
```

2. Allot full root privileges to user and then modify to provide only selected root privileges.(use visudo)

```
  GNU nano 7.2                          /etc/sudoers.tmp
## User privilege specification
##
root ALL=(ALL:ALL) ALL

## Uncomment to allow members of group wheel to execute any command
# %wheel ALL=(ALL:ALL) ALL

## Same thing without a password
# %wheel ALL=(ALL:ALL) NOPASSWD: ALL

## Uncomment to allow members of group sudo to execute any command
# %sudo ALL=(ALL:ALL) ALL

## Uncomment to allow any user to run sudo if they know the password
## of the user they are running the command as (root by default).
# Defaults targetpw  # Ask for the password of the target user
# ALL ALL=(ALL:ALL) ALL  # WARNING: only use this together with 'Defaults targetpw'

## Read drop-in files from /etc/sudoers.d
@includedir /etc/sudoers.d
```

3. Execute fdisk command with different options and interpret the outputs.

```
[root@archlinux tetroner]# fdisk -l
Disk /dev/nvme1n1: 476.94 GiB, 512110190592 bytes, 1000215216 sectors
Disk model: KINGSTON OM8PCP3512F-AI1
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: gpt
Disk identifier: 253B8173-D3AF-4CE2-AC0A-0C369040A929

Device            Start         End    Sectors    Size
/dev/nvme1n1p1     2048     1050623    1048576    512M
/dev/nvme1n1p2  1050624  1000214527  999163904  476.4G


Disk /dev/nvme0n1: 931.51 GiB, 1000204886016 bytes, 1953525168 sectors
Disk model: Samsung SSD 980 1TB
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 16384 bytes / 131072 bytes
Disklabel type: gpt
Disk identifier: AAAEA02C-C47A-456E-A152-BE6CBD88DBCE
```

```
[root@archlinux tetroner]# fdisk -l /dev/nvme1n1p1
Disk /dev/nvme1n1p1: 512 MiB, 536870912 bytes, 1048
576 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 byt
es
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x00000000
```

```
[root@archlinux tetroner]# fdisk  /dev/nvme1n1p1

Welcome to fdisk (util-linux 2.39.3).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

This disk is currently in use - repartitioning is probably a bad idea.
It's recommended to umount all file systems, and swapoff all swap
partitions on this disk.

The device contains 'vfat' signature and it will be removed by a write command. S
ee fdisk(8) man page and --wipe option for more details.

Command (m for help): m

Help:

  DOS (MBR)
   a   toggle a bootable flag
   b   edit nested BSD disklabel
   c   toggle the dos compatibility flag
```

4. Execute df command with different options and interpret the outputs.

```
[root@archlinux tetroner]# df
Filesystem      1K-blocks      Used Available Use% Mounted on
dev              8074092         0   8074092   0% /dev
run              8085996      1996   8084000   1% /run
efivarfs             192        61       127  33% /sys/firmware/efi/efivars
/dev/nvme1n1p2 490617784 189257668 276364636  41% /
tmpfs            8085996     71020   8014976   1% /dev/shm
tmpfs            8085996     13092   8072904   1% /tmp
/dev/nvme1n1p1    523248    111108    412140  22% /boot
tmpfs            1617196     65660   1551536   5% /run/user/1000
/dev/nvme0n1p3 313701368 199324892 114376476  64% /run/media/tetroner/Windows
/dev/nvme0n1p1 347599556 156977516 190622040  46% /run/media/tetroner/Data
/dev/nvme0n1p5 314572792 219603152  94969640  70% /run/media/tetroner/Backup
```

```
[root@archlinux tetroner]# df -m
Filesystem      1M-blocks  Used Available Use% Mounted on
dev                 7885     0      7885   0% /dev
run                 7897     2      7895   1% /run
efivarfs               1     1         1  33% /sys/firmware/efi/efivars
/dev/nvme1n1p2    479119 184823    269888  41% /
tmpfs               7897    70      7828   1% /dev/shm
tmpfs               7897    13      7884   1% /tmp
/dev/nvme1n1p1       511   109       403  22% /boot
tmpfs               1580    65      1516   5% /run/user/1000
/dev/nvme0n1p3    306349 194654    111696  64% /run/media/tetroner/Windows
/dev/nvme0n1p1    339453 153299    186155  46% /run/media/tetroner/Data
/dev/nvme0n1p5    307200 214457     92744  70% /run/media/tetroner/Backup
```

