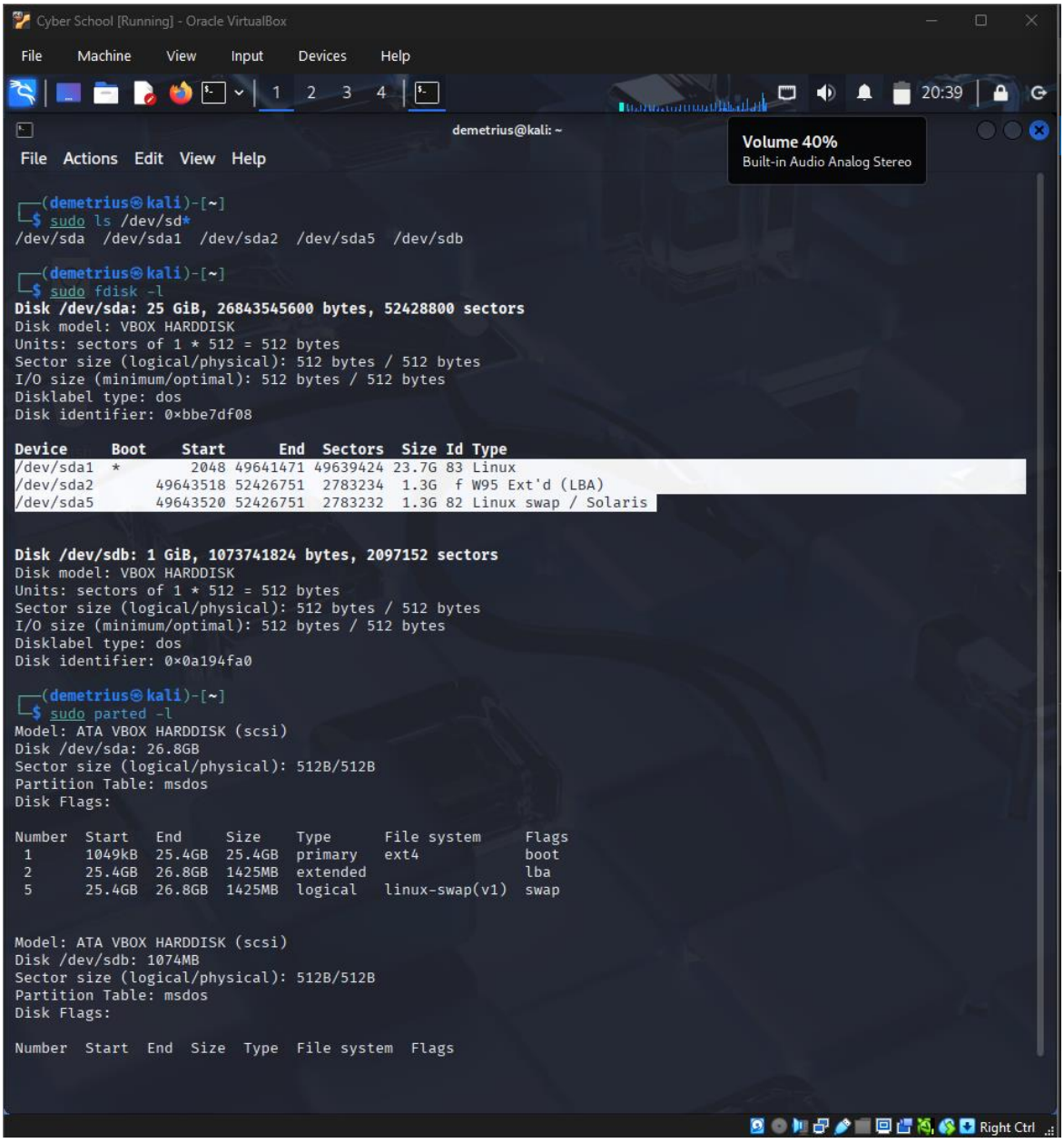
CYSE 270 Lab 7: File Management

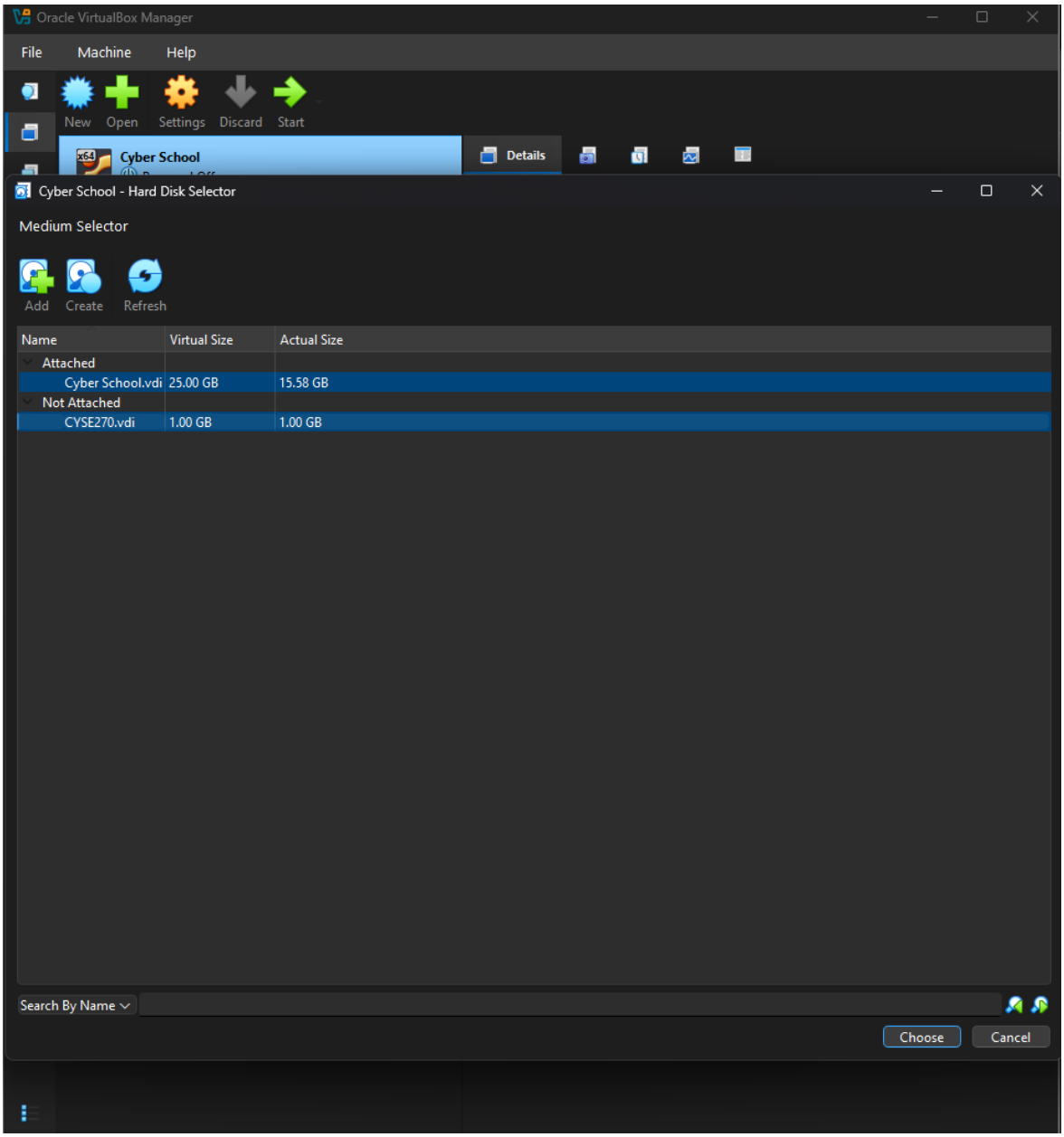
Part 1

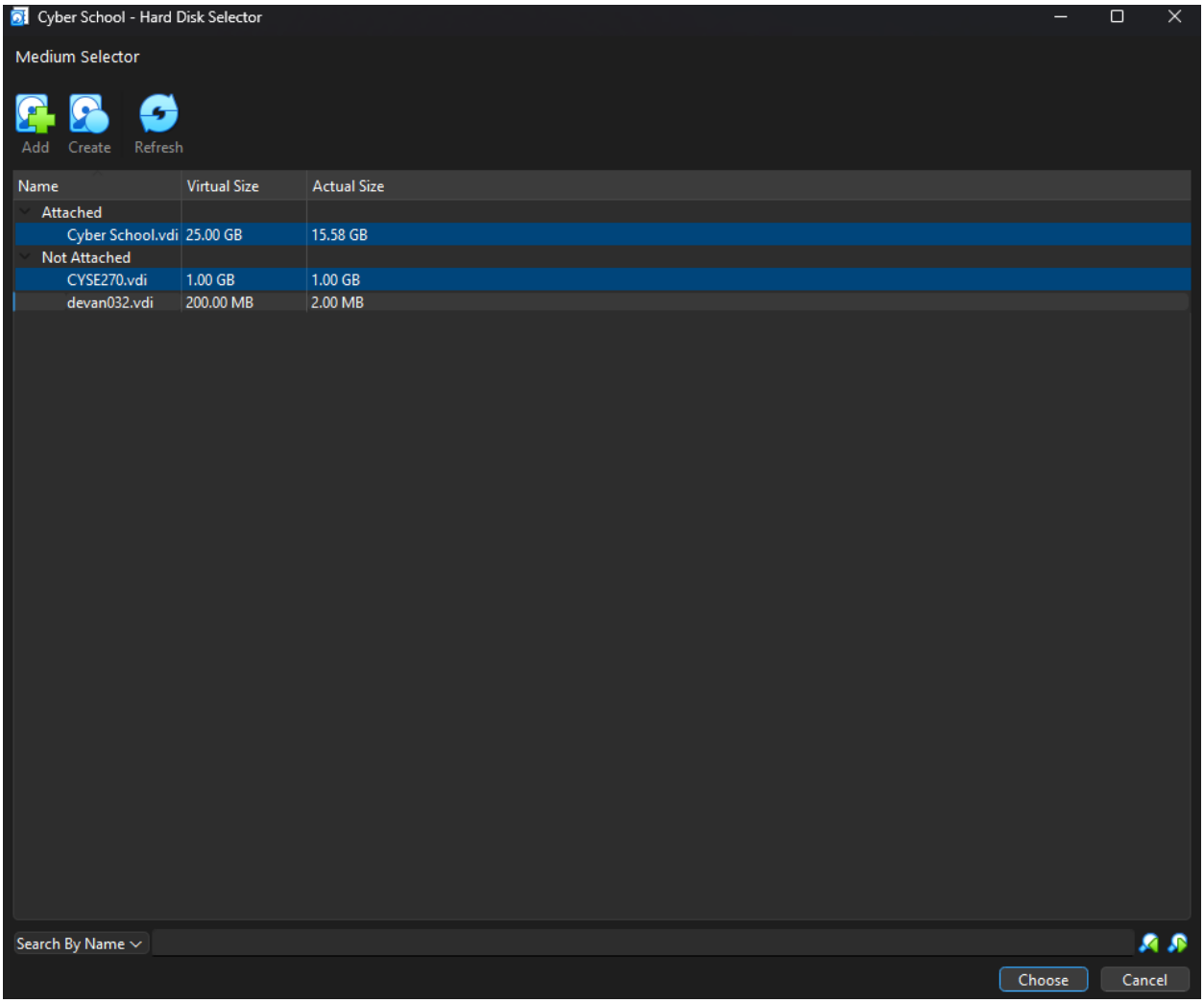
Steps 1, 2, and 3



