What is meant by mounting a device in Linux?

The **mount** command mounts a storage device or filesystem, making it accessible and attaching it to an existing directory structure.

The **umount** command "unmounts" a mounted filesystem, informing the system to complete any pending read or write operations, and safely detaching it.

Unix systems have a single directory tree. All accessible storage must have an associated location in this single directory tree. This is unlike Windows where (in the most common syntax for file paths) there is one directory **tree per storage component (drive).**

Mounting is the act of associating a storage device to a particular location in the directory tree. For example, when the system boots, a particular storage device (commonly called the root partition) is associated with the root of the directory tree, i.e., that storage device is mounted on `/` (the root directory).

Let's say you now want to access files on a CD-ROM. You must mount the CD-ROM on a location in the directory tree (this may be done automatically when you insert the CD). Let's say the CD-ROM device is `/dev/cdrom` and the chosen mount point is `/media/cdrom`. The corresponding command is

```
mount /dev/cdrom /media/cdrom
```

After that command is run, a file whose location on the CD-ROM is `/dir/file` is now accessible on your system as `/media/cdrom/dir/file`. When you've finished using the CD, you run the command `umount /dev/cdrom` or `umount /media/cdrom` (both will work; typical desktop environments will do this when you click on the “eject” or ”safely remove” button).

Mounting applies to anything that is made accessible as files, not just actual storage devices. For example, all Linux systems have a special filesystem mounted under `/proc`. That filesystem (called `proc`) does not have underlying storage: the files in it give information about running processes and various other system information; the information is provided directly by the kernel from its in-memory data structures.