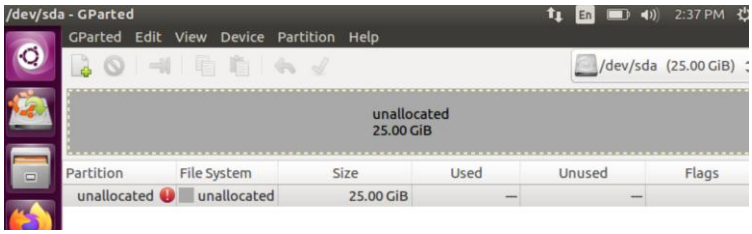
Laboratory Exercise -6

File Systems

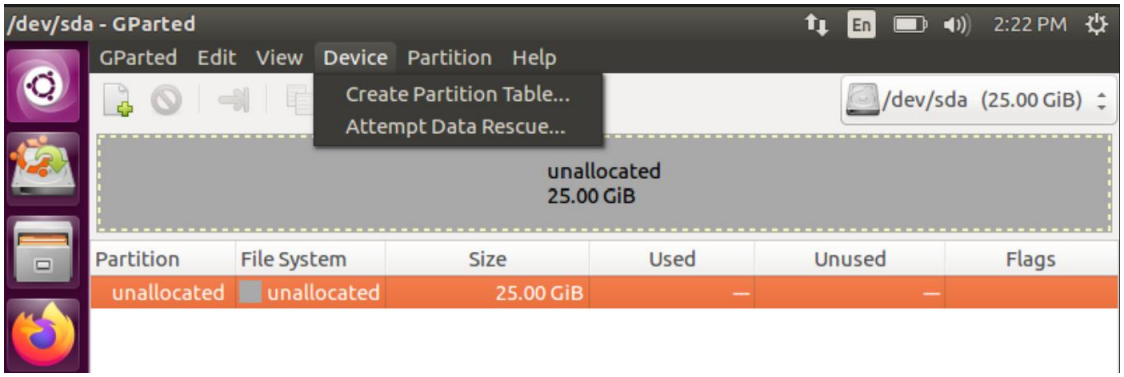
LAB 6TEST1: MBR Partitioning

1) In the setting of your virtual machine in VirtualBOX, add a new disk to the SATA controller with 2GB capacity
2) **Open your Disk and check how many partion you have**
3) Open terminal, Install and run gparted application using apt-get
4) The disk will be seen inside gparted as /dev/sda

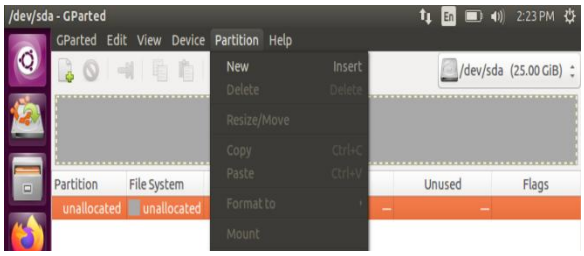
```
sudo apt-get install gparted
sudo gparted
```

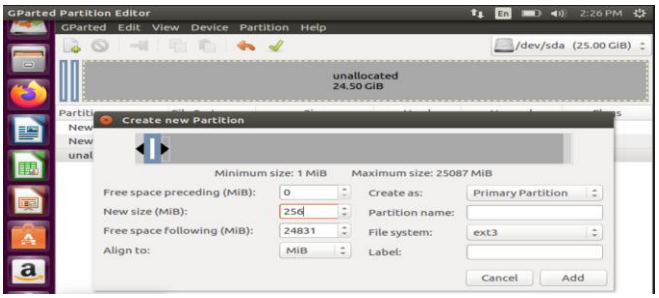


4) Using device menu: create a **msdos** partition table

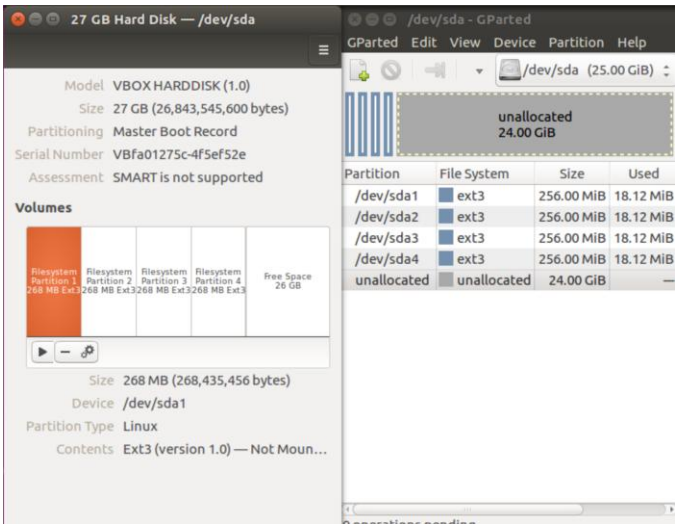


5) Using partition menu: create 4 primary partitions each of size 256 MB with ext3 file system and Add





