

```
radwa@radwa-VirtualBox: ~  
radwa@radwa-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, 0.0773345 s, 265 MB/s  
radwa@radwa-VirtualBox:~$ sudo losetup -f  
[sudo] password for radwa:  
/dev/loop15
```

```
losetup: /tmp/disk.img: failed to set up loop device: device or resource busy  
radwa@radwa-VirtualBox:~$ sudo losetup -P /dev/loop18 /tmp/disk.img
```

```
radwa@radwa-VirtualBox:~$ sudo fdisk /dev/loop18
```

```
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 0xa431e747.  
  
Command (m for help): n  
Partition type  
   p   primary (0 primary, 0 extended, 4 free)  
   e   extended (container for logical partitions)  
Select (default p): p  
Partition number (1-4, default 1):  
First sector (2048-39999, default 2048):  
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-39999, default 39999):  
  
Created a new partition 1 of type 'Linux' and of size 18.5 MiB.  
  
Command (m for help):
```

```
radwa@radwa-VirtualBox:~$ sudo mkfs.ext4 /tmp/disk.img  
mke2fs 1.46.5 (30-Dec-2021)  
Discarding device blocks: done  
Creating filesystem with 5000 4k blocks and 5008 inodes  
  
Allocating group tables: done  
Writing inode tables: done  
Creating journal (1024 blocks): done  
Writing superblocks and filesystem accounting information: done  
  
radwa@radwa-VirtualBox:~$
```

```
radwa@radwa-VirtualBox:~$ sudo mount /dev/loop18 /mnt
radwa@radwa-VirtualBox:~$ ls /mnt
lost+found
radwa@radwa-VirtualBox:~$
```

```
radwa@radwa-VirtualBox:~$ sudo touch /mnt/file1.txt
radwa@radwa-VirtualBox:~$ sudo touch /mnt/file2.txt
radwa@radwa-VirtualBox:~$ sudo umount /mnt
radwa@radwa-VirtualBox:~$ sudo apt install gparted
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  systemd-hwe-hwdb
Use 'sudo apt autoremove' to remove it.
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 231 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 1.3.1-1
```