```
[root@archlinux tetroner]# df -k
Filesystem        1K-blocks        Used Available Use% Mounted on
dev                 8074092           0   8074092   0% /dev
run                 8085996        1992   8084004   1% /run
efivarfs                192          61       127  33% /sys/firmware/efi/efivars
/dev/nvme1n1p2    490617784   189257936 276364368  41% /
tmpfs               8085996       71020   8014976   1% /dev/shm
tmpfs               8085996       13092   8072904   1% /tmp
/dev/nvme1n1p1       523248      111108    412140  22% /boot
tmpfs               1617196       65744   1551452   5% /run/user/1000
/dev/nvme0n1p3    313701368   199324892 114376476  64% /run/media/tetroner/Windows
/dev/nvme0n1p1    347599556   156977516 190622040  46% /run/media/tetroner/Data
/dev/nvme0n1p5    314572792   219603152  94969640  70% /run/media/tetroner/Backup
[root@archlinux tetroner]# df -h
Filesystem        Size  Used Avail Use% Mounted on
dev               7.8G     0  7.8G   0% /dev
run               7.8G  2.0M  7.8G   1% /run
efivarfs          192K   61K  127K  33% /sys/firmware/efi/efivars
/dev/nvme1n1p2    468G  181G  264G  41% /
tmpfs             7.8G   70M  7.7G   1% /dev/shm
tmpfs             7.8G   13M  7.7G   1% /tmp
/dev/nvme1n1p1    511M  109M  403M  22% /boot
tmpfs             1.6G   65M  1.5G   5% /run/user/1000
```

```
[root@archlinux tetroner]# df -T
Filesystem        Type     1K-blocks        Used Available Use% Mounted on
dev               devtmpfs   8074092           0   8074092   0% /dev
run               tmpfs      8085996        1992   8084004   1% /run
efivarfs          efivarfs       192          61       127  33% /sys/firmware/efi/efivars
/dev/nvme1n1p2    ext4     490617784   189257160 276365144  41% /
tmpfs             tmpfs      8085996       71020   8014976   1% /dev/shm
tmpfs             tmpfs      8085996       13092   8072904   1% /tmp
/dev/nvme1n1p1    vfat        523248      111108    412140  22% /boot
tmpfs             tmpfs      1617196       65744   1551452   5% /run/user/1000
/dev/nvme0n1p3    fuseblk  313701368   199324892 114376476  64% /run/media/tetroner/Windows
/dev/nvme0n1p1    fuseblk  347599556   156977516 190622040  46% /run/media/tetroner/Data
/dev/nvme0n1p5    fuseblk  314572792   219603152  94969640  70% /run/media/tetroner/Backup
[root@archlinux tetroner]# df -i
Filesystem         Inodes   IUsed     IFree IUse% Mounted on
dev               2018523     724   2017799    1% /dev
run               2021499    1229   2020270    1% /run
efivarfs                0       0         0     - /sys/firmware/efi/efivars
/dev/nvme1n1p2   31227904 1819201  29408703    6% /
tmpfs             2021499      74   2021425    1% /dev/shm
tmpfs             1048576      43   1048533    1% /tmp
/dev/nvme1n1p1          0       0         0     - /boot
```

