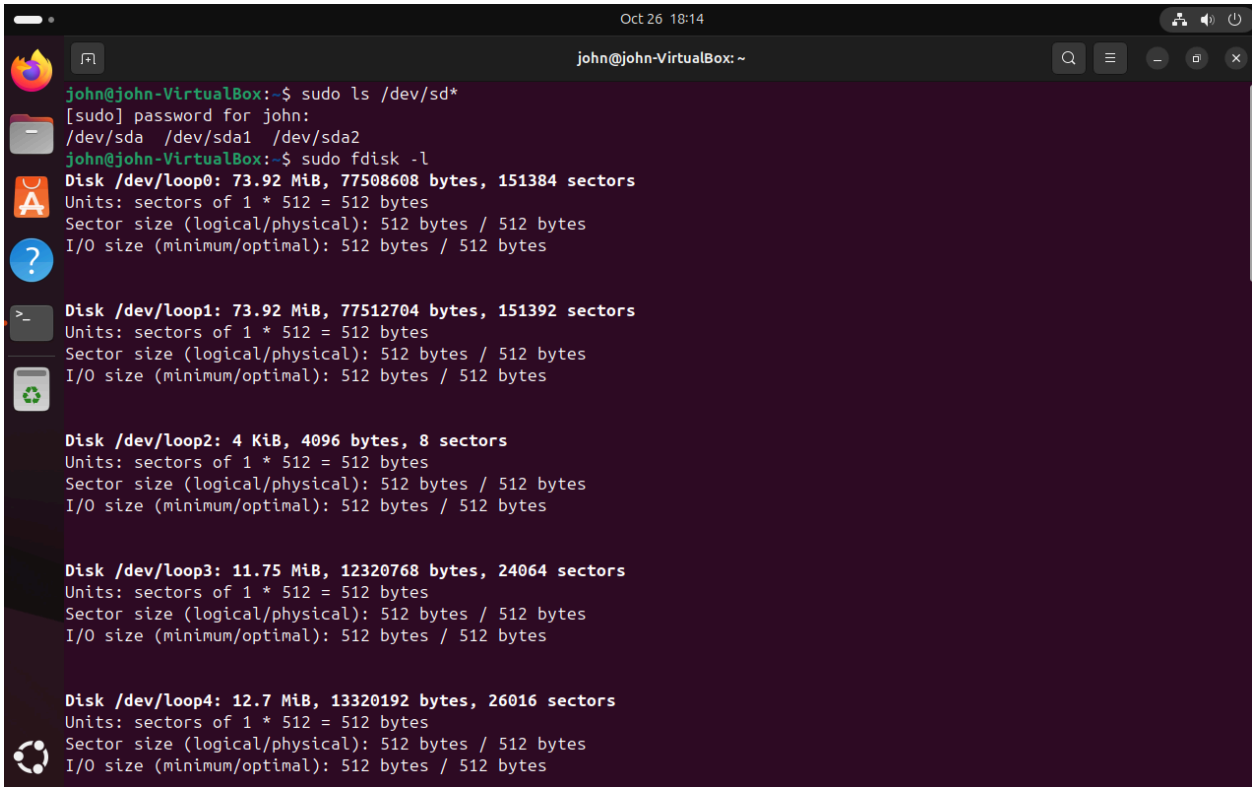
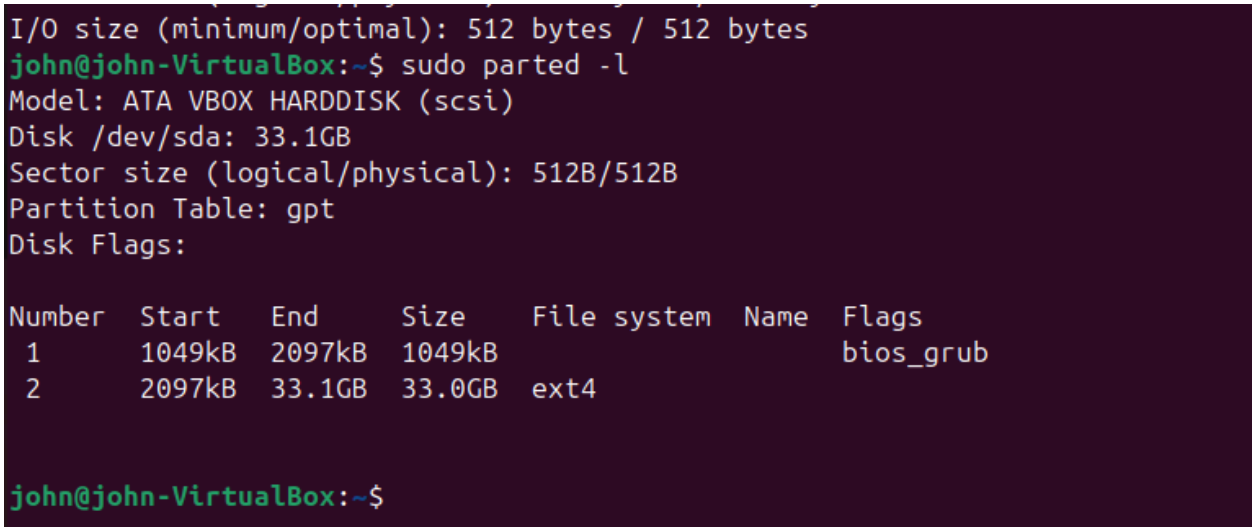
Steps 1 and 2:

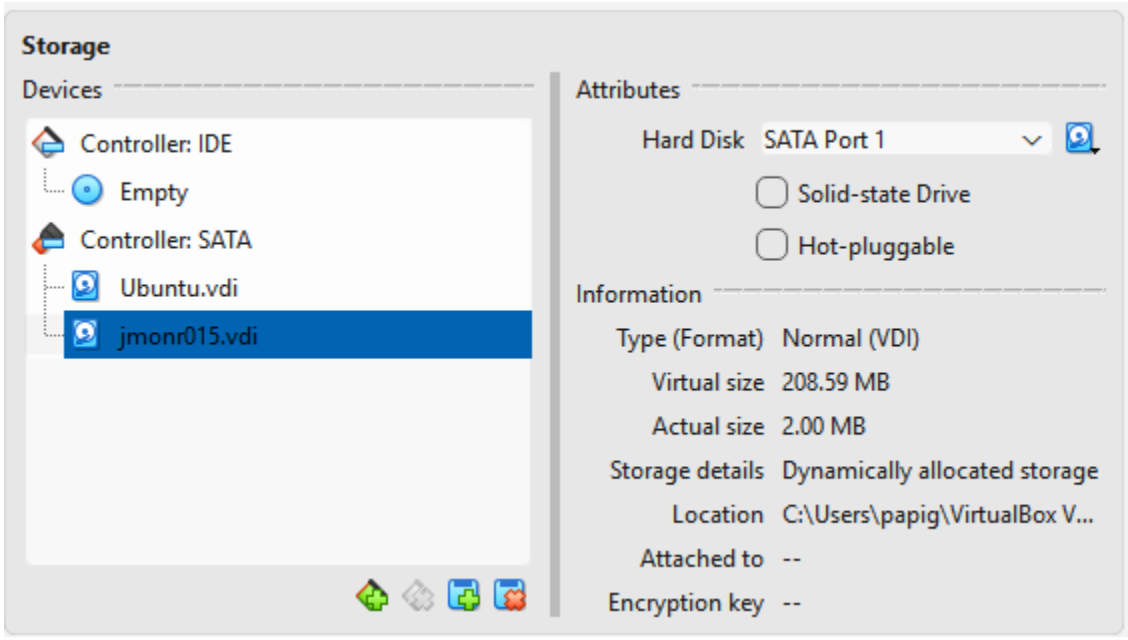


Step 3:

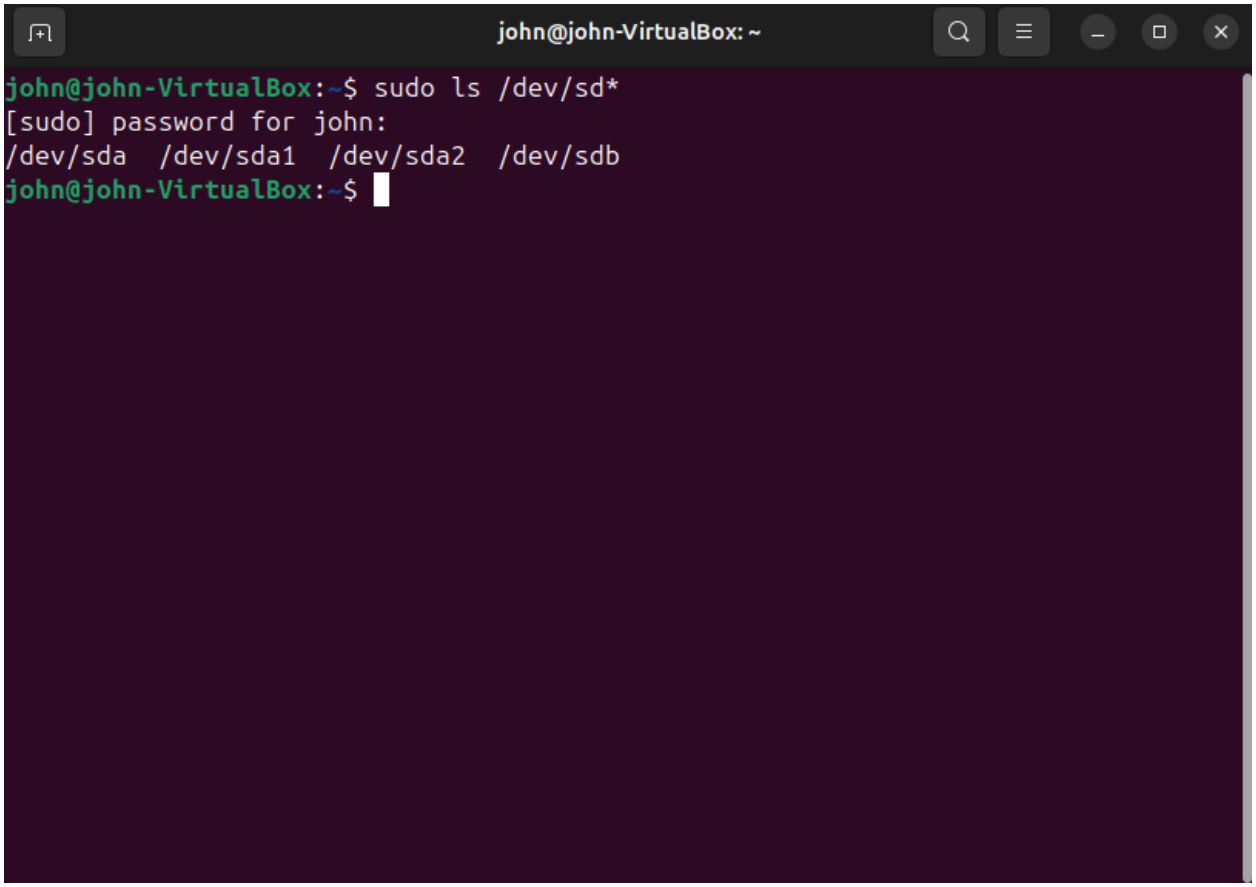


Part 2

Step 1 and 2:

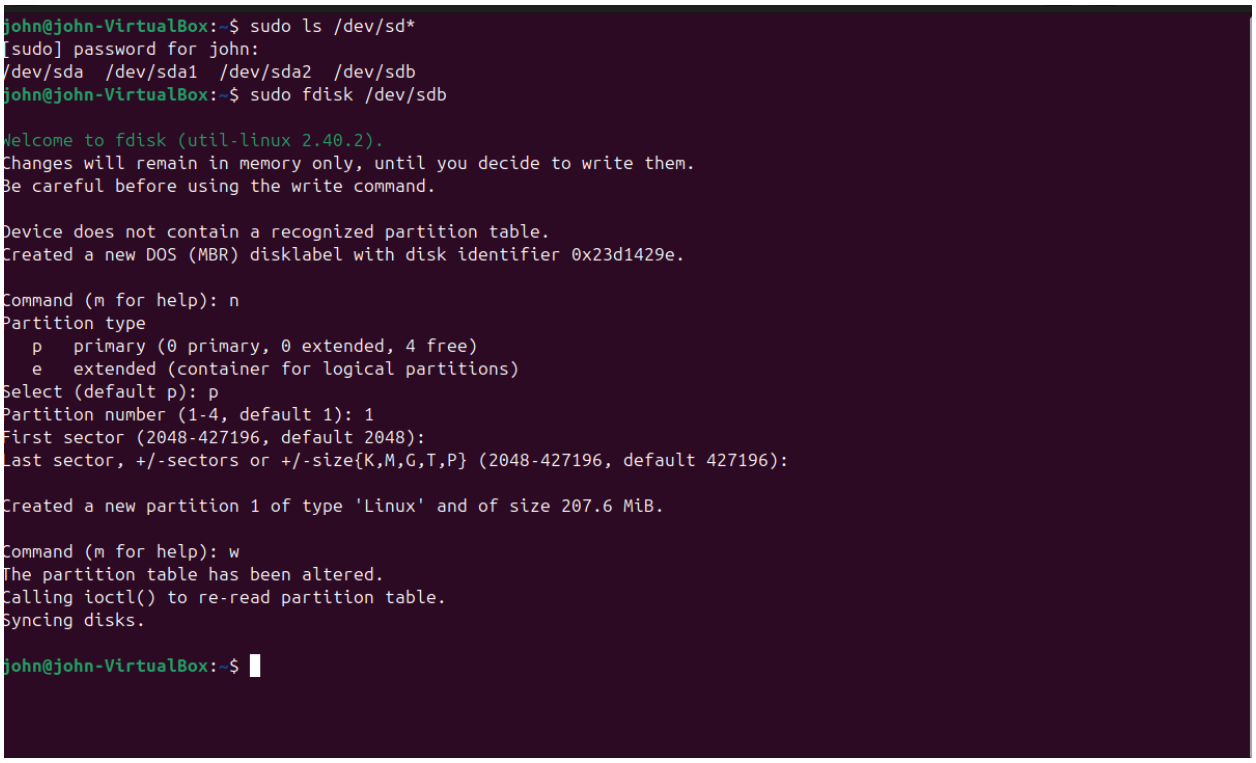


Step 3:



Part 3:

Step 1:


john@john-VirtualBox:~$ sudo ls /dev/sd*
[sudo] password for john:
/dev/sda /dev/sda1 /dev/sda2 /dev/sdb
john@john-VirtualBox:~$ sudo fdisk /dev/sdb
Welcome to fdisk (util-linux 2.40.2).
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.
Created a new DOS (MBR) disklabel with disk identifier 0x23d1429e.
Command (m for help): n
Partition type
p primary (0 primary, 0 extended, 4 free)
e extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-427196, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-427196, default 427196):
Created a new partition 1 of type 'Linux' and of size 207.6 MiB.
Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.
john@john-VirtualBox:~$

Step 2-3:

```
john@john-VirtualBox:~$ sudo mkfs.ext4 /dev/sdb1
mke2fs 1.47.2 (1-Jan-2025)
Creating filesystem with 53143 4k blocks and 53152 inodes
Filesystem UUID: f620c894-5c5f-4ace-a5ec-3ef0566aeeaf
Superblock backups stored on blocks:
        32768

Allocating group tables: done
Writing inode tables: done
Creating journal (4096 blocks): done
Writing superblocks and filesystem accounting information: done

john@john-VirtualBox:~$ sudo fdisk -l
Disk /dev/loop0: 73.92 MiB, 77508608 bytes, 151384 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 /dev/loop1: 4 KiB, 4096 bytes, 8 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
```

Step 4-8:

```
john@john-VirtualBox:~$ sudo mkdir /cyse
john@john-VirtualBox:~$ sudo mount /dev/sdb1 /cyse
john@john-VirtualBox:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
tmpfs           1.4G  1.7M  1.4G   1% /run
/dev/sda2        31G   13G   17G  43% /
tmpfs           7.0G     0  7.0G   0% /dev/shm
tmpfs           5.0M  8.0K  5.0M   1% /run/lock
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-journald.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-resolved.service
tmpfs           7.0G  8.0K  7.0G   1% /tmp
tmpfs           1.4G  108K  1.4G   1% /run/user/1000
/dev/sdb1       179M  152K  164M   1% /cyse
john@john-VirtualBox:~$ sudo sh -c 'echo "John" > /cyse/jmonr015.txt'
john@john-VirtualBox:~$ sudo umount /cyse
john@john-VirtualBox:~$ ls /cyse
john@john-VirtualBox:~$
```