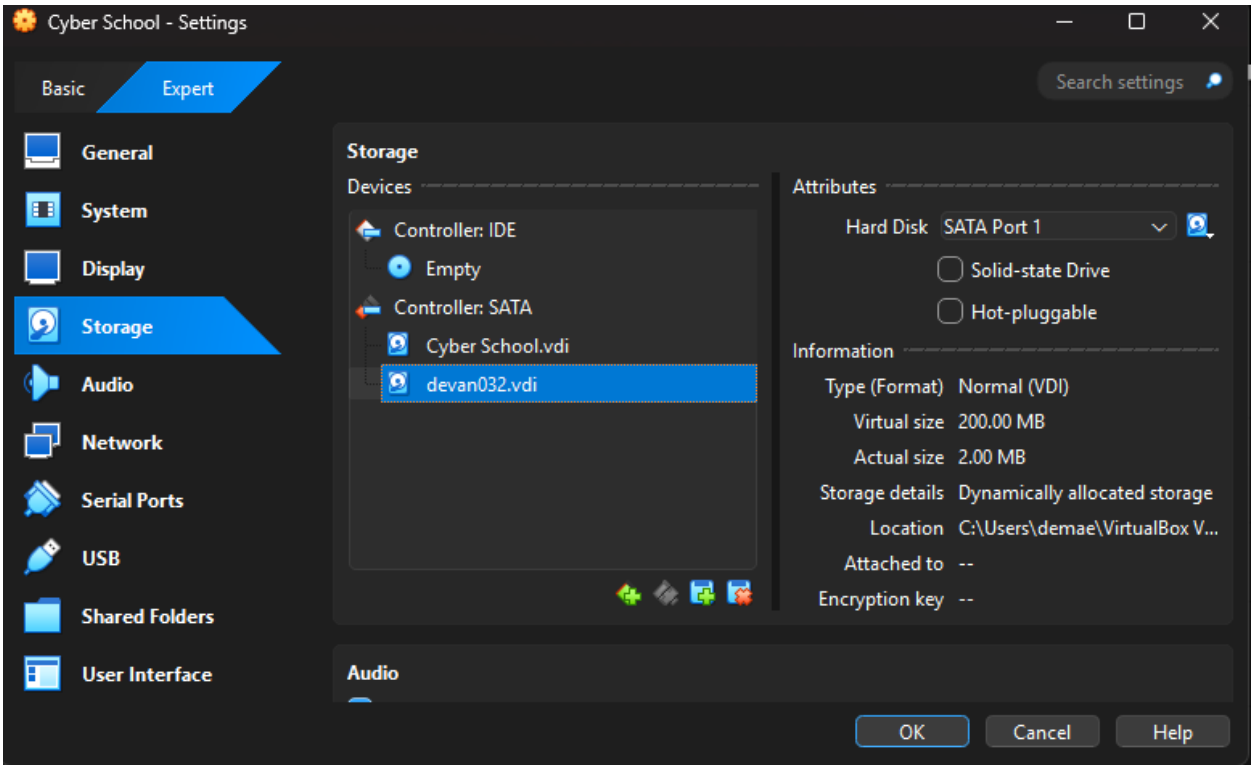
Part 2

Step 1


Oracle VirtualBox Manager
File
Machine
Help
New
Open
Settings
Discard
Start
Cyber School
Details
Cyber School - Hard Disk Selector
Medium Selector
Add
Create
Refresh
Name
Virtual Size
Actual Size
Attached
Cyber School.vdi
25.00 GB
15.58 GB
Not Attached
CYSE270.vdi
1.00 GB
1.00 GB
Search By Name
Choose
Cancel