```
[root@archlinux tetroner]# df -hT
Filesystem      Type        Size   Used Avail Use% Mounted on
dev             devtmpfs    7.8G      0  7.8G    0% /dev
run             tmpfs       7.8G   2.0M  7.8G    1% /run
efivarfs        efivarfs    192K    61K  127K   33% /sys/firmware/efi/efivars
/dev/nvme1n1p2  ext4        468G   181G  264G   41% /
tmpfs           tmpfs       7.8G    70M  7.7G    1% /dev/shm
tmpfs           tmpfs       7.8G    13M  7.7G    1% /tmp
/dev/nvme1n1p1  vfat        511M   109M  403M   22% /boot
tmpfs           tmpfs       1.6G    65M  1.5G    5% /run/user/1000
/dev/nvme0n1p3  fuseblk     300G   191G  110G   64% /run/media/tetroner/Windows
/dev/nvme0n1p1  fuseblk     332G   150G  182G   46% /run/media/tetroner/Data
/dev/nvme0n1p5  fuseblk     300G   210G   91G   70% /run/media/tetroner/Backup
[root@archlinux tetroner]# df -hT /home
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme1n1p2  ext4  468G  181G  264G  41% /
```

```
[root@archlinux tetroner]# df -x /dev/nvme0n1p1
Filesystem      1K-blocks        Used Available Use% M
ounted on
dev              8074092           0   8074092    0% /dev
run              8085996        1992   8084004    1% /run
efivarfs             192          61       127   33% /sys/firmware/efi/efivars
/dev/nvme1n1p2 490617784   189258064 276364240   41% /
tmpfs            8085996       71020   8014976    1% /dev/shm
tmpfs            8085996       13092   8072904    1% /tmp
/dev/nvme1n1p1    523248      111108    412140   22% /boot
tmpfs            1617196       65744   1551452    5% /run/user/1000
/dev/nvme0n1p3 313701368   199324892 114376476   64% /run/media/tetroner/Windows
/dev/nvme0n1p1 347599556   156977516 190622040   46% /run/media/tetroner/Data
/dev/nvme0n1p5 314572792   219603152  94969640   70% /run/media/tetroner/Backup
```

5. Execute lsblk command with different options and interpret the outputs.

```
[root@archlinux tetroner]# lsblk
NAME        MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
zram0        254:0    0     4G  0 disk [SWAP]
nvme1n1      259:0    0 476.9G  0 disk
├─nvme1n1p1 259:1    0   512M  0 part /boot
└─nvme1n1p2 259:2    0 476.4G  0 part /
nvme0n1      259:3    0 931.5G  0 disk
├─nvme0n1p1 259:4    0 331.5G  0 part /run/media/tetroner/Data
├─nvme0n1p2 259:5    0    16M  0 part
├─nvme0n1p3 259:6    0 299.2G  0 part /run/media/tetroner/Windows
├─nvme0n1p4 259:7    0   850M  0 part
└─nvme0n1p5 259:8    0   300G  0 part /run/media/tetroner/Backup
```

```
[root@archlinux tetroner]# lsblk -a
NAME         MAJ:MIN RM    SIZE RO TYPE MOUNTPOINTS
zram0         254:0    0      4G  0 disk [SWAP]
nvme1n1       259:0    0 476.9G  0 disk
├─nvme1n1p1 259:1    0    512M  0 part /boot
└─nvme1n1p2 259:2    0 476.4G  0 part /
nvme0n1       259:3    0 931.5G  0 disk
├─nvme0n1p1 259:4    0 331.5G  0 part /run/media/tetroner/Data
├─nvme0n1p2 259:5    0     16M  0 part
├─nvme0n1p3 259:6    0 299.2G  0 part /run/media/tetroner/Windows
└─nvme0n1p4 259:7    0    850M  0 part
```

```
[root@archlinux tetroner]# lsblk -f
NAME FSTYPE FSVER LABEL  UUID                                 FSAVAIL FSUSE% MOUNTPOINTS
zram0
                                                                      [SWAP]
nvme1n1

├─nvme1n1p1
│   vfat   FAT32       AD17-0900                             402.5M   21% /boot
└─nvme1n1p2
    ext4   1.0         d01f8117-4198-4f3f-a361-9725ebacb093  263.6G   39% /
nvme0n1

├─nvme0n1p1
│   ntfs         Data   46B66B32B66B2223                     181.8G   45% /run/media/tetroner/Data
├─nvme0n1p2
│   ext4   1.0         62985261-bb42-4dd9-970e-ca3038cf9a9c
├─nvme0n1p3
    ntfs               00B4E530B4E5293C                      109.1G   64% /run/media/tetroner/Window
s
```

