Assignment - 2 (Day 5)
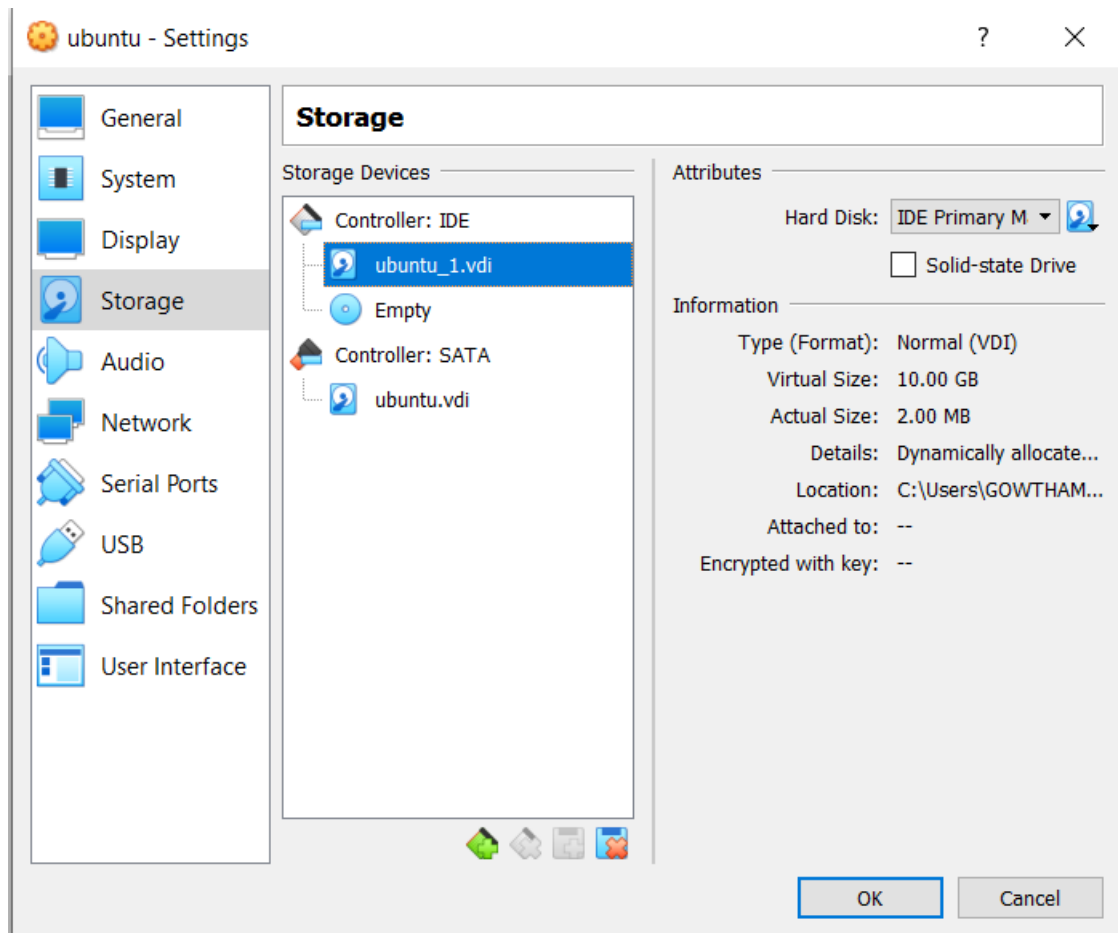
Name : GOKUL J B

Email id : jbgokul2000@gmail.com

Question

1. Add a 10GB disk to the CentOS.

```
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:~$ 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:~$ 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:~$ 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, rnapbt=0, refl
ink=0
data     =                       bsize=4096   blocks=1048576, imaxpct=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-aefb-ee6c14fdb3dc
└─sda2 ext4         492d3b8e-7322-4e3b-b6af-53fb2642c75a
gowtham@raj-VirtualBox:~$
```

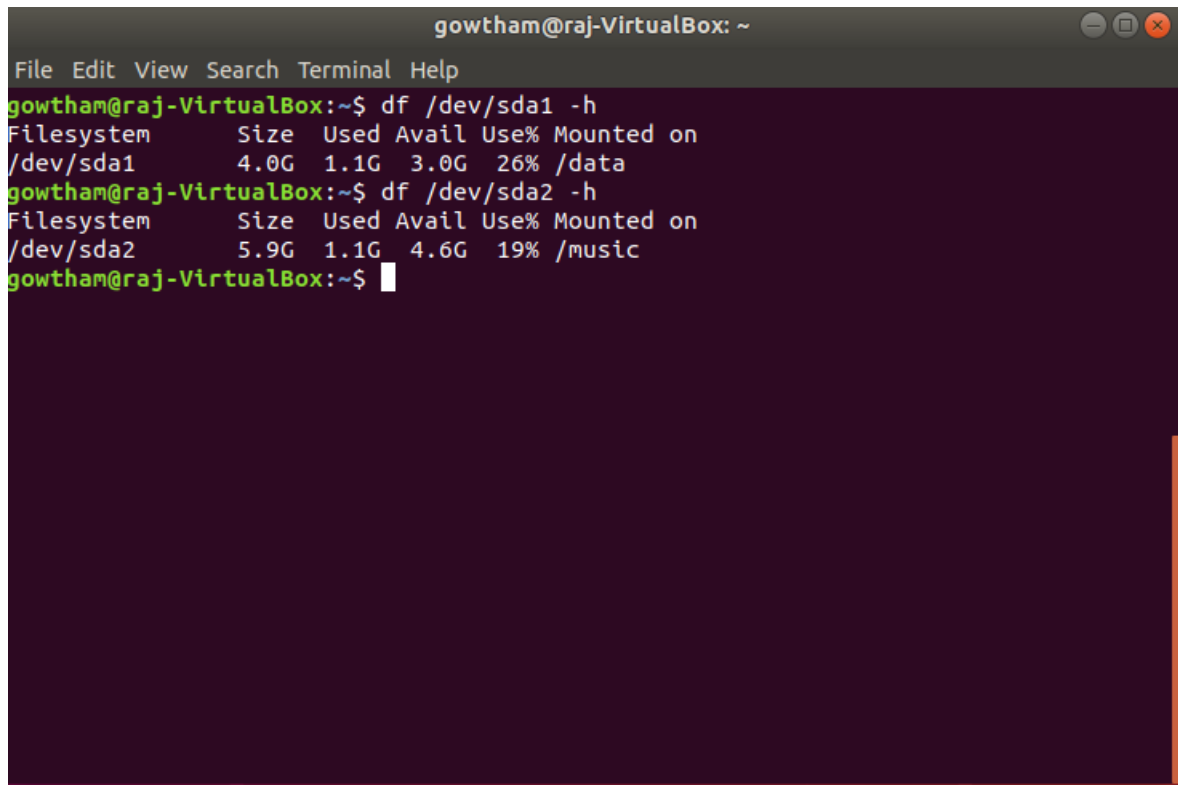4. Mount 4GB and 6GB in /data and /music directory respectively.


```
                          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.

```
gowtham@raj-VirtualBox: ~                                    ⊝ ⊡ ⊗
File  Edit  View  Search  Terminal  Help
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:~$
```