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# **Type of Devices**

There are mainly three kinds of devices:

1. Block Devices
2. Character Devices
3. Network Devices

## **Block Devices:**

* Driver communicates with kernel by sending/receiving entire blocks/group of data.
* Examples: Hard disk, RAM, USB cameras, etc.
* They support file system.
* Mainly used for storing the data or holding the data for temporary time.
* They are mainly subjected to read/write activity.
* Entry point directory: /dev
* To list out only block devices,

Command: ls –l /dev/ | grep “^b”

* Identified by “b” in the first column of the output of ls -l /dev.

C:\Users\csi1092303\Desktop\b.png

## **Character Devices:**

* Driver communicates with kernel by sending/receiving single character.
* Examples: Serial ports, Parallel ports, sound cards, null, zero, mem, etc.
* Mainly used for transmitting/transferring the data.
* Entry point directory: /dev/ttyl or /dev/lp0
* To list out only block devices,

Command: ls –l /dev/ | grep “^c”

* Identified by “c” in the first column of the output of ls –l /dev.

C:\Users\csi1092303\Downloads\c.png

## **Network Devices:**

* Mainly used to provide network connectivity by sending/receiving packets/frames.
* Examples: Hub, Switch, Router, NIC card, Ethernet port.
* No entry point.
* To list out all network devices,

Command: ip link show

## **Virtual devices:**

* It is device file that has no associated hardware and it is created by kernel.
* Example: /dev/null , /dev/urandom
* TTY: TeleTYpewriter