```
[root@archlinux tetroner]# lsblk -l
NAME        MAJ:MIN RM    SIZE RO TYPE MOUNTPOINTS
zram0        254:0    0      4G  0 disk [SWAP]
nvme1n1      259:0    0 476.9G  0 disk
nvme1n1p1  259:1    0    512M  0 part /boot
nvme1n1p2  259:2    0 476.4G  0 part /
nvme0n1      259:3    0 931.5G  0 disk
nvme0n1p1  259:4    0 331.5G  0 part /run/media/tetroner/Data
nvme0n1p2  259:5    0     16M  0 part
nvme0n1p3  259:6    0 299.2G  0 part /run/media/tetroner/Windows
nvme0n1p4  259:7    0    850M  0 part
nvme0n1p5  259:8    0    300G  0 part /run/media/tetroner/Backup
```

```
[root@archlinux tetroner]# lsblk -m
NAME             SIZE OWNER GROUP MODE
zram0              4G root  disk  brw-rw----
nvme1n1        476.9G root  disk  brw-rw----
 ├─nvme1n1p1     512M root  disk  brw-rw----
 └─nvme1n1p2   476.4G root  disk  brw-rw----
nvme0n1        931.5G root  disk  brw-rw----
 ├─nvme0n1p1   331.5G root  disk  brw-rw----
 ├─nvme0n1p2     16M root  disk  brw-rw----
 ├─nvme0n1p3   299.2G root  disk  brw-rw----
 ├─nvme0n1p4    850M root  disk  brw-rw----
 └─nvme0n1p5    300G root  disk  brw-rw----
[root@archlinux tetroner]# lsblk -o
lsblk: option requires an argument -- 'o'
Try 'lsblk --help' for more information.
```

```
[root@archlinux tetroner]# lsblk -b
NAME    MAJ:MIN RM          SIZE RO TYPE MOUNTPOINTS
zram0   254:0    0    4294967296  0 disk [SWAP]
nvme1n1
        259:0    0   512110190592  0 disk
├─nvme1n1p1
        259:1    0     536870912  0 part /boot
└─nvme1n1p2
        259:2    0   511571918848  0 part /
nvme0n1
        259:3    0  1000204886016  0 disk
├─nvme0n1p1
        259:4    0   355941947904  0 part /run/media/tetroner/Data
├─nvme0n1p2
        259:5    0      16777216  0 part
├─nvme0n1p3
        259:6    0   321230204928  0 part /run/media/tetroner/Windows
├─nvme0n1p4
        259:7    0     891289600  0 part
└─nvme0n1p5
        259:8    0   322122543104  0 part /run/media/tetroner/Backup
```

```
[root@archlinux tetroner]# lsblk -p
NAME            MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
/dev/zram0      254:0    0     4G  0 disk [SWAP]
/dev/nvme1n1    259:0    0 476.9G  0 disk
├─/dev/nvme1n1p1
                259:1    0   512M  0 part /boot
└─/dev/nvme1n1p2
                259:2    0 476.4G  0 part /
/dev/nvme0n1    259:3    0 931.5G  0 disk
├─/dev/nvme0n1p1
                259:4    0 331.5G  0 part /run/media/tetroner/Data
├─/dev/nvme0n1p2
                259:5    0    16M  0 part
├─/dev/nvme0n1p3
                259:6    0 299.2G  0 part /run/media/tetroner/Windows
├─/dev/nvme0n1p4
                259:7    0   850M  0 part
└─/dev/nvme0n1p5
                259:8    0   300G  0 part /run/media/tetroner/Backup
[root@archlinux tetroner]#
```

Package Managers Ans:

```
                                    sfit@mylinuxlab:/home/sfit                              _  □  ×
File  Edit  View  Search  Terminal  Help
tmpfs            417432      0   417432   0% /run/user/0
[root@mylinuxlab sfit]# lsblk -a
NAME            MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda             8:0     0    20G  0 disk
├─sda1          8:1     0     1G  0 part /boot
└─sda2          8:2     0    19G  0 part
  ├─centos-root 253:0   0    17G  0 lvm  /
  └─centos-swap 253:1   0     2G  0 lvm  [SWAP]
sr0             11:0    1  1024M  0 rom
[root@mylinuxlab sfit]# lsblk -l
NAME            MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda             8:0     0    20G  0 disk
sda1            8:1     0     1G  0 part /boot
sda2            8:2     0    19G  0 part
centos-root     253:0   0    17G  0 lvm  /
centos-swap     253:1   0     2G  0 lvm  [SWAP]
sr0             11:0    1  1024M  0 rom
[root@mylinuxlab sfit]# lsblk /dev/sda
NAME            MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
sda             8:0     0   20G  0 disk
├─sda1          8:1     0    1G  0 part /boot
└─sda2          8:2     0   19G  0 part
  ├─centos-root 253:0   0   17G  0 lvm  /
  └─centos-swap 253:1   0    2G  0 lvm  [SWAP]
[root@mylinuxlab sfit]# lsblk -o name,size
NAME            SIZE
sda             20G
├─sda1           1G
└─sda2          19G
  ├─centos-root 17G
  └─centos-swap  2G
sr0            1024M
[root@mylinuxlab sfit]# lsblk -m
NAME            SIZE OWNER GROUP MODE
```

```
[sfit@mylinuxlab ~]$ yum repolist -v
Loading "fastestmirror" plugin
Loading "langpacks" plugin
Adding en_US.UTF-8 to language list
Config time: 0.004
Yum version: 3.4.3
Loading mirror speeds from cached hostfile
 * base: mirrors.hostever.com
 * extras: mirror-hk.koddos.net
 * updates: mirror-hk.koddos.net
Setting up Package Sacks
pkgsack time: 0.003
Repo-id      : base/7/x86_64
Repo-name    : CentOS-7 - Base
Repo-revision: 1604001756
Repo-updated : Fri Oct 30 01:33:00 2020
Repo-pkgs    : 10,072
Repo-size    : 8.9 G
Repo-mirrors : http://mirrorlist.centos.org/?release=7&arch=x86_64&repo=os&infra=stock
Repo-baseurl : http://mirrors.hostever.com/centos/7.9.2009/os/x86_64/ (8 more)
Repo-expire  : 21,600 second(s) (last: Thu Feb 15 10:22:35 2024)
  Filter     : read-only:present
Repo-filename: /etc/yum.repos.d/CentOS-Base.repo


Repo-id      : extras/7/x86_64
Repo-name    : CentOS-7 - Extras
Repo-revision: 1707321209
Repo-updated : Wed Feb  7 21:23:31 2024
Repo-pkgs    : 519
Repo-size    : 1.0 G
```

| | sfit@mylinuxlab:~ | | Microsoft Word - BARC_informatio... | |

```
                                    sfit@mylinuxlab:~                                    _  □  ✕

