

# filesystems

## Hardware needed

1. \*\*SDCARD or USB Flash

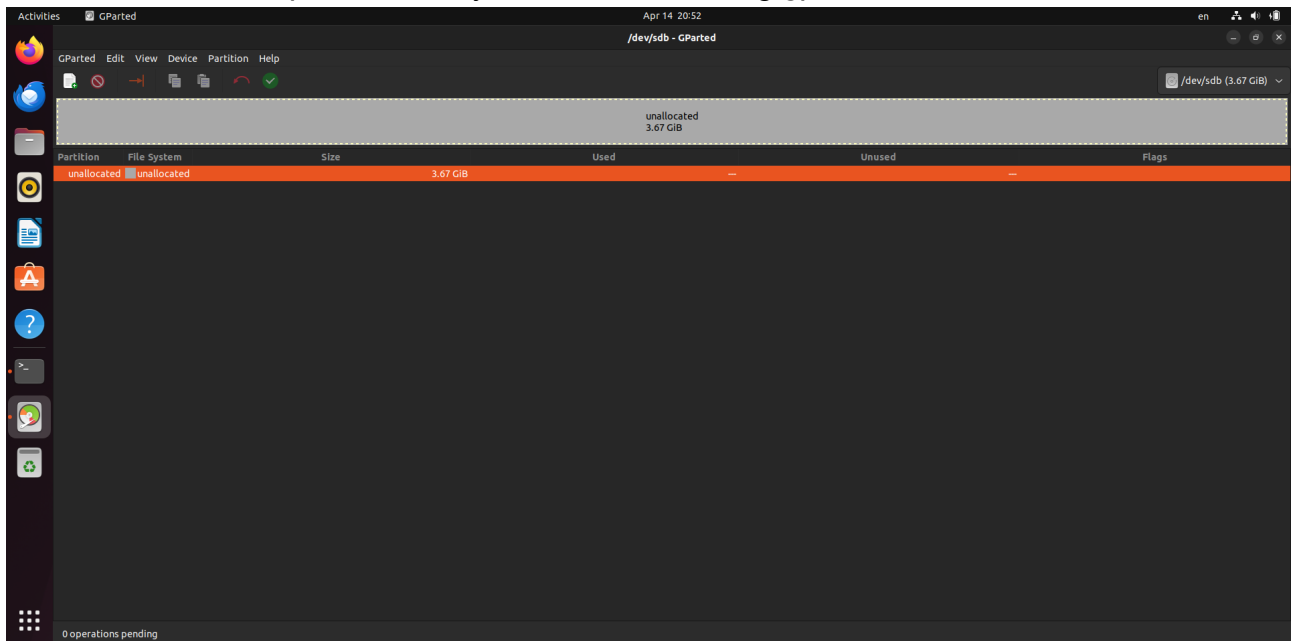


## Software Needed.

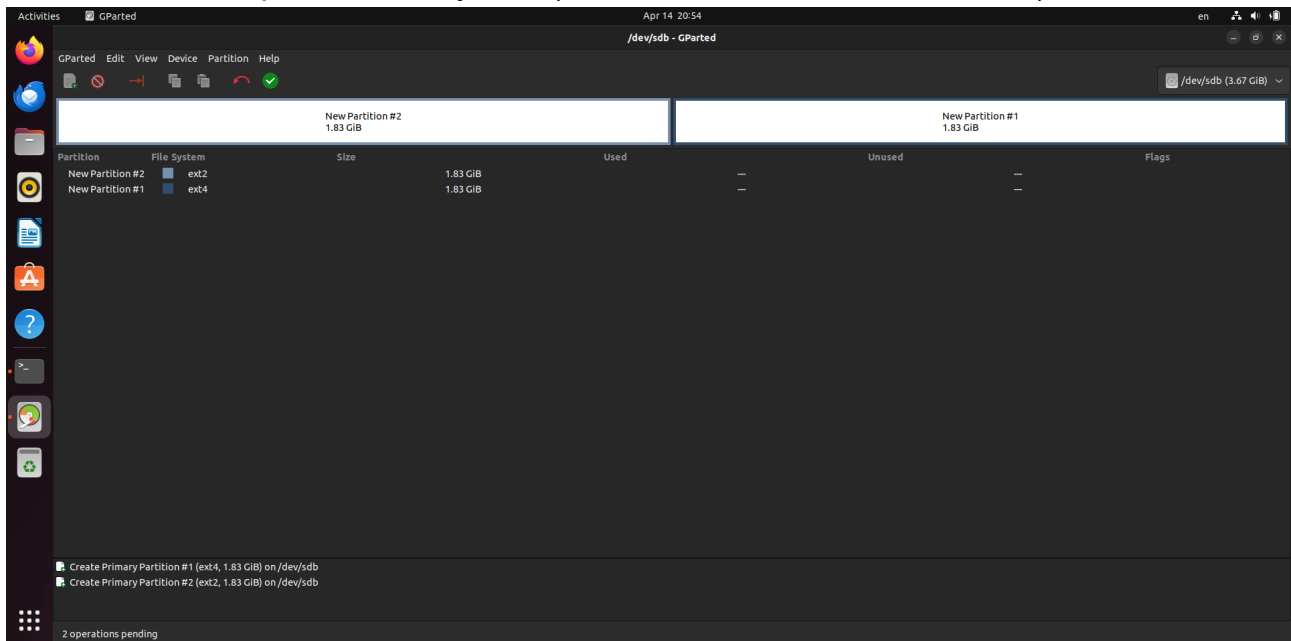
1. \*\*gparted.

## Requirements.

1. **\*\*Make at least two partitions on your SD-CARD using *gparted*.**



2. **\*\*Create for each partitions filesystem ( first one *ext4* & second one *ext2* ).**

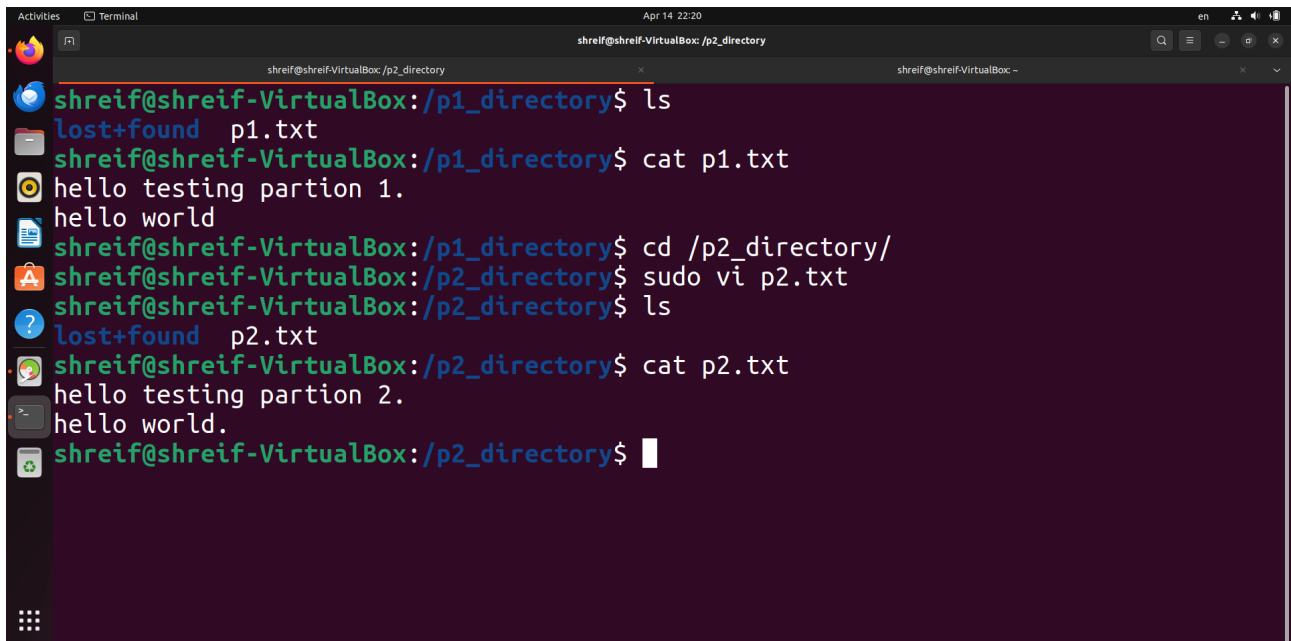


```
Activities Terminal Apr 14 20:56 shreif@shreif-VirtualBox -
shreif@shreif-VirtualBox:~$ lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
loop0 7:0 0 4K 1 loop /snap/bare/5
loop1 7:1 0 74.2M 1 loop /snap/core22/1122
loop2 7:2 0 266.6M 1 loop /snap/firefox/3836
loop3 7:3 0 267.5M 1 loop /snap/firefox/3941