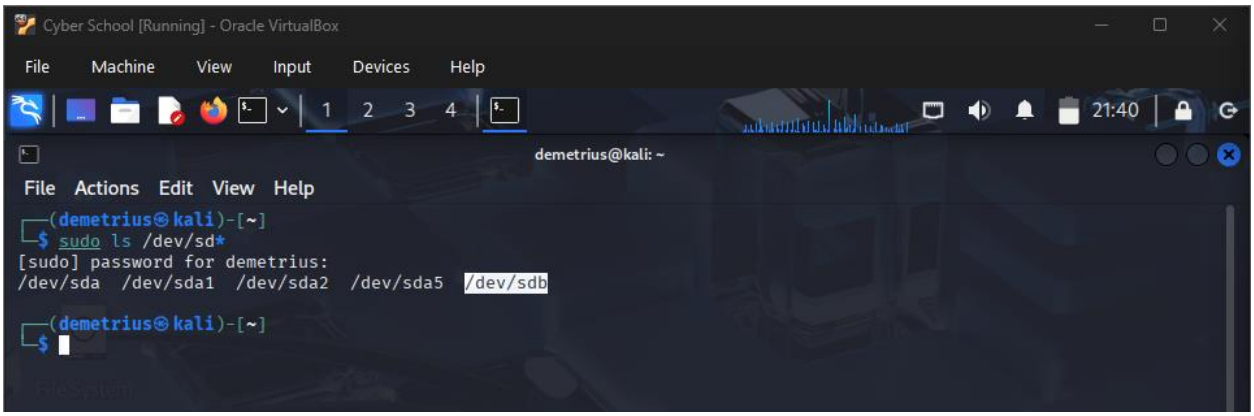

Cyber School - Hard Disk Selector
Medium Selector
Add
Create
Refresh
Name
Virtual Size
Actual Size
Attached
Cyber School.vdi
25.00 GB
15.58 GB
Not Attached
CYSE270.vdi
1.00 GB
1.00 GB
devan032.vdi
200.00 MB
2.00 MB
Search By Name
Choose
Cancel

Step 2


Cyber School - Settings
Basic
Expert
Search settings
General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface
Storage
Devices
Controller: IDE
Empty
Controller: SATA
Cyber School.vdi
devan032.vdi
Attributes
Hard Disk
SATA Port 1
Solid-state Drive
Hot-pluggable
Information
Type (Format) Normal (VDI)
Virtual size 200.00 MB
Actual size 2.00 MB
Storage details Dynamically allocated storage
Location C:\Users\demae\VirtualBox V...
Attached to --
Encryption key --
Audio
OK
Cancel
Help

Step 3

A)


Cyber School [Running] - Oracle VirtualBox
File Machine View Input Devices Help
1 2 3 4
21:40
demetrius@kali: ~
File Actions Edit View Help
(demetrius㉿kali)-[~]
$ sudo ls /dev/sd*
[sudo] password for demetrius:
/dev/sda /dev/sda1 /dev/sda2 /dev/sda5 /dev/sdb
(demetrius㉿kali)-[~]
$

B)

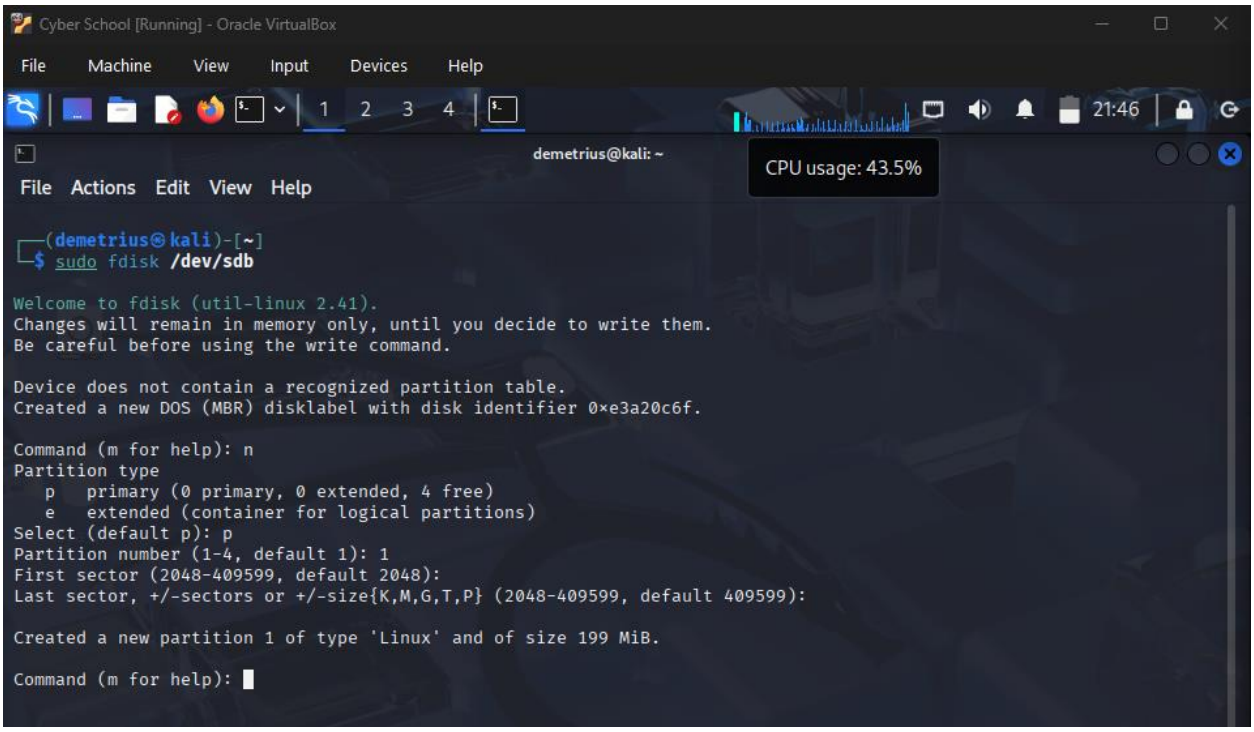
```
┌──(demetrius㉿kali)-[~]
└─$ sudo fdisk -l
Disk /dev/sda: 25 GiB, 26843545600 bytes, 52428800 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xbbe7df08

Device     Boot    Start      End  Sectors  Size Id Type
/dev/sda1  *        2048 49641471 49639424 23.7G 83 Linux
/dev/sda2       49643518 52426751  2783234  1.3G  f W95 Ext'd (LBA)
/dev/sda5       49643520 52426751  2783232  1.3G 82 Linux swap / Solaris


Disk /dev/sdb: 200 MiB, 209715200 bytes, 409600 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

┌──(demetrius㉿kali)-[~]
└─$
```