File  Edit  View  Search  Terminal  Help
repolist: 16,311
[sfit@mylinuxlab ~]$ yum repolist enabled
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.hostever.com
 * extras: mirror-hk.koddos.net
 * updates: mirror-hk.koddos.net
repo id                            repo name                                      status
base/7/x86_64                      CentOS-7 - Base                                10,072
extras/7/x86_64                    CentOS-7 - Extras                                 519
updates/7/x86_64                   CentOS-7 - Updates                              5,720
repolist: 16,311
[sfit@mylinuxlab ~]$ yum repolist disabled
Loaded plugins: fastestmirror, langpacks
repo id                            repo name
C7.0.1406-base/x86_64              CentOS-7.0.1406 - Base
C7.0.1406-centosplus/x86_64        CentOS-7.0.1406 - CentOSPlus
C7.0.1406-extras/x86_64            CentOS-7.0.1406 - Extras
C7.0.1406-fasttrack/x86_64         CentOS-7.0.1406 - Fasttrack
C7.0.1406-updates/x86_64           CentOS-7.0.1406 - Updates
C7.1.1503-base/x86_64              CentOS-7.1.1503 - Base
C7.1.1503-centosplus/x86_64        CentOS-7.1.1503 - CentOSPlus
C7.1.1503-extras/x86_64            CentOS-7.1.1503 - Extras
C7.1.1503-fasttrack/x86_64         CentOS-7.1.1503 - Fasttrack
C7.1.1503-updates/x86_64           CentOS-7.1.1503 - Updates
C7.2.1511-base/x86_64              CentOS-7.2.1511 - Base
C7.2.1511-centosplus/x86_64        CentOS-7.2.1511 - CentOSPlus
C7.2.1511-extras/x86_64            CentOS-7.2.1511 - Extras
C7.2.1511-fasttrack/x86_64         CentOS-7.2.1511 - Fasttrack
C7.2.1511-updates/x86_64           CentOS-7.2.1511 - Updates
C7.3.1611-base/x86_64              CentOS-7.3.1611 - Base
C7.3.1611-centosplus/x86_64        CentOS-7.3.1611 - CentOSPlus
C7.3.1611-extras/x86_64            CentOS-7.3.1611 - Extras
C7.3.1611-fasttrack/x86_64         CentOS-7.3.1611 - Fasttrack
```

File   Edit   View   Search   Terminal   Help

```
repolist: 0
[sfit@mylinuxlab ~]$ yum repolist all
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.hostever.com
 * extras: mirror-hk.koddos.net
 * updates: mirror-hk.koddos.net
repo id                               repo name                               status
C7.0.1406-base/x86_64                 CentOS-7.0.1406 - Base                   disabled
C7.0.1406-centosplus/x86_64           CentOS-7.0.1406 - CentOSPlus             disabled
C7.0.1406-extras/x86_64               CentOS-7.0.1406 - Extras                 disabled
C7.0.1406-fasttrack/x86_64            CentOS-7.0.1406 - Fasttrack              disabled
C7.0.1406-updates/x86_64              CentOS-7.0.1406 - Updates                disabled
C7.1.1503-base/x86_64                 CentOS-7.1.1503 - Base                   disabled
C7.1.1503-centosplus/x86_64           CentOS-7.1.1503 - CentOSPlus             disabled
C7.1.1503-extras/x86_64               CentOS-7.1.1503 - Extras                 disabled
C7.1.1503-fasttrack/x86_64            CentOS-7.1.1503 - Fasttrack              disabled
C7.1.1503-updates/x86_64              CentOS-7.1.1503 - Updates                disabled
C7.2.1511-base/x86_64                 CentOS-7.2.1511 - Base                   disabled
C7.2.1511-centosplus/x86_64           CentOS-7.2.1511 - CentOSPlus             disabled
C7.2.1511-extras/x86_64               CentOS-7.2.1511 - Extras                 disabled
C7.2.1511-fasttrack/x86_64            CentOS-7.2.1511 - Fasttrack              disabled
C7.2.1511-updates/x86_64              CentOS-7.2.1511 - Updates                disabled
C7.3.1611-base/x86_64                 CentOS-7.3.1611 - Base                   disabled
C7.3.1611-centosplus/x86_64           CentOS-7.3.1611 - CentOSPlus             disabled
C7.3.1611-extras/x86_64               CentOS-7.3.1611 - Extras                 disabled
C7.3.1611-fasttrack/x86_64            CentOS-7.3.1611 - Fasttrack              disabled
C7.3.1611-updates/x86_64              CentOS-7.3.1611 - Updates                disabled
C7.4.1708-base/x86_64                 CentOS-7.4.1708 - Base                   disabled
C7.4.1708-centosplus/x86_64           CentOS-7.4.1708 - CentOSPlus             disabled
C7.4.1708-extras/x86_64               CentOS-7.4.1708 - Extras                 disabled
C7.4.1708-fasttrack/x86_64            CentOS-7.4.1708 - Fasttrack              disabled
C7.4.1708-updates/x86_64              CentOS-7.4.1708 - Updates                disabled
C7.5.1804-base/x86_64                 CentOS-7.5.1804 - Base                   disabled
```

File   Edit   View   Search   Terminal   Help

