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03/23/2025

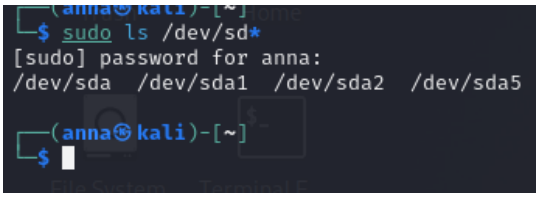
CYSE 270_28494

Professor Al Kinoon

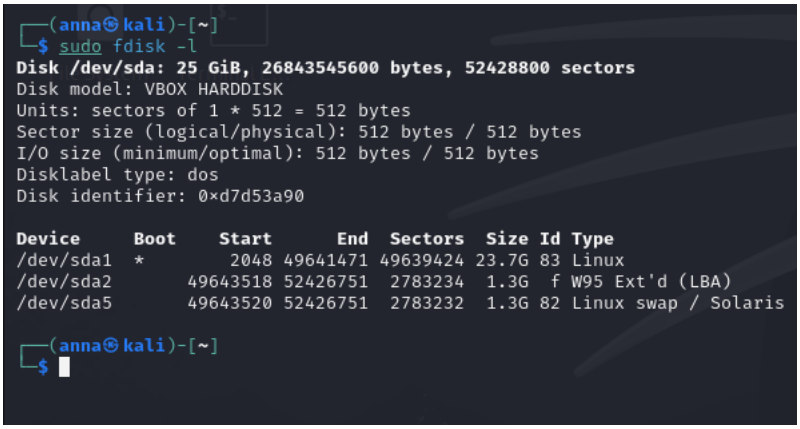
Lab 7 – Manage Local Storage

Part I– Check your file system (30 points).
Submit the screenshot for All the three steps.

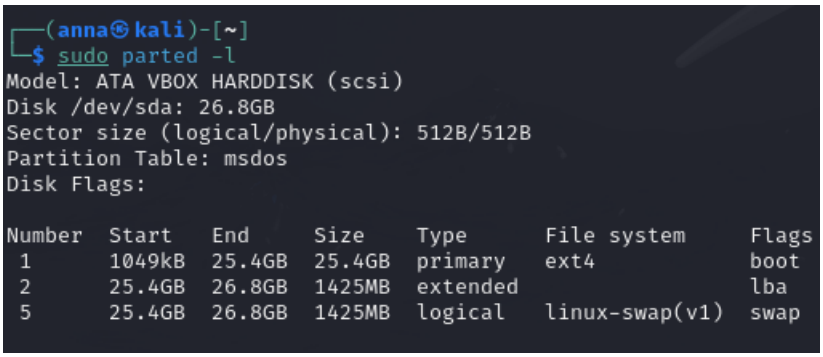
Step 1. Execute the ls /dev/sd* command to see the current hard disk devices. [use sudo]



Step 2. Execute the fdisk -l command to list the current hard disk partitions. [use sudo]

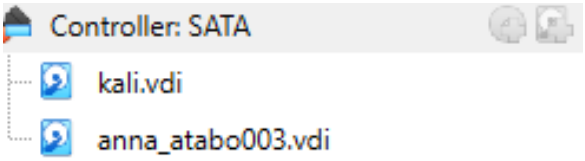


Step 3. Execute the parted -l command to list the current hard disk partition table. [use sudo]

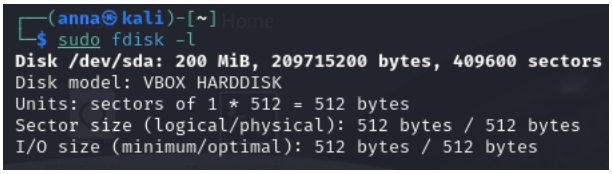


Part II– Create a new virtual disk (30 points)
Submit the screenshot for All the three steps.

Step 1. In the VM setting, attach a new virtual hard disk with the size of 200 MB to our current Linux VM. Name it as “your_midas.vdi” [HINT: Please refer to the slides and discussion during the class for
week 7]



Step 2. Load this virtual hard disk to your virtual machine.

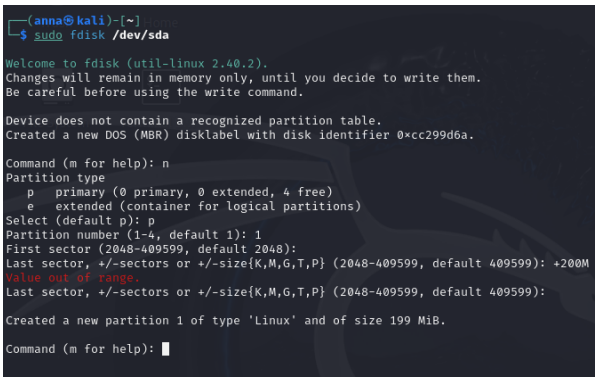


Step 3. Repeat the steps in Part I and highlight the differences after adding the new virtual hard disk.

A new disk drive appears in the list

Part III– Creating Partitions and Filesystems (60 points)
Submit the screenshot for All the three eight steps.