loop4 7:4 0 497M 1 loop /snap/gnome-42-2204/141
loop5 7:5 0 504.2M 1 loop /snap/gnome-42-2204/172
loop6 7:6 0 91.7M 1 loop /snap/gtk-common-themes/1535
loop7 7:7 0 12.9M 1 loop /snap/snap-store/1113
loop8 7:8 0 12.3M 1 loop /snap/snap-store/959
loop9 7:9 0 40.4M 1 loop /snap/snapd/20671
loop10 7:10 0 39.1M 1 loop /snap/snapd/21184
loop11 7:11 0 452K 1 loop /snap/snapd-desktop-integration/83
loop12 7:12 0 476K 1 loop /snap/snapd-desktop-integration/157
sda 8:0 0 25G 0 disk
├─sda1 8:1 0 1M 0 part
├─sda2 8:2 0 513M 0 part /boot/efi
└─sda3 8:3 0 24.5G 0 part /var/snap/firefox/common/host-hunspell
sdb 8:16 1 3.7G 0 disk
├─sdb1 8:17 1 1.8G 0 part
└─sdb2 8:18 1 1.8G 0 part
sr0 11:0 1 51M 0 rom /media/shreif/VBox_GAs_7.0.14
shreif@shreif-VirtualBox:~$
```