```
Password:
[root@mylinuxlab sfit]# yum remove tree
Loaded plugins: fastestmirror, langpacks
Resolving Dependencies
--> Running transaction check
---> Package tree.x86_64 0:1.6.0-10.el7 will be erased
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================
 Package          Arch            Version              Repository          Size
================================================================================
Removing:
 tree             x86_64          1.6.0-10.el7         @base               87 k

Transaction Summary
================================================================================
Remove  1 Package

Installed size: 87 k
Is this ok [y/N]: y
Downloading packages:
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Erasing    : tree-1.6.0-10.el7.x86_64                                     1/1
  Verifying  : tree-1.6.0-10.el7.x86_64                                     1/1

Removed:
  tree.x86_64 0:1.6.0-10.el7

Complete!
```

File   Edit   View   Search   Terminal   Help

```
bash: tree: command not found...
[root@mylinuxlab sfit]# yum install tree
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.nxtgen.com
 * extras: mirrors.nxtgen.com
 * updates: mirrors.nxtgen.com
Resolving Dependencies
--> Running transaction check
---> Package tree.x86_64 0:1.6.0-10.el7 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================
 Package          Arch            Version            Repository          Size
================================================================================
Installing:
 tree             x86_64          1.6.0-10.el7       base                46 k

Transaction Summary
================================================================================
Install  1 Package

Total download size: 46 k
Installed size: 87 k
Is this ok [y/d/N]: y
Downloading packages:
tree-1.6.0-10.el7.x86_64.rpm                              |  46 kB  00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : tree-1.6.0-10.el7.x86_64                                    1/1
```

File   Edit   View   Search   Terminal   Help

```
[root@mylinuxlab sfit]# yum list kernel
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.nxtgen.com
 * extras: mirrors.nxtgen.com
 * updates: mirrors.nxtgen.com
Installed Packages
kernel.x86_64                        3.10.0-1160.el7              @anaconda
Available Packages
kernel.x86_64                        3.10.0-1160.108.1.el7        updates
[root@mylinuxlab sfit]# █
```

```
[root@mylinuxlab sfit]# yum info tree
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.nxtgen.com
 * extras: mirrors.nxtgen.com
 * updates: mirrors.nxtgen.com
Installed Packages
Name        : tree
Arch        : x86_64
Version     : 1.6.0
Release     : 10.el7
Size        : 87 k
Repo        : installed
From repo   : base
Summary     : File system tree viewer
URL         : http://mama.indstate.edu/users/ice/tree/
License     : GPLv2+
Description : The tree utility recursively displays the contents of directories in a
            : tree-like format.  Tree is basically a UNIX port of the DOS tree
            : utility.

[root@mylinuxlab sfit]# █
```

File Edit View Search Terminal Help

```
Transaction test succeeded
Running transaction
Warning: RPMDB altered outside of yum.
  Installing : tree-1.6.0-10.el7.x86_64                                          1/1
  Verifying  : tree-1.6.0-10.el7.x86_64                                          1/1

Installed:
  tree.x86_64 0:1.6.0-10.el7

Complete!
[root@mylinuxlab sfit]# rpm -qi tree
Name        : tree
Version     : 1.6.0
Release     : 10.el7
Architecture: x86_64
Install Date: Thu 15 Feb 2024 04:12:27 PM IST
Group       : Applications/File
Size        : 89505
License     : GPLv2+
Signature   : RSA/SHA256, Fri 04 Jul 2014 11:06:46 AM IST, Key ID 24c6a8a7f4a80eb5
Source RPM  : tree-1.6.0-10.el7.src.rpm
Build Date  : Tue 10 Jun 2014 12:58:53 AM IST
Build Host  : worker1.bsys.centos.org
Relocations : (not relocatable)
Packager    : CentOS BuildSystem <http://bugs.centos.org>
Vendor      : CentOS
URL         : http://mama.indstate.edu/users/ice/tree/
Summary     : File system tree viewer
Description :
The tree utility recursively displays the contents of directories in a
tree-like format.  Tree is basically a UNIX port of the DOS tree
utility.
[root@mylinuxlab sfit]# 
```

File Edit View Search Terminal Help

