

LINUX ASSIGNMENT DAY 5 LU

Question 1

1. Add a 10GB disk to the CentOS.
2. Create 2 Partitions 4GB and 6GB of Space respectively.
3. Format 4GB with xfs and 6GB with ext4 file system.
4. Mount 4GB and 6GB in /data and /music directory respectively.
5. Create one file of 1GB in each of the mount point created above.
6. Verify the disk Consumption and disk space free in the mounted partitions.

root@cosys7:~

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```
[root@cosys7 ~]# lsblk
NAME                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda                  8:0    0   20G  0 disk
├─sda1                8:1    0    1G  0 part /boot
├─sda2                8:2    0   19G  0 part
│   ├─centos-root     253:0    0   17G  0 lvm  /
│   └─centos-swap     253:1    0    2G  0 lvm  [SWAP]
sdb                  8:16    0   10G  0 disk
sr0                  11:0    1  4.4G  0 rom   /run/media/root/CentOS 7 x86_64

[root@cosys7 ~]#
[root@cosys7 ~]# fdisk /dev/sdb
Welcome to fdisk (util-linux 2.23.2).

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
Building a new DOS disklabel with disk identifier 0x5ee78fa0.

Command (m for help):
```

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```
[root@cosys7 ~]# fdisk /dev/sdb
Welcome to fdisk (util-linux 2.23.2).
```

```
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
Building a new DOS disklabel with disk identifier 0x2914ce29.
```

```
Command (m for help): n
```

```
Partition type:
```

```
  p   primary (0 primary, 0 extended, 4 free)
  e   extended
```

```
Select (default p): p
```

```
Partition number (1-4, default 1): 1
```

```
First sector (2048-20971519, default 2048):
```

```
Using default value 2048
```

```
Last sector, +sectors or +size{K,M,G} (2048-20971519, default 20971519): +4G
```

```
Partition 1 of type Linux and of size 4 GiB is set
```

```
Command (m for help): n
```

```
Partition type:
```

```
  p   primary (1 primary, 0 extended, 3 free)
  e   extended
```

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```
p   primary (0 primary, 0 extended, 4 free)
e   extended
```

Select (default p): p

Partition number (1-4, default 1): 1

First sector (2048-20971519, default 2048):

Using default value 2048

Last sector, +sectors or +size{K,M,G} (2048-20971519, default 20971519): +4G

Partition 1 of type Linux and of size 4 GiB is set

Command (m for help): n

Partition type:

```
p   primary (1 primary, 0 extended, 3 free)
e   extended
```

Select (default p): p

Partition number (2-4, default 2): 2

First sector (8390656-20971519, default 8390656):

Using default value 8390656

Last sector, +sectors or +size{K,M,G} (8390656-20971519, default 20971519): +6G

Value out of range.

Last sector, +sectors or +size{K,M,G} (8390656-20971519, default 20971519):

Using default value 20971519

Partition 2 of type Linux and of size 6 GiB is set

Command (m for help): █

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Partition number (2-4, default 2): 2

First sector (8390656-20971519, default 8390656):

Using default value 8390656

Last sector, +sectors or +size{K,M,G} (8390656-20971519, default 20971519): +6G
Value out of range.

Last sector, +sectors or +size{K,M,G} (8390656-20971519, default 20971519):

Using default value 20971519

Partition 2 of type Linux and of size 6 GiB is set

Command (m for help): p

Disk /dev/sdb: 10.7 GB, 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

Disk label type: dos

Disk identifier: 0x4fe5067e

Device	Boot	Start	End	Blocks	Id	System
/dev/sdb1		2048	8390655	4194304	83	Linux
/dev/sdb2		8390656	20971519	6290432	83	Linux

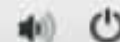
Command (m for help): █

```
root@cosys7:~  
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[root@cosys7 ~]# mkfs.xfs /dev/sdb1  
meta-data=/dev/sdb1          isize=512    agcount=4, agsize=262144 blks  
=                               sectsz=512   attr=2, projid32bit=1  
=                               crc=1       finobt=0, sparse=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  
[root@cosys7 ~]#  
[root@cosys7 ~]# mkfs.ext4 /dev/sdb2  
mke2fs 1.42.9 (28-Dec-2013)  
Filesystem label=  
OS type: Linux  
Block size=4096 (log=2)  
Fragment size=4096 (log=2)  
Stride=0 blocks, Stripe width=0 blocks  
393216 inodes, 1572608 blocks  
78630 blocks (5.00%) reserved for the super user  
First data block=0  
Maximum filesystem blocks=1610612736
```

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```
[root@cosys7 ~]# mkfs.ext4 /dev/sdb2
```

```
mke2fs 1.42.9 (28-Dec-2013)
```

```
Filesystem label=
```

```
OS type: Linux
```

```
Block size=4096 (log=2)
```

```
Fragment size=4096 (log=2)
```

```
Stride=0 blocks, Stripe width=0 blocks
```

```
393216 inodes, 1572608 blocks
```

```
78630 blocks (5.00%) reserved for the super user
```

```
First data block=0
```

```
Maximum filesystem blocks=1610612736
```

```
48 block groups
```

```
32768 blocks per group, 32768 fragments per group
```

```
8192 inodes per group
```

```
Superblock backups stored on blocks:
```

```
32768, 98304, 163840, 229376, 294912, 819200, 884736
```

```
Allocating group tables: done
```

```
Writing inode tables: done
```

```
Creating journal (32768 blocks): done
```

```
Writing superblocks and filesystem accounting information: done
```

```
[root@cosys7 ~]#
```