3. \*\*Mount two partitions on your root filesystem.

```
Activities Terminal Apr 14 21:47 shreif@shreif-VirtualBox -
shreif@shreif-VirtualBox:~$ sudo mount -t ext4 /dev/sdb1 /p1_directory
[sudo] password for shreif:
shreif@shreif-VirtualBox:~$ sudo mount -t ext2 /dev/sdb2 /p2_directory
shreif@shreif-VirtualBox:~$ lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
loop0 7:0 0 4K 1 loop /snap/bare/5
loop1 7:1 0 74.2M 1 loop /snap/core22/1122
loop2 7:2 0 266.6M 1 loop /snap/firefox/3836
loop3 7:3 0 267.5M 1 loop /snap/firefox/3941
loop4 7:4 0 497M 1 loop /snap/gnome-42-2204/141
loop5 7:5 0 504.2M 1 loop /snap/gnome-42-2204/172
loop6 7:6 0 91.7M 1 loop /snap/gtk-common-themes/1535
loop7 7:7 0 12.9M 1 loop /snap/snap-store/1113
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loop9 7:9 0 40.4M 1 loop /snap/snapd/20671
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loop11 7:11 0 452K 1 loop /snap/snapd-desktop-integration/83
loop12 7:12 0 476K 1 loop /snap/snapd-desktop-integration/157
sda 8:0 0 25G 0 disk
├─sda1 8:1 0 1M 0 part
├─sda2 8:2 0 513M 0 part /boot/efi
└─sda3 8:3 0 24.5G 0 part /var/snap/firefox/common/host-hunspell
sdb 8:16 1 3.7G 0 disk
├─sdb1 8:17 1 1.8G 0 part /p1_directory
└─sdb2 8:18 1 1.8G 0 part /p2_directory
sr0 11:0 1 51M 0 rom /media/shreif/VBox_GAs_7.0.14
shreif@shreif-VirtualBox:~$
```

