

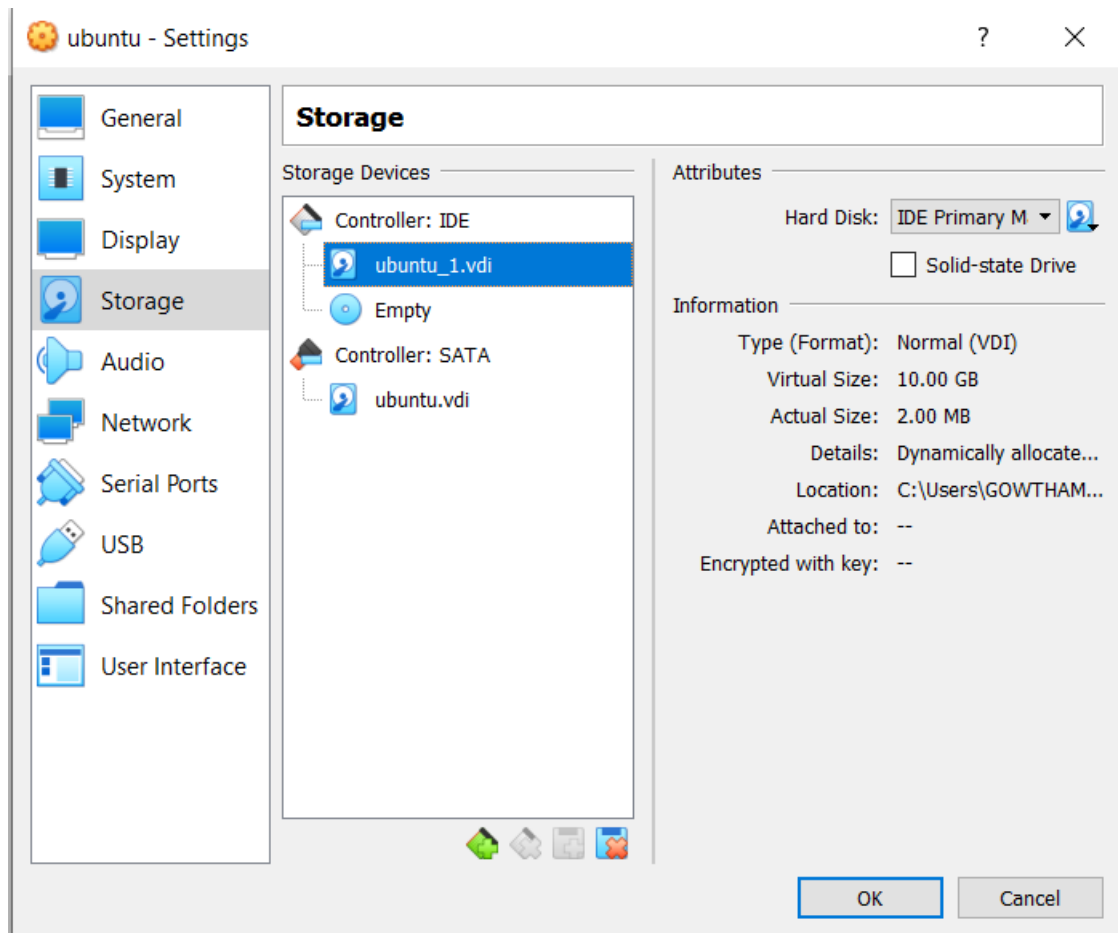
Assignment - 2 (Day 5)

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Question

1. Add a 10GB disk to the CentOS.



```
gowtham@raj-VirtualBox: ~  
File Edit View Search Terminal Help  
gowtham@raj-VirtualBox:~$ sudo fdisk -l | grep "/dev/sd"  
[sudo] password for gowtham:  
Disk /dev/sda: 10 GiB, 10737418240 bytes, 20971520 sectors  
Disk /dev/sdb: 40 GiB, 42949672960 bytes, 83886080 sectors  
/dev/sdb1      2048  1050623  1048576  512M EFI System  
/dev/sdb2    1050624 83884031 82833408 39.5G Linux filesystem  
gowtham@raj-VirtualBox:~$
```