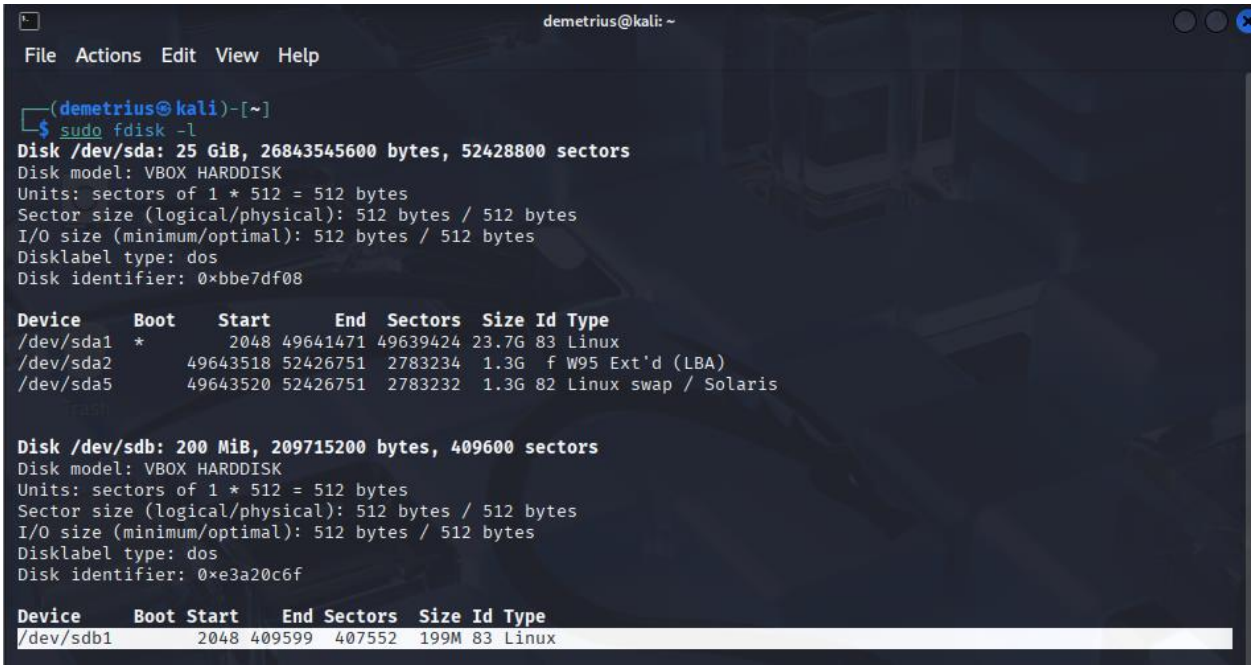
C)

```
┌──(demetrius㉿kali)-[~]
└─$ sudo parted -l
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sda: 26.8GB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start   End     Size    Type      File system     Flags
 1      1049kB  25.4GB  25.4GB  primary   ext4            boot
 2      25.4GB  26.8GB  1425MB  extended                  lba
 5      25.4GB  26.8GB  1425MB  logical   linux-swap(v1)  swap


Error: /dev/sdb: unrecognised disk label
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sdb: 210MB
Sector size (logical/physical): 512B/512B
Partition Table: unknown
Disk Flags:
```