root@cosys7:~

root@cosys7:~

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```
[root@cosys7 ~]#  
[root@cosys7 ~]# #mount the disk  
[root@cosys7 ~]#  
[root@cosys7 ~]# mkdir /data  
[root@cosys7 ~]#  
[root@cosys7 ~]# mkdir /music  
[root@cosys7 ~]#  
[root@cosys7 ~]# mount /dev/sdb1 /data  
[root@cosys7 ~]#  
[root@cosys7 ~]# df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
devtmpfs	470M	0	470M	0%	/dev
tmpfs	487M	0	487M	0%	/dev/shm
tmpfs	487M	8.6M	478M	2%	/run
tmpfs	487M	0	487M	0%	/sys/fs/cgroup
/dev/mapper/centos-root	17G	3.9G	14G	23%	/
/dev/sda1	1014M	172M	843M	17%	/boot
tmpfs	98M	24K	98M	1%	/run/user/0
/dev/sr0	4.4G	4.4G	0	100%	/run/media/root/CentOS 7 x86_64
/dev/sdb1	4.0G	33M	4.0G	1%	/data

```
[root@cosys7 ~]#  
[root@cosys7 ~]#
```


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```
tmpfs                487M    0  487M    0% /sys/fs/cgroup
/dev/mapper/centos-root 17G   3.9G   14G   23% /
/dev/sda1            1014M  172M  843M   17% /boot
tmpfs                 98M    24K   98M    1% /run/user/0
/dev/sr0              4.4G   4.4G    0 100% /run/media/root/CentOS 7 x86_64
/dev/sdb1             4.0G    33M   4.0G    1% /data
```

```
[root@cosys7 ~]#
```

```
[root@cosys7 ~]# mount /dev/sdb2 /music
```

```
[root@cosys7 ~]#
```

```
[root@cosys7 ~]# df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
devtmpfs	470M	0	470M	0%	/dev
tmpfs	487M	0	487M	0%	/dev/shm
tmpfs	487M	8.6M	478M	2%	/run
tmpfs	487M	0	487M	0%	/sys/fs/cgroup
/dev/mapper/centos-root	17G	3.9G	14G	23%	/
/dev/sda1	1014M	172M	843M	17%	/boot
tmpfs	98M	24K	98M	1%	/run/user/0
/dev/sr0	4.4G	4.4G	0	100%	/run/media/root/CentOS 7 x86_64
/dev/sdb1	4.0G	33M	4.0G	1%	/data
/dev/sdb2	5.8G	24M	5.5G	1%	/music

```
[root@cosys7 ~]#
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[root@cosys7 ~]# █
```

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root@cosys7:~

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```
[root@cosys7 ~]# seq 1000000 > /data/SQL
```

```
[root@cosys7 ~]#
```

```
[root@cosys7 ~]# du -h /data/SQL
```

```
6.6M    /data/SQL
```

```
[root@cosys7 ~]# seq 100000000 > /data/SQL
```

```
[root@cosys7 ~]#
```

```
[root@cosys7 ~]# du -h /data/SQL
```

```
848M    /data/SQL
```

```
[root@cosys7 ~]# df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
devtmpfs	470M	0	470M	0%	/dev
tmpfs	487M	0	487M	0%	/dev/shm
tmpfs	487M	8.6M	478M	2%	/run
tmpfs	487M	0	487M	0%	/sys/fs/cgroup
/dev/mapper/centos-root	17G	3.9G	14G	23%	/
/dev/sda1	1014M	172M	843M	17%	/boot
tmpfs	98M	28K	98M	1%	/run/user/0
/dev/sr0	4.4G	4.4G	0	100%	/run/media/root/CentOS 7 x86_64
/dev/sdb1	4.0G	887M	3.2G	22%	/data
/dev/sdb2	5.8G	24M	5.5G	1%	/music

```
Ce [root@cosys7 ~]#
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[root@cosys7 ~]#
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[root@cosys7 ~]#
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Applications Places Terminal

Sat 15:4

root@cosys7:~

File Edit View Search Terminal Help

```
[root@cosys7 ~]# seq 1000000000 > /music/SQL
```

```
[root@cosys7 ~]#
```

```
[root@cosys7 ~]# du -h /music/SQL
```

```
848M    /music/SQL
```

```
[root@cosys7 ~]#
```

```
[root@cosys7 ~]# df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
devtmpfs	470M	0	470M	0%	/dev
tmpfs	487M	0	487M	0%	/dev/shm
tmpfs	487M	8.6M	478M	2%	/run
tmpfs	487M	0	487M	0%	/sys/fs/cgroup
/dev/mapper/centos-root	17G	3.9G	14G	23%	/
/dev/sda1	1014M	172M	843M	17%	/boot
tmpfs	98M	28K	98M	1%	/run/user/0
/dev/sr0	4.4G	4.4G	0	100%	/run/media/root/CentOS 7 x86_64
/dev/sdb1	4.0G	887M	3.2G	22%	/data
/dev/sdb2	5.8G	872M	4.7G	16%	/music

```
[root@cosys7 ~]#
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[root@cosys7 ~]#
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[root@cosys7 ~]#
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Ca [root@cosys7 ~]#
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[root@cosys7 ~]#
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[root@cosys7 ~]#
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