

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

2- `losetup -f`

3- `sudo losetup -P /dev/loop18 /tmp/disk.img`

4- `sudo fdisk /dev/loop18`

5- `sudo mkfs.ext4 /tmp/disk.img`

6- `sudo mount /dev/loop18 /mnt`

7- `sudo apt install gparted`

8- `sudo gparted /dev/loop18`

```
omar@omar-VirtualBox:~$ dd if=/dev/zero of=/tmp/disk.img bs=512 count=40000
dd: failed to open '/tmp/disk.img': No such file or directory
omar@omar-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, 0.078733 s, 260 MB/s
omar@omar-VirtualBox:~$ losetup -f
losetup: cannot find an unused loop device: Permission denied
omar@omar-VirtualBox:~$ losetup -f
losetup: cannot find an unused loop device: Permission denied
omar@omar-VirtualBox:~$ sudo losetup -f
[sudo] password for omar:
/dev/loop18
omar@omar-VirtualBox:~$ sudo losetup -P /dev/loop18 /tmp/disk.img
omar@omar-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 0x86201a77.

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): 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): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

omar@omar-VirtualBox:~$ sudo mkfs.ext4 /tmp/disk.img
mke2fs 1.46.5 (30-Dec-2021)
Found a dos partition table in /tmp/disk.img
Proceed anyway? (y,N) y
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
```

```

omar@omar-VirtualBox:~$ sudo mount /dev/loop18 /mnt
omar@omar-VirtualBox:~$ ls /mnt
lost+found
omar@omar-VirtualBox:~$ cd /mnt
omar@omar-VirtualBox:/mnt$ sudo touch file2.txt
omar@omar-VirtualBox:/mnt$ ls
file2.txt  lost+found
omar@omar-VirtualBox:/mnt$ cd ~
omar@omar-VirtualBox:~$ sudo umount /mnt
sudo: umount: command not found
omar@omar-VirtualBox:~$ sudo umount /mnt
omar@omar-VirtualBox:~$ ls /mnt
omar@omar-VirtualBox:~$ sudo 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

omar@omar-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 206 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 (416 kB/s)
Selecting previously unselected package gparted-common.
(Reading database ... 203169 files and directories currently
installed.)

```

```

omar@omar-VirtualBox:~$ sudo gparted
GParted 1.3.1
configuration --enable-libparted-dmraid --enable-online-resize
libparted 3.4









^C
omar@omar-VirtualBox:~$ sudo gparted /dev/loop18
GParted 1.3.1
configuration --enable-libparted-dmraid --enable-online-resize
libparted 3.4

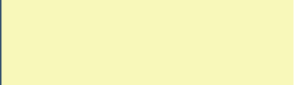
```


Preparing to unpack .../gparted-common\_1.3.1-1ubuntu1\_all.deb

**/dev/loop18 - GParted**

GParted Edit View Device Partition Help

        /dev/loop18 (19.53 MiB) v

 /dev/loop18  
19.53 MiB

Partition	File System	Size	Used	Unused	Flags
/dev/loop18	 ext4	19.53 MiB	5.30 MiB	14.23 MiB	

0 operations pending

^C

omar@omar-VirtualBox:~\$ sudo gparted /dev/loop18

GParted 1.3.1

configuration --enable-libparted-dmraid --enable-online-resize

libparted 3.4