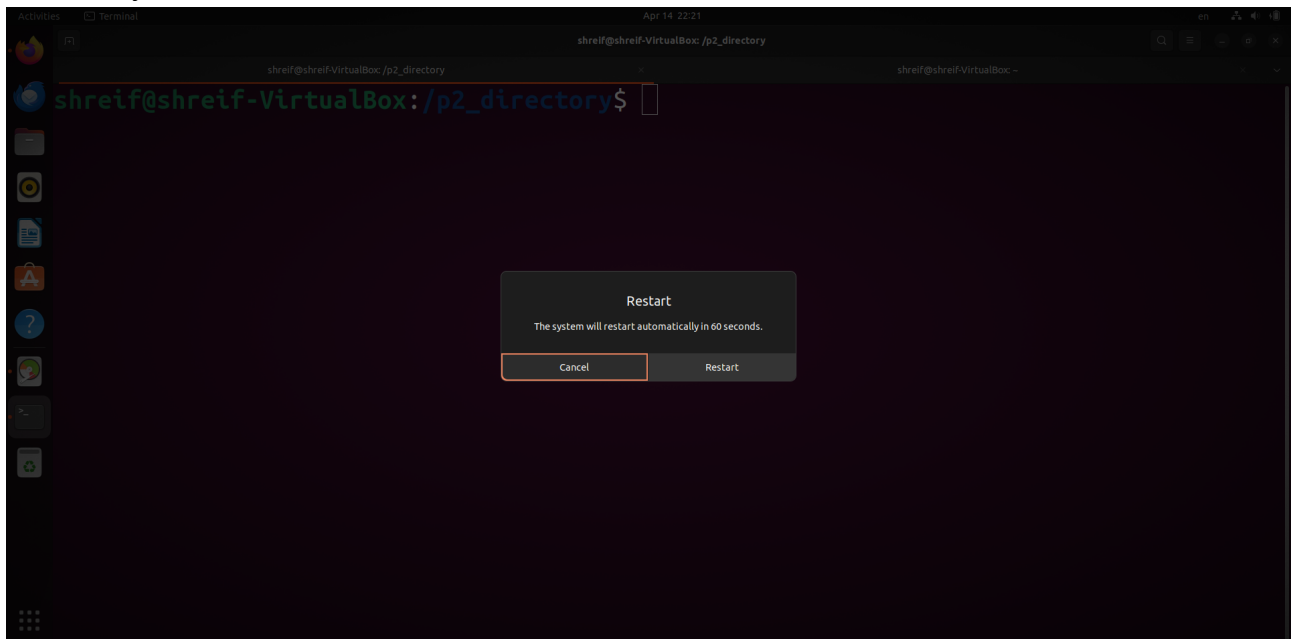
4. \*\*Add some files inside each one.



A terminal window titled 'shreif@shreif-VirtualBox: /p2\_directory' showing a series of commands and their outputs. The user is in the /p1\_directory directory. They list files, showing 'p1.txt'. They then view the contents of 'p1.txt', which contains 'hello testing partion 1.' and 'hello world'. Next, they navigate to the /p2\_directory directory using 'cd /p2\_directory/'. They then use 'sudo vi p2.txt' to create a new file. After exiting the editor, they list files, showing 'p2.txt', and view its contents, which are 'hello testing partion 2.' and 'hello world.'.

```
shreif@shreif-VirtualBox:/p1_directory$ ls
lost+found  p1.txt
shreif@shreif-VirtualBox:/p1_directory$ cat p1.txt
hello testing partion 1.
hello world
shreif@shreif-VirtualBox:/p1_directory$ cd /p2_directory/
shreif@shreif-VirtualBox:/p2_directory$ sudo vi p2.txt
shreif@shreif-VirtualBox:/p2_directory$ ls
lost+found  p2.txt
shreif@shreif-VirtualBox:/p2_directory$ cat p2.txt
hello testing partion 2.
hello world.
shreif@shreif-VirtualBox:/p2_directory$
```

5. \*\*reboot your machine.