Step 1. Use the fdisk command to create a new primary partition on the new virtual hard disk attached
in Part II.



Step 2. Use the correct command to create an ext4 filesystem on the new partition.

```
┌──(anna㉿kali)-[~]
└─$ sudo mkfs.ext4 /dev/sda1
mke2fs 1.47.1 (20-May-2024)
Creating filesystem with 203776 1k blocks and 51000 inodes
Filesystem UUID: 10c83821-e517-43c4-ad54-a385bfd74ee3
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


┌──(anna㉿kali)-[~]
└─$ sudo blkid /dev/sda1
/dev/sda1: UUID="10c83821-e517-43c4-ad54-a385bfd74ee3" BLOCK_SIZE="1024" TYPE="ext4" PARTUUID="cc299d6a-01"

┌──(anna㉿kali)-[~]
└─$
```

Step 3. Repeat the steps in Part I and highlight the differences.

Step 4. Make a new directory named /cyse. And mount the new partition under this directory.

```
┌──(anna㉿kali)-[~]
└─$ sudo mkdir /cyse

┌──(anna㉿kali)-[~]
└─$ sudo mount /dev/sda1 /cyse

┌──(anna㉿kali)-[~]
└─$ df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            926M     0  926M   0% /dev
tmpfs           198M  988K  197M   1% /run
/dev/sdb1        24G   15G  7.9G  65% /
tmpfs           988M  4.0K  988M   1% /dev/shm
tmpfs           5.0M     0  5.0M   0% /run/lock
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-journald.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-udev-load-credentials.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-sysctl.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-tmpfiles-setup-dev-early.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-tmpfiles-setup-dev.service
tmpfs           988M   28K  988M   1% /tmp
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-tmpfiles-setup.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/getty@tty1.service
tmpfs           198M  112K  198M   1% /run/user/1000
/dev/sda1       181M   63K  167M   1% /cyse
```

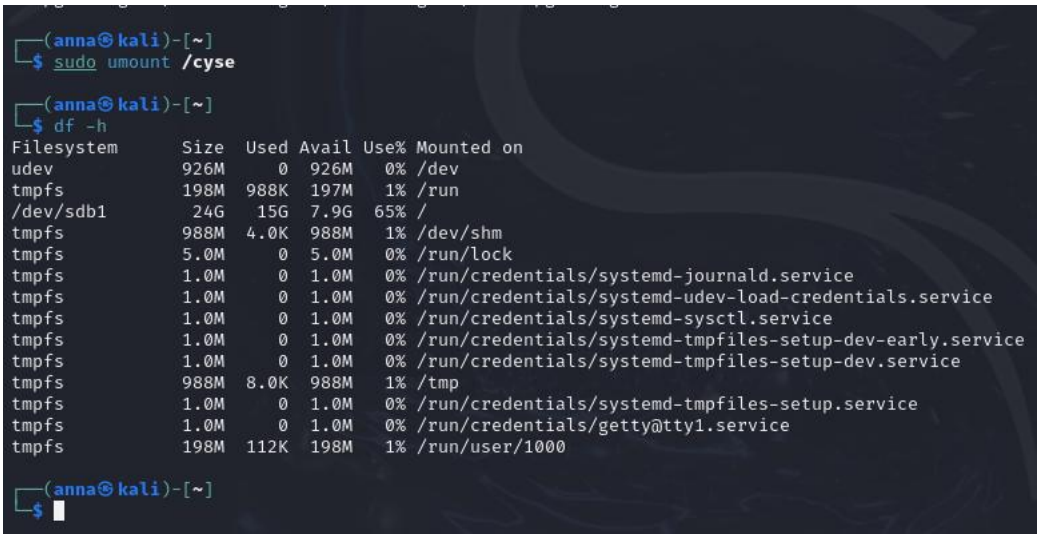
Step 5. Use the df command to check the mounting point of the new partition.

```
┌──(anna㉿kali)-[~]
└─$ df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            926M     0  926M   0% /dev
tmpfs           198M  988K  197M   1% /run
/dev/sdb1        24G   15G  7.9G  65% /
tmpfs           988M  4.0K  988M   1% /dev/shm
tmpfs           5.0M     0  5.0M   0% /run/lock
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-journald.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-udev-load-credentials.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-sysctl.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-tmpfiles-setup-dev-early.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-tmpfiles-setup-dev.service
tmpfs           988M   40K  988M   1% /tmp
tmpfs           1.0M     0  1.0M   0% /run/credentials/systemd-tmpfiles-setup.service
tmpfs           1.0M     0  1.0M   0% /run/credentials/getty@tty1.service
tmpfs           198M  112K  198M   1% /run/user/1000
/dev/sda1       181M   63K  167M   1% /cyse

┌──(anna㉿kali)-[~]
└─$
```

Step 6. Create a new file named for YourMIDAS.txt (replace YourMIDAS with your MIDAS ID) in the directory /cyse and put your name in that file.

Step 7. Unmount /cyse directory.



Step 8. Check the contents in /cyse directory. What do you find?ls -l

No contents found