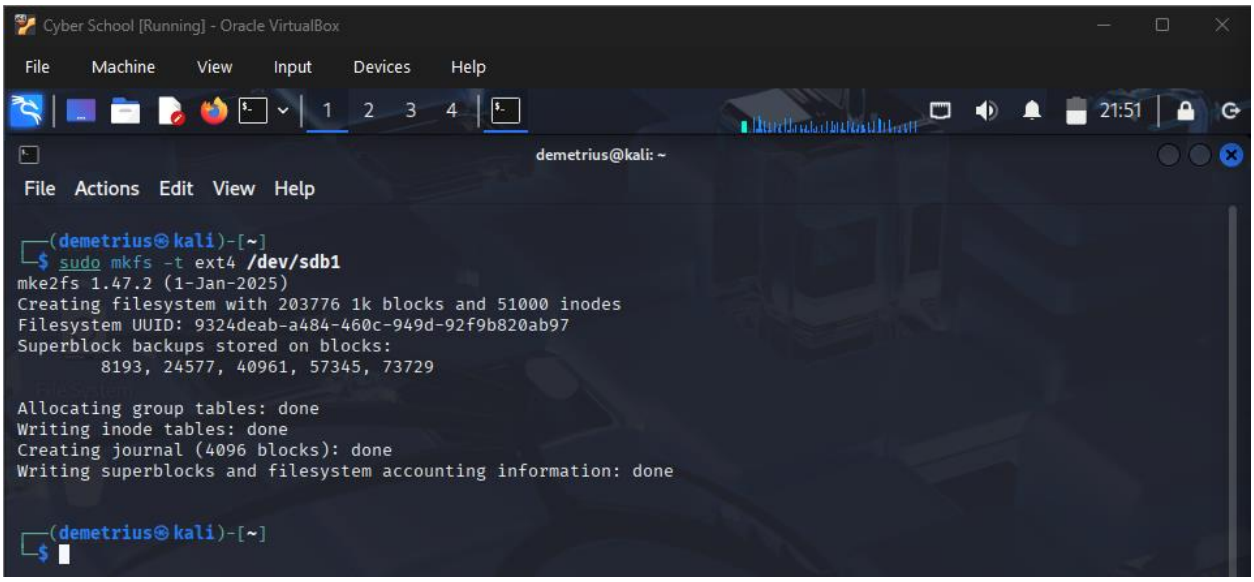
Part 3

Step 1


Cyber School [Running] - Oracle VirtualBox
File Machine View Input Devices Help
21:46
demetrius@kali: ~
CPU usage: 43.5%
File Actions Edit View Help
(demetrius㉿kali)-[~]
$ sudo fdisk /dev/sdb
Welcome to fdisk (util-linux 2.41).
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 0×e3a20c6f.
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 (2048-409599, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-409599, default 409599):
Created a new partition 1 of type 'Linux' and of size 199 MiB.
Command (m for help):

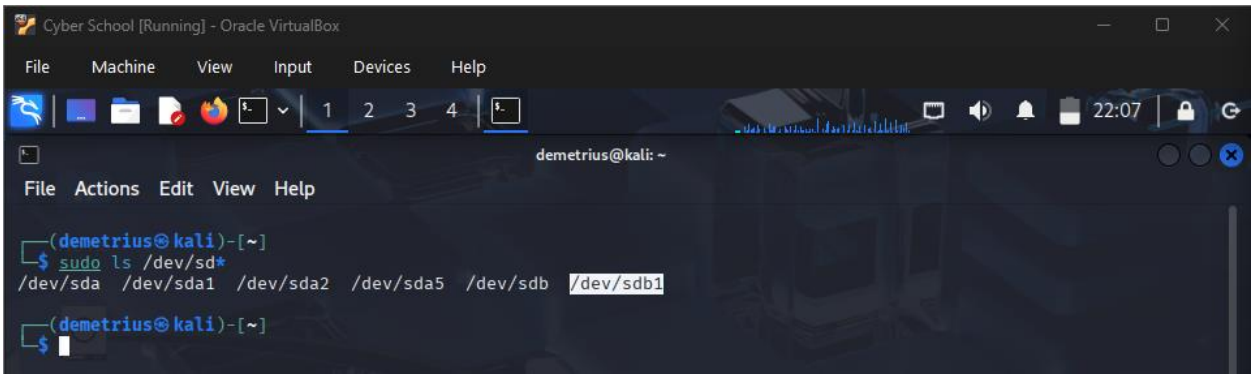

demetrius@kali: ~
File Actions Edit View Help
(demetrius㉿kali)-[~]
$ sudo fdisk -l
Disk /dev/sda: 25 GiB, 26843545600 bytes, 52428800 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0×bbe7df08
Device Boot Start End Sectors Size Id Type
/dev/sda1 * 2048 49641471 49639424 23.7G 83 Linux
/dev/sda2 49643518 52426751 2783234 1.3G f W95 Ext'd (LBA)
/dev/sda5 49643520 52426751 2783232 1.3G 82 Linux swap / Solaris
Disk /dev/sdb: 200 MiB, 209715200 bytes, 409600 sectors
Disk model: VBOX HARDDISK
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: dos
Disk identifier: 0×e3a20c6f
Device Boot Start End Sectors Size Id Type
/dev/sdb1 2048 409599 407552 199M 83 Linux