6. **\*\*check if mounting points still exists, *it should not*.**

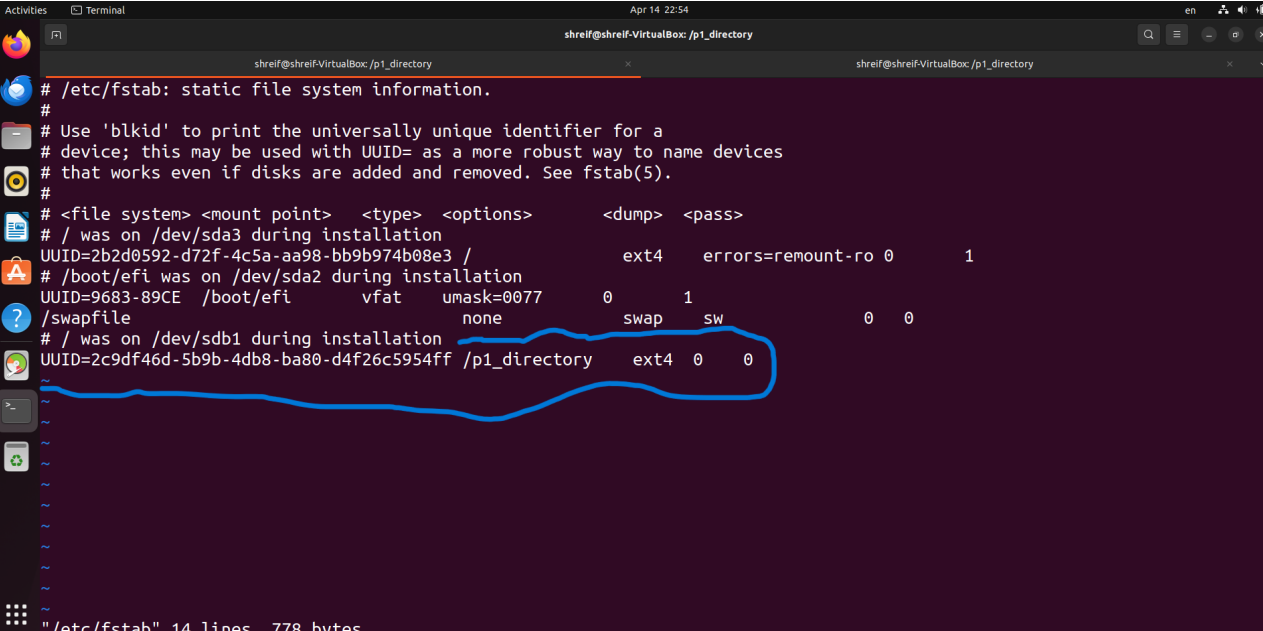
Activities Terminal Apr 14 22:30 en

shreiff@shreiff-VirtualBox -

```

loop1 7:1 0 74.2M 1 loop /snap/core22/1122
loop2 7:2 0 266.6M 1 loop /snap/firefox/3836
loop3 7:3 0 267.5M 1 loop /snap/firefox/3941
loop4 7:4 0 497M 1 loop /snap/gnome-42-2204/141
loop5 7:5 0 504.2M 1 loop /snap/gnome-42-2204/172
loop6 7:6 0 91.7M 1 loop /snap/gtk-common-themes/1535
loop7 7:7 0 12.9M 1 loop /snap/snap-store/1113
loop8 7:8 0 12.3M 1 loop /snap/snap-store/959
loop9 7:9 0 40.4M 1 loop /snap/snapd/20671
loop10 7:10 0 39.1M 1 loop /snap/snapd/21184
loop11 7:11 0 476K 1 loop /snap/snapd-desktop-integration/157
loop12 7:12 0 452K 1 loop /snap/snapd-desktop-integration/83
sda 8:0 0 25G 0 disk
├─sda1 8:1 0 1M 0 part
├─sda2 8:2 0 513M 0 part /boot/efi
└─sda3 8:3 0 24.5G 0 part /var/snap/firefox/common/host-hunspell
sdb 8:16 1 3.7G 0 disk
├─sdb1 8:17 1 1.8G 0 part /media/shreiff/2c9df46d-5b9b-4db8-ba80-d4f26c5954ff
└─sdb2 8:18 1 1.8G 0 part /media/shreiff/aa6b1775-b7f4-4c89-b9a6-f2b770dfb28
sr0 11:0 1 51M 0 rom /media/shreiff/VBox_GAs_7.0.14
shreiff@shreiff-VirtualBox: $
  