```
The tree utility recursively displays the contents of directories in a
tree-like format.  Tree is basically a UNIX port of the DOS tree
utility.
[root@mylinuxlab sfit]# rpm -qc tree
[root@mylinuxlab sfit]# rpm -qa --last
tree-1.6.0-10.el7.x86_64                  Thu 15 Feb 2024 04:12:27 PM IST
ftp-0.17-67.el7.x86_64                    Thu 27 Apr 2023 09:57:53 AM IST
vsftpd-3.0.2-29.el7_9.x86_64              Thu 27 Apr 2023 09:25:51 AM IST
openssh-server-7.4p1-22.el7_9.x86_64      Wed 26 Apr 2023 09:53:23 AM IST
openssh-clients-7.4p1-22.el7_9.x86_64     Wed 26 Apr 2023 09:25:39 AM IST
openssh-7.4p1-22.el7_9.x86_64             Wed 26 Apr 2023 09:25:39 AM IST
telnet-0.17-66.el7.x86_64                 Fri 21 Apr 2023 10:14:04 AM IST
telnet-server-0.17-66.el7.x86_64          Fri 21 Apr 2023 10:11:05 AM IST
gpg-pubkey-f4a80eb5-53a7ff4b              Tue 18 Apr 2023 10:45:21 AM IST
words-3.0-22.el7.noarch                   Sat 15 Apr 2023 02:53:13 PM IST
rootfiles-8.1-11.el7.noarch               Sat 15 Apr 2023 02:53:13 PM IST
iwl7260-firmware-25.30.13.0-79.el7.noarch Sat 15 Apr 2023 02:53:13 PM IST
iwl6050-firmware-41.28.5.1-79.el7.noarch  Sat 15 Apr 2023 02:53:13 PM IST
iwl6000g2a-firmware-18.168.6.1-79.el7.noarch  Sat 15 Apr 2023 02:53:13 PM IST
iwl6000-firmware-9.221.4.1-79.el7.noarch  Sat 15 Apr 2023 02:53:13 PM IST
iwl3945-firmware-15.32.2.9-79.el7.noarch  Sat 15 Apr 2023 02:53:13 PM IST
iwl100-firmware-39.31.5.1-79.el7.noarch   Sat 15 Apr 2023 02:53:13 PM IST
man-pages-3.53-5.el7.noarch               Sat 15 Apr 2023 02:53:12 PM IST
iwl5150-firmware-8.24.2.2-79.el7.noarch   Sat 15 Apr 2023 02:53:11 PM IST
iwl4965-firmware-228.61.2.24-79.el7.noarch  Sat 15 Apr 2023 02:53:11 PM IST
iwl3160-firmware-25.30.13.0-79.el7.noarch Sat 15 Apr 2023 02:53:11 PM IST
iwl2030-firmware-18.168.6.1-79.el7.noarch Sat 15 Apr 2023 02:53:11 PM IST
iwl135-firmware-18.168.6.1-79.el7.noarch  Sat 15 Apr 2023 02:53:11 PM IST
iwl1000-firmware-39.31.5.1-79.el7.noarch  Sat 15 Apr 2023 02:53:11 PM IST
traceroute-2.0.22-2.el7.x86_64            Sat 15 Apr 2023 02:53:10 PM IST
thai-scalable-waree-fonts-0.5.0-7.el7.noarch  Sat 15 Apr 2023 02:53:10 PM IST
sil-padauk-fonts-2.8-5.el7.noarch         Sat 15 Apr 2023 02:53:10 PM IST
sil-nuosu-fonts-2.1.1-5.el7.noarch        Sat 15 Apr 2023 02:53:10 PM IST
setserial-2.17-33.el7.x86_64              Sat 15 Apr 2023 02:53:10 PM IST
```