Step 2


Cyber School [Running] - Oracle VirtualBox
File Machine View Input Devices Help
1 2 3 4
21:51
demetrius@kali: ~
File Actions Edit View Help
(demetrius㉿kali)-[~]
$ sudo mkfs -t ext4 /dev/sdb1
mke2fs 1.47.2 (1-Jan-2025)
Creating filesystem with 203776 1k blocks and 51000 inodes
Filesystem UUID: 9324deab-a484-460c-949d-92f9b820ab97
Superblock backups stored on blocks:
8193, 24577, 40961, 57345, 73729
Allocating group tables: done
Writing inode tables: done
Creating journal (4096 blocks): done
Writing superblocks and filesystem accounting information: done
(demetrius㉿kali)-[~]
$

Step 3

a)


Cyber School [Running] - Oracle VirtualBox
File Machine View Input Devices Help
1 2 3 4
22:07
demetrius@kali: ~
File Actions Edit View Help
(demetrius㉿kali)-[~]
$ sudo ls /dev/sd*
/dev/sda /dev/sda1 /dev/sda2 /dev/sda5 /dev/sdb /dev/sdb1
(demetrius㉿kali)-[~]
$

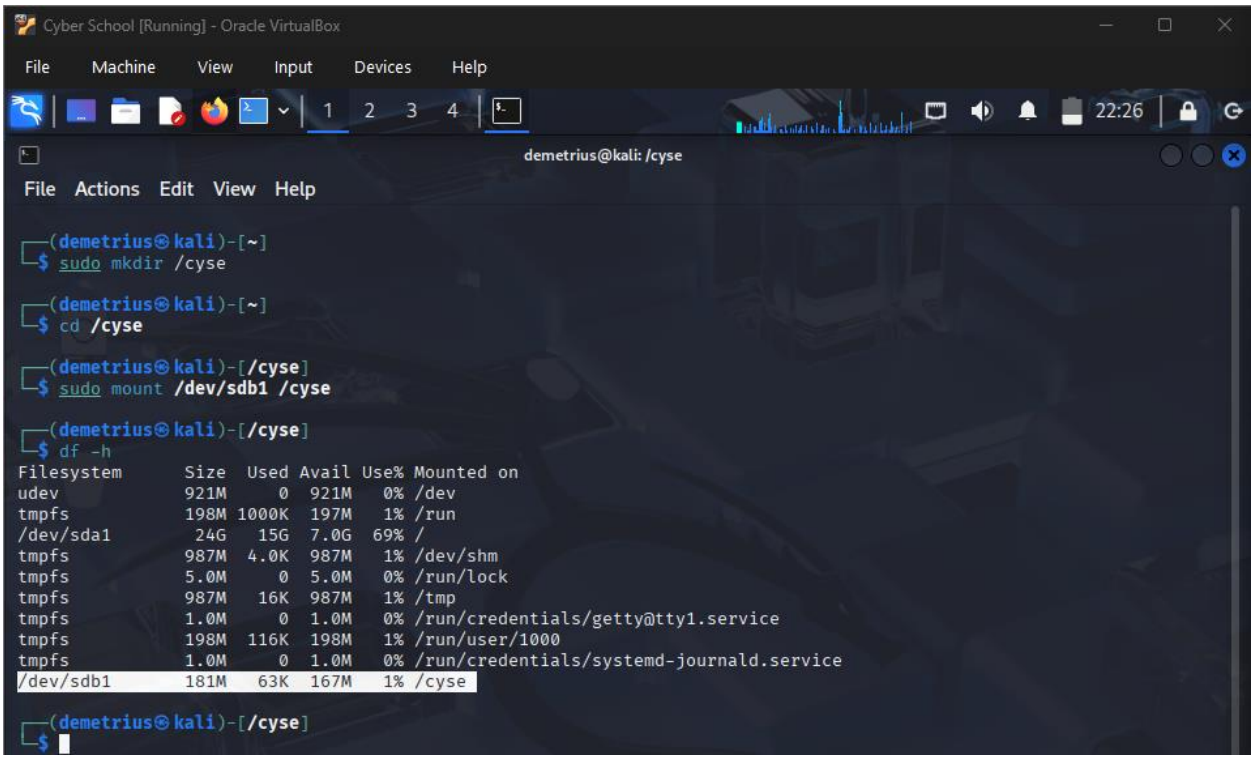
b)

```
┌──(demetrius㉿kali)-[~]
└─$ sudo fdisk -l
Disk /dev/sda: 25 GiB, 26843545600 bytes, 52428800 sectors
Disk model: VBOX HARDDISK
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: dos
Disk identifier: 0xbbe7df08

Device     Boot    Start      End  Sectors  Size Id Type
/dev/sda1  *        2048 49641471 49639424 23.7G 83 Linux
/dev/sda2       49643518 52426751  2783234  1.3G  f W95 Ext'd (LBA)
/dev/sda5       49643520 52426751  2783232  1.3G 82 Linux swap / Solaris


Disk /dev/sdb: 200 MiB, 209715200 bytes, 409600 sectors
Disk model: VBOX HARDDISK
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: dos
Disk identifier: 0xe3a20c6f

Device     Boot Start    End Sectors  Size Id Type
/dev/sdb1        2048 409599  407552  199M 83 Linux

┌──(demetrius㉿kali)-[~]
└─$
```

c)