2. Create 2 Partitions 4GB and 6GB of Space respectively.

```
gowtham@raj-VirtualBox: ~  
File Edit View Search Terminal Help  
gowtham@raj-VirtualBox:~$ sudo fdisk /dev/sda  
Welcome to fdisk (util-linux 2.31.1).  
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 0xc9ef5a68.  
  
Command (m for help): m  
Help:  
  
DOS (MBR)  
a toggle a bootable flag  
b edit nested BSD disklabel  
c toggle the dos compatibility flag  
  
Generic  
d delete a partition  
F list free unpartitioned space  
l list known partition types  
n add a new partition  
p print the partition table  
t change a partition type  
v verify the partition table  
i print information about a partition  
  
Misc  
m print this menu  
u change display/entry units  
x extra functionality (experts only)  
  
Script  
I load disk layout from sfdisk script file  
O dump disk layout to sfdisk script file  
  
Save & Exit
```

```
gowtham@raj-VirtualBox: ~  
File Edit View Search Terminal Help  
gowtham@raj-VirtualBox:~$ sudo fdisk /dev/sda -l  
Disk /dev/sda: 10 GiB, 10737418240 bytes, 20971520 sectors  
Units: sectors of 1 * 512 = 512 bytes  
Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes  
Disklabel type: gpt  
Disk identifier: EB8CD5A3-84B3-4842-9B27-4D11A99B696A  
  
Device      Start      End  Sectors  Size Type  
/dev/sda1   2048    8390655   8388608    4G Linux filesystem  
/dev/sda2  8390656 20971486 12580831    6G Linux filesystem  
gowtham@raj-VirtualBox:~$
```

3. Format 4GB with xfs and 6GB with ext4 file system.

```
gowtham@raj-VirtualBox: ~  
File Edit View Search Terminal Help  
gowtham@raj-VirtualBox:~$ sudo mkfs.xfs /dev/sda1  
meta-data=/dev/sda1            isize=512    agcount=4, agsize=262144 blks  
=                               sectsz=512   attr=2, projid32bit=1  
=                               crc=1       finobt=1, sparse=0, rmapbt=0, refl  
inok=0  
data      =                     bsize=4096   blocks=1048576, inapct=25  
=                     sunit=0    swidth=0 blks  
naming    =version 2           bsize=4096   ascii-ci=0 ftype=1  
log       =internal log       bsize=4096   blocks=2560, version=2  
=                     sectsz=512  sunit=0 blks, lazy-count=1  
realtime  =none               extsz=4096   blocks=0, rtextents=0  
gowtham@raj-VirtualBox:~$
```

```
gowtham@raj-VirtualBox: ~
File Edit View Search Terminal Help
gowtham@raj-VirtualBox:~$ sudo mkfs.ext4 /dev/sda2
mke2fs 1.44.1 (24-Mar-2018)
Creating filesystem with 1572603 4k blocks and 393216 inodes
Filesystem UUID: 492d3b8e-7322-4e3b-b6af-53fb2642c75a
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done

gowtham@raj-VirtualBox:~$
```

```
gowtham@raj-VirtualBox: ~
File Edit View Search Terminal Help
gowtham@raj-VirtualBox:~$ lsblk /dev/sda -f
NAME      FSTYPE LABEL UUID                                MOUNTPOINT
sda
├─sda1    xfs      c2845f7a-e0cb-4602-ae6c-14fdb3dc
└─sda2    ext4     492d3b8e-7322-4e3b-b6af-53fb2642c75a
gowtham@raj-VirtualBox:~$
```

