

```
asmaa@asmaa-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, 0.0757906 s, 270 MB/s
```

```
asmaa@asmaa-VirtualBox:~$ sudo losetup -f
[sudo] password for asmaa:
/dev/loop16
asmaa@asmaa-VirtualBox:~$ sudo losetup /dev/loop16 /tmp/disk.img
asmaa@asmaa-VirtualBox:~$
```

```
asmaa@asmaa-VirtualBox:~$ sudo fdisk /dev/loop16

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 0xdfadff2c.

Command (m for help):
All unwritten changes will be lost, do you really want to quit?

asmaa@asmaa-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

asmaa@asmaa-VirtualBox:~$
```

```
asmaa@asmaa-VirtualBox:~$ sudo mount /dev/loop16 /mnt
asmaa@asmaa-VirtualBox:~$ ls /mnt
lost+found
asmaa@asmaa-VirtualBox:~$ sudo touch /mnt/text1.txt
asmaa@asmaa-VirtualBox:~$ sudo touch /mnt/text2.txt
asmaa@asmaa-VirtualBox:~$ sudo touch /mnt/text3.txt
asmaa@asmaa-VirtualBox:~$ ls /mnt
lost+found text1.txt text2.txt text3.txt
asmaa@asmaa-VirtualBox:~$
```

```
asmaa@asmaa-VirtualBox:~$ sudo umount /mnt
asmaa@asmaa-VirtualBox:~$ sudo apt install gparted
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libflashrom1 libftdi1-2
Use 'sudo apt autoremove' to remove them.
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 35 not upgraded.
Need to get 490 kB of archives.
After this operation, 2,128 kB of additional disk space will be used.
```