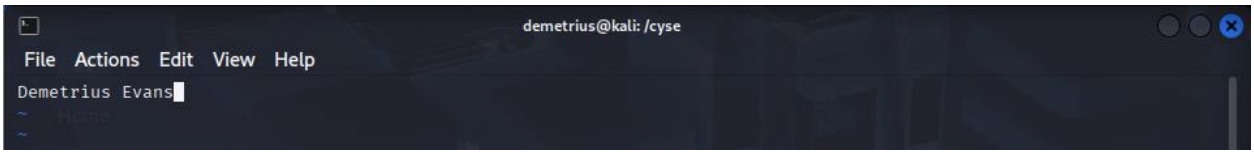
```
┌──(demetrius㉿kali)-[~]
└─$ sudo parted -l
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sda: 26.8GB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start   End     Size    Type      File system     Flags
 1      1049kB  25.4GB  25.4GB  primary   ext4            boot
 2      25.4GB  26.8GB  1425MB  extended                  lba
 5      25.4GB  26.8GB  1425MB  logical   linux-swap(v1)  swap


Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sdb: 210MB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start   End    Size   Type     File system  Flags
 1      1049kB  210MB  209MB  primary  ext4
```

Step 4 & 5


Cyber School [Running] - Oracle VirtualBox
File Machine View Input Devices Help
1 2 3 4
22:26
demetrius@kali: /cyse
File Actions Edit View Help
(demetrius㉿kali)-[~]
$ sudo mkdir /cyse
(demetrius㉿kali)-[~]
$ cd /cyse
(demetrius㉿kali)-[/cyse]
$ sudo mount /dev/sdb1 /cyse
(demetrius㉿kali)-[/cyse]
$ df -h
Filesystem Size Used Avail Use% Mounted on
udev 921M 0 921M 0% /dev
tmpfs 198M 1000K 197M 1% /run
/dev/sda1 24G 15G 7.0G 69% /
tmpfs 987M 4.0K 987M 1% /dev/shm
tmpfs 5.0M 0 5.0M 0% /run/lock
tmpfs 987M 16K 987M 1% /tmp
tmpfs 1.0M 0 1.0M 0% /run/credentials/getty@tty1.service
tmpfs 198M 116K 198M 1% /run/user/1000
tmpfs 1.0M 0 1.0M 0% /run/credentials/systemd-journald.service
/dev/sdb1 181M 63K 167M 1% /cyse
(demetrius㉿kali)-[/cyse]
$

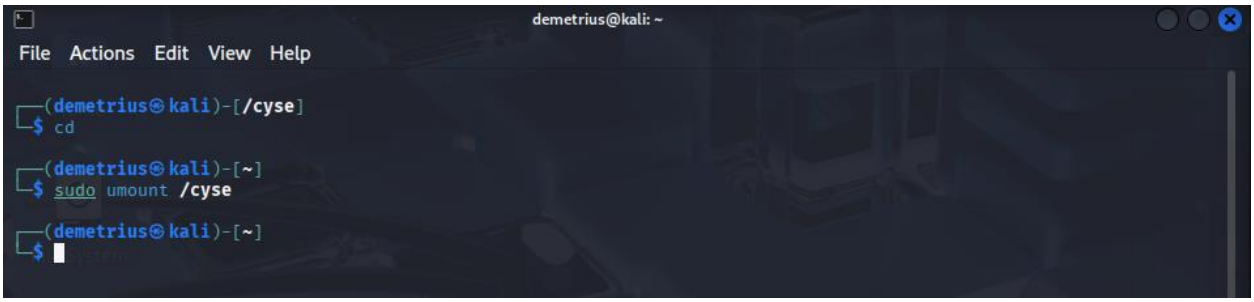
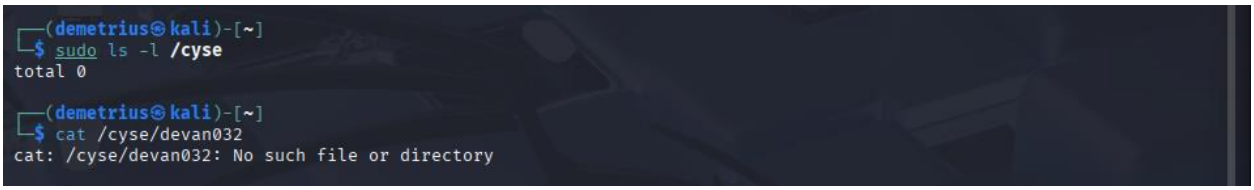
Step 6

(demetrius㉿kali)-[/cyse]
$ cd /cyse
(demetrius㉿kali)-[/cyse]
$ sudo touch devan032.txt
(demetrius㉿kali)-[/cyse]


demetrius@kali: /cyse
File Actions Edit View Help
Demetrius Evans

(demetrius㉿kali)-[/cyse]
$ sudo vi /cyse/devan032
(demetrius㉿kali)-[/cyse]
$

Step 7


demetrius@kali: ~
File Actions Edit View Help
(demetrius㉿kali)-[/cyse]
$ cd
(demetrius㉿kali)-[~]
$ sudo umount /cyse
(demetrius㉿kali)-[~]
$

Step 8: My file, devan032 is not showing up, the directory returns as empty. When I try to open the file with the cat command nothing happens.