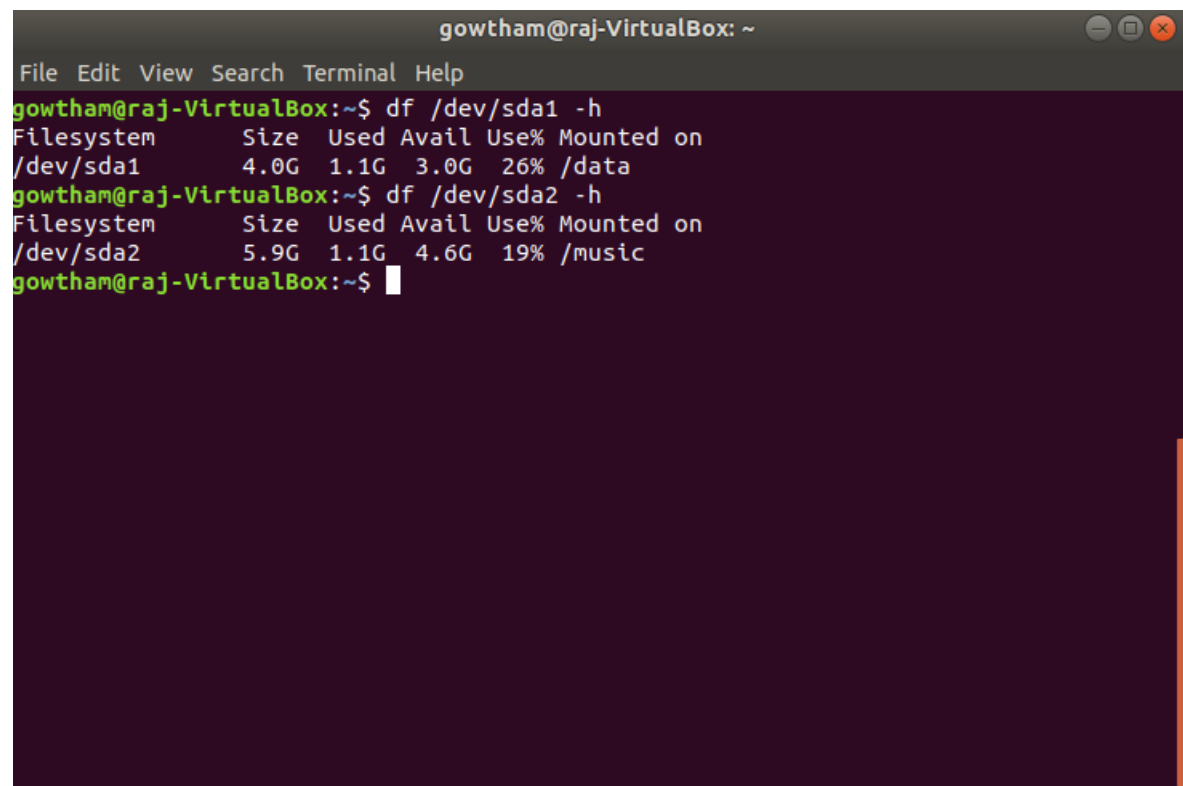
4. Mount 4GB and 6GB in /data and /music directory respectively.

```
gowtham@raj-VirtualBox: ~  
File Edit View Search Terminal Help  
gowtham@raj-VirtualBox:~$ sudo mkdir /data  
[sudo] password for gowtham:  
gowtham@raj-VirtualBox:~$ sudo mkdir /music  
gowtham@raj-VirtualBox:~$ sudo mount /dev/sda1 /data  
gowtham@raj-VirtualBox:~$ sudo mount /dev/sda2 /music  
gowtham@raj-VirtualBox:~$ lsblk /dev/sda -f  
NAME      FSTYPE LABEL UUID                                MOUNTPOINT  
sda  
├─sda1 xfs          c2845f7a-e0cb-4602-aefb-ee6c14fdb3dc /data  
└─sda2 ext4        492d3b8e-7322-4e3b-b6af-53fb2642c75a /music  
gowtham@raj-VirtualBox:~$
```

5. Create one file of 1GB in each of the mount point created above.

```
gowtham@raj-VirtualBox: ~  
File Edit View Search Terminal Help  
gowtham@raj-VirtualBox:~$ sudo dd if=/dev/zero of=/data/letsupgrade bs=4M count=  
256 oflag=sync status=progress  
1006632960 bytes (1.0 GB, 960 MiB) copied, 12 s, 83.8 MB/s  
256+0 records in  
256+0 records out  
1073741824 bytes (1.1 GB, 1.0 GiB) copied, 12.8559 s, 83.5 MB/s  
gowtham@raj-VirtualBox:~$ sudo dd if=/dev/zero of=/music/letsupgrade bs=4M count  
=256 oflag=sync status=progress  
989855744 bytes (990 MB, 944 MiB) copied, 11 s, 89.8 MB/s  
256+0 records in  
256+0 records out  
1073741824 bytes (1.1 GB, 1.0 GiB) copied, 11.9165 s, 90.1 MB/s  
gowtham@raj-VirtualBox:~$ ls /data -lh  
total 1.0G  
-rw-r--r-- 1 root root 1.0G Dec 10 16:02 letsupgrade  
gowtham@raj-VirtualBox:~$ ls /music -lh  
total 1.1G  
-rw-r--r-- 1 root root 1.0G Dec 10 16:02 letsupgrade  
drwx----- 2 root root 16K Dec 10 15:30 lost+found  
gowtham@raj-VirtualBox:~$
```

6. Verify the disk Consumption and disk space free in the mounted partitions.



A terminal window titled "gowtham@raj-VirtualBox: ~" with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the execution of two 'df' commands. The first command, 'df /dev/sda1 -h', displays disk usage for /dev/sda1, which is mounted at /data. The second command, 'df /dev/sda2 -h', displays disk usage for /dev/sda2, which is mounted at /music. The prompt 'gowtham@raj-VirtualBox:~\$' is shown at the end of the output.

```
gowtham@raj-VirtualBox:~$ df /dev/sda1 -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/sda1       4.0G  1.1G  3.0G  26% /data
gowtham@raj-VirtualBox:~$ df /dev/sda2 -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/sda2       5.9G  1.1G  4.6G  19% /music
gowtham@raj-VirtualBox:~$
```