1-dd if=/dev/zero of=/tmp/disk.img bs=512 count=40000

```
samar@samar-VirtualBox:~$ dd if=/dev/zero of=/tmp/disk.img bs=512 count=40000
40000+0 records in
40000+0 records out
20480000 bytes (20 MB, 20 MiB) copied, 0.334693 s, 61.2 MB/s
samar@samar-VirtualBox:~$
```

2-sudo losetup -f

 Sudo losetup /dev/loop6/tmp/disk.img

Losetup -l | grep 6

```
samar@samar-VirtualBox:~$ sudo losetup -f
[sudo] password for samar:
/dev/loop6
samar@samar-VirtualBox:~$
```

```
samar@samar-VirtualBox:~$ losetup -l | grep 6
/dev/loop6          0      0        0  0 /tmp/disk.img
                    0     512
/dev/loop11         0      0        1  1 /var/lib/snapd/snaps/snap-store_638.s
nap                 0     512
/dev/loop2          0      0        1  1 /var/lib/snapd/snaps/firefox_1635.sna
p                   0     512
samar@samar-VirtualBox:~$
```

3- sudo fdisk /dev/loop6

```
samar@samar-VirtualBox:~$ sudo fdisk /dev/loop6

Welcome to fdisk (util-linux 2.37.2).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table.
Created a new DOS disklabel with disk identifier 0xeff2c2da.

Command (m for help): m

Help:
```

```
Command (m for help): p
Disk /dev/loop6: 19.53 MiB, 20480000 bytes, 40000 sectors
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: dos
Disk identifier: 0xeff2c2da
```

```
   Created a new partition 1 of type 'Linux' and of size 18.5 MiB.
```

```
Command (m for help): p
Disk /dev/loop6: 19.53 MiB, 20480000 bytes, 40000 sectors
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: dos
Disk identifier: 0xeff2c2da

Device        Boot Start   End Sectors  Size Id Type
/dev/loop6p1       2048 39999   37952 18.5M 83 Linux
```

4-sudo mkfs.ext4 /dev/loop6p1

```
samar@samar-VirtualBox:~$ sudo mkfs.ext4 /dev/loop6p1
mke2fs 1.46.5 (30-Dec-2021)
Discarding device blocks: done
Creating filesystem with 4744 4k blocks and 4752 inodes

Allocating group tables: done
Writing inode tables: done
Creating journal (1024 blocks): done
Writing superblocks and filesystem accounting information: done
```

5- sudo mount /dev/loop6p1 /mnt

```
samar@samar-VirtualBox:~$ sudo mount /dev/loop6p1 /mnt
```

6-

```
samar@samar-VirtualBox:~$ sudo touch /mnt/file1.txt
samar@samar-VirtualBox:~$ ls /mnt
file1.txt  lost+found
samar@samar-VirtualBox:~$ sudo touch /mnt/file2.txt
samar@samar-VirtualBox:~$ ls /mnt
file1.txt  file2.txt  lost+found
```

7-

```
samar@samar-VirtualBox:~$ sudo umount /mnt
samar@samar-VirtualBox:~$ ls /mnt
```

8- apt search gparted

Sudo apt install gparted

```
samar@samar-VirtualBox:~$ apt search gparted
Sorting... Done
Full Text Search... Done
gparted/jammy 1.3.1-1ubuntu1 amd64
  GNOME partition editor

gparted-common/jammy,jammy 1.3.1-1ubuntu1 all
  GNOME partition editor -- common data

partitionmanager/jammy 21.12.3-0ubuntu1 amd64
  file, disk and partition management for KDE
```

```
samar@samar-VirtualBox:~$ sudo apt install gparted
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  gparted-common
Suggested packages:
  dmraid gpart jfsutils kpartx mtools reiser4progs reiserfsprogs udftools
  xfsprogs exfatprogs
The following NEW packages will be installed:
  gparted gparted-common
0 upgraded, 2 newly installed, 0 to remove and 220 not upgraded.
Need to get 490 kB of archives.
After this operation, 2,128 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://eg.archive.ubuntu.com/ubuntu jammy/main amd64 gparted-common all 1
.3.1-1ubuntu1 [71.9 kB]
Get:2 http://eg.archive.ubuntu.com/ubuntu jammy/main amd64 gparted amd64 1.3.1-
1ubuntu1 [418 kB]
Fetched 490 kB in 1s (467 kB/s)
Selecting previously unselected package gparted-common.
(Reading database ... 175331 files and directories currently installed.)
Preparing to unpack .../gparted-common_1.3.1-1ubuntu1_all.deb ...
Unpacking gparted-common (1.3.1-1ubuntu1) ...
Selecting previously unselected package gparted.
Preparing to unpack .../gparted_1.3.1-1ubuntu1_amd64.deb ...
Unpacking gparted (1.3.1-1ubuntu1) ...
Setting up gparted-common (1.3.1-1ubuntu1) ...
```

9-sudo gparted /dev/loop6p1