

Tasks:

1. Use `fdisk -l` to locate information about the partition sizes.

```
[root@localhost ~]# fdisk -l /dev/  
/dev/mapper/cs-root /dev/sda /dev/sda2  
/dev/mapper/cs-swap /dev/sda1 /dev/sr0  
[root@localhost ~]#
```

2. Use `fdisk` to add a new logical partition that is 2GB in size.

Device	Boot	Start	End	Sectors	Size	Id	Type
/dev/sdb1		2048	10487807	10485760	5G	5	Extended
/dev/sdb5		4096	4198399	4194304	2G	83	Linux

```
[root@centos8srv ~]# S
```

3. Did the kernel feel the changes? Display the content of `/proc/partitions` file?

What did you notice? How to overcome that?

```
-bash: cat /proc/partitions: No such file or directory  
[root@centos8srv ~]# cat /proc/partitions  
major minor #blocks name  
  
8 0 41943040 sda  
8 1 27262976 sda1  
8 2 4194304 sda2  
8 3 10484736 sda3  
8 16 10485760 sdb  
8 17 1 sdb1  
8 21 2097152 sdb5  
11 0 1048575 sr0
```

4. Make a new ext4 file system on the new logical partition you just created.

```
[root@centos8srv ~]# mkfs.ext4/dev/sdb5  
-bash: mkfs.ext4/dev/sdb5: No such file or directory  
[root@centos8srv ~]# mkfs.ext4 /dev/sdb5  
mke2fs 1.46.5 (30-Dec-2021)  
Creating filesystem with 524288 4k blocks and 131072 inodes  
Filesystem UUID: a5a81804-e03a-41fe-9eb1-7560759498fc  
Superblock backups stored on blocks:  
32768, 98304, 163840, 229376, 294912  
  
Allocating group tables: done  
Writing inode tables: done  
Creating journal (16384 blocks): done  
Writing superblocks and filesystem accounting information: done
```

5. Create a directory, name it /data.
6. Add a label to the new filesystem, name it data.
7. Add a new entry to /etc/fstab for the new filesystem using the label you just create.
8. Mount the new filesystem

```
root@centos8srv ~]# mkdir /data
root@centos8srv ~]# e2label /dev/sdb "data"
e2label: Bad magic number in super-block while trying to open /dev/sdb
Found a dos partition table in /dev/sdb
root@centos8srv ~]# nano /etc/fstab
root@centos8srv ~]# nano /etc/fstab
root@centos8srv ~]# mount -a
mount: /data: can't find LABEL="data".
root@centos8srv ~]# nano /etc/fstab
root@centos8srv ~]# nano /etc/fstab
root@centos8srv ~]# e2label /dev/sdb "data"
e2label: Bad magic number in super-block while trying to open /dev/sdb
Found a dos partition table in /dev/sdb
root@centos8srv ~]# e2label /dev/sdb5 "data"
root@centos8srv ~]# nano /etc/fstab
root@centos8srv ~]# nano /etc/fstab
root@centos8srv ~]# mount -a
root@centos8srv ~]#
```