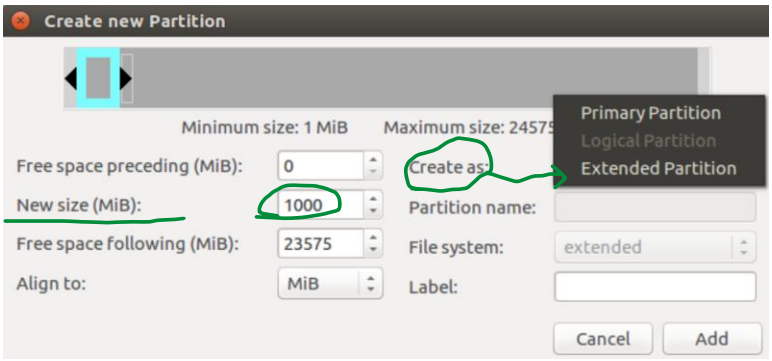
5) Using Edit Menu: Click to apply all operation and then check your Disk**. How Many Partition you have**



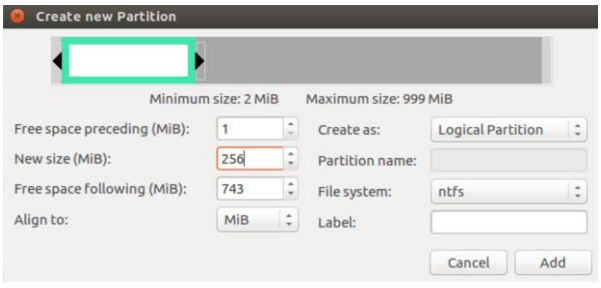
6) Try to add fifth primary partition of size 256 MB, record the error

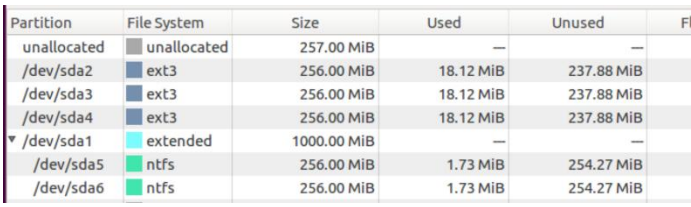
7) Delete one primary partition

8) Add Extended partition of 1 GB



9) Inside it creates two logical partitions with 256 MB with ntfs file system and Apply





Partition	File System	Size	Used	Unused
unallocated	unallocated	257.00 MiB	—	—
/dev/sda2	ext3	256.00 MiB	18.12 MiB	237.88 MiB
/dev/sda3	ext3	256.00 MiB	18.12 MiB	237.88 MiB
/dev/sda4	ext3	256.00 MiB	18.12 MiB	237.88 MiB
/dev/sda1	extended	1000.00 MiB	—	—
/dev/sda5	ntfs	256.00 MiB	1.73 MiB	254.27 MiB
/dev/sda6	ntfs	256.00 MiB	1.73 MiB	254.27 MiB

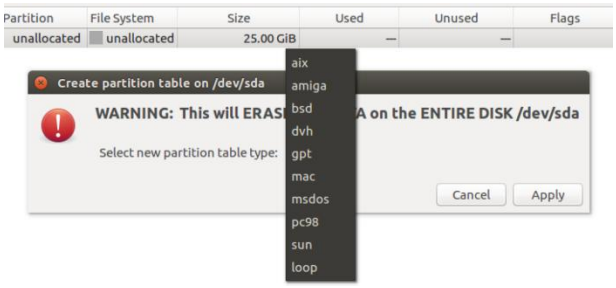
10)Check files 

11) Delete all partitions **and in Edit Menu: Apply all operation.**

LAB 6TEST2: GPT Partitioning

1) Using device menu: create a **gpt** partition table
2) Using partition menu: create 4 primary partitions each of size 256 MB with **ntfs** file system and **Apply**
3) Try to add fifth primary partition of size 256 MB with **ntfs** file system and **Apply**

1)



LAB 6TEST3: Partition Mounting

1) Provide screen shoots and comments for all steps below
2) Open a new Terminal window
3) Use the command df to list mounting points
4) **Create folder mydisk**
5) Mount sdb1 as mydisk Yours may be sda1

sudo mount /dev/sdb1 mydisk –o uid= ubuntu

6) Use the command df to list mounting points
7) Go inside mydisk and create a new file using cat > file1.txt
8) List the files inside mydisk
9) Go outside mydisk
10) Unmount my disk using the command umount

sudo umount mydisk

11) Use the command df to list mounting points
12) Go inside mydisk and List the files inside mydisk
13) Using gparted delete all partitions in /dev/sdb

LAB 6 TEST4: Hard and Symbolic Links

1) Under **/home/** ubuntu create a folder **test1** mkdir /home/ubuntu/test1
2) Inside **test1** create a file called **file1** using touch /home/ubuntu/test1/file1
3) Create hard link to **file1** ln /home/ubuntu/test1/file1 /home/ubuntu/test1/hardlink1
4) List the directory contents using the command

ls –li ls -li /home/ubuntu/test1

Provide screen shoot and comments

1) Under **/home/** ubuntu change to folder **test1** ls -li /home/ubuntu/test1
2) Inside test1 make sure there is a file called **file1** ls
3) Create soft link to **file1** Ls -s file1 softlink1
4) List the directory contents using the command

ls –li

Provide screen shoot and comments for all steps above