

# Exercises Partitions

## Exercise 1: Identify Disks and Existing Partitions

- Run: `sudo fdisk -l`
- List all disks and note device names (e.g. `/dev/sda`, `/dev/sdb`).
- Identify a disk for practice (use a non-system disk to avoid issues).
- Be careful to not touch the bootdisk: to find out which disk this is, Run the following command and look for `/` and `/boot` in the column

### **MOUNTPOINTS**

## Exercise 2: Create Partitions Using fdisk

- Start fdisk on chosen disk: `sudo fdisk /dev/sdx` (replace x accordingly).
- With `m`, view help menu.
- `p` to print existing partitions.
- `n` to create a new partition:
  - Choose `p` for primary.
  - Select partition number (e.g., 1).
  - Accept default for first sector.
  - Specify size (e.g., `+500M` for 500MB).
- `t` to change partition type; set to Linux filesystem (83).
- `w` to write changes and exit.

### Exercise 3: Format the Partition

In this example the available disk is `/dev/sda`

- Format with ext4: `sudo mkfs.ext4 /dev/sda`
- Run: `lsblk -f`

Investigate the columns and especially check NAME, FSTYPE and MOUNTPOINTS

### Exercise 5: Create GPT Partition and Partition Using parted

- Start parted: `sudo parted /dev/sdx`
- Create GPT label: `(parted) mklabel gpt`
- Make a partition: `(parted) mkpart primary ext4 1MiB 501MiB`
- Quit: `(parted) quit`
- Format with ext4.
- Run `lsblk -f` again.

### Exercise 6: Clean up the disk and create two partitions using fdisk

- Overwrite the partition table with zeroes  
`sudo dd if=/dev/zero of=/dev/sda bs=1M count=1`
- run `lsblk -f` to confirm that sda does not contain any partitions
- use `fdisk` to create two partitions: 1 and 2. Both partitions should be 200MB in size.
- Refer to exercise 2 for assistance.

### Exercise 7: Explain Partition Types

- **Primary partitions:** Up to 4 per MBR disk, bootable.
- **Extended partition:** A container to hold multiple logical partitions beyond the 4-primary limit.
- **Logical partitions:** Inside extended partitions, used for more flexibility.
- Use extended partitions when you need more than 4 partitions on MBR disks.