```

7. **\*\*Make the *ext4* persistence by adding */etc/fstab* file ----> (search how you can do that).**



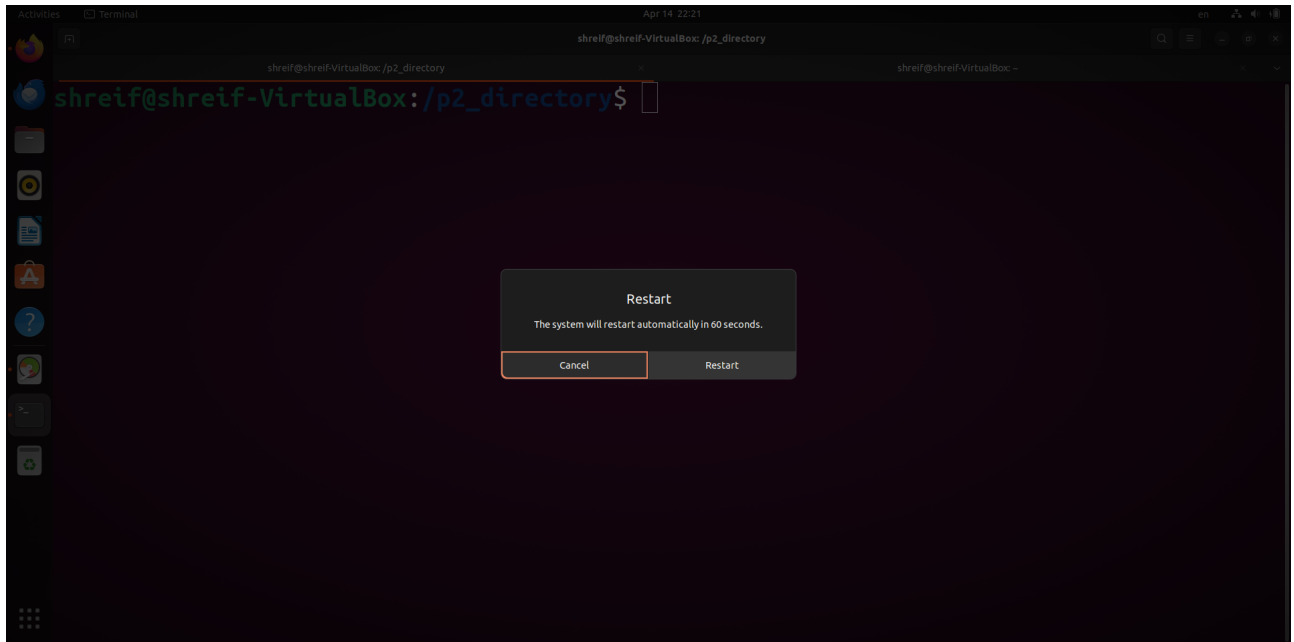
```

shreif@shreif-VirtualBox: /p1_directory
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# <file system> <mount point> <type> <options>        <dump>  <pass>
# / was on /dev/sda3 during installation
UUID=2b2d0592-d72f-4c5a-aa98-bb9b974b08e3 /          ext4      errors=remount-ro 0      1
# /boot/efi was on /dev/sda2 during installation
UUID=9683-89CE /boot/efi  vfat     umask=0077        0      1
# /swapfile
/swapfile none      swap      sw                0      0
# / was on /dev/sdb1 during installation
UUID=2c9df46d-5b9b-4db8-ba80-d4f26c5954ff /p1_directory ext4 0 0

```

"/etc/fstab" 14 lines, 778 bytes

8. \*\*reboot your system.



9. \*\*Check if the *ext4* is mounted.