Passerelles numériques

A Gateway for Life

OS & Maintenance

Chapter 3 – Partitioning

Objective

After finished this lesson students will be able to know:

- Overview of partition
- Purpose of partition
- Types of partitioning
- Tools for partitioning
- Practice partitioning

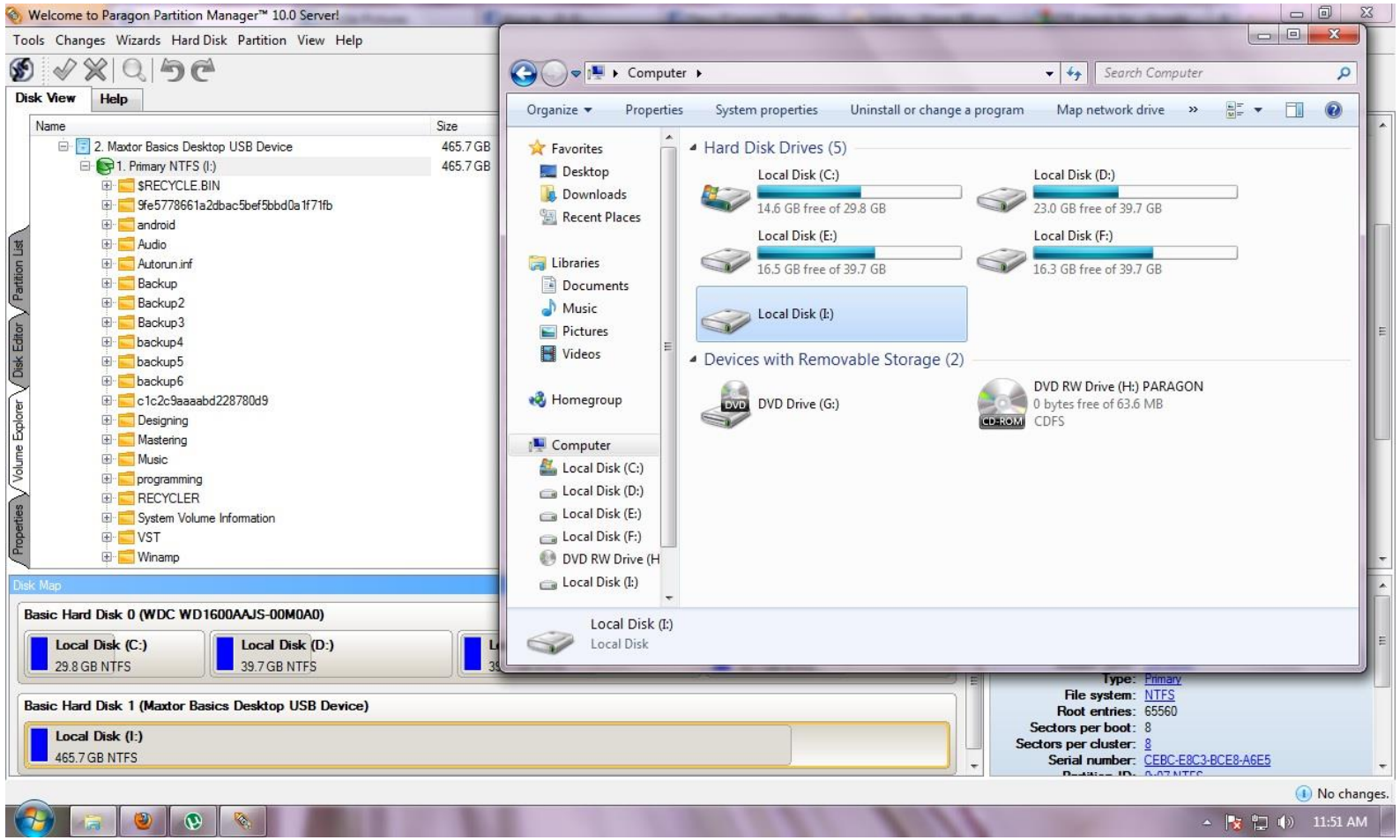
Overview of Partition

- When a hard disk is installed in a computer, it must be partitioned before being formatted and then used. You cannot use it immediately when you buy it and install it in a computer.
- Once a partition is created, it can be formatted so it can be used.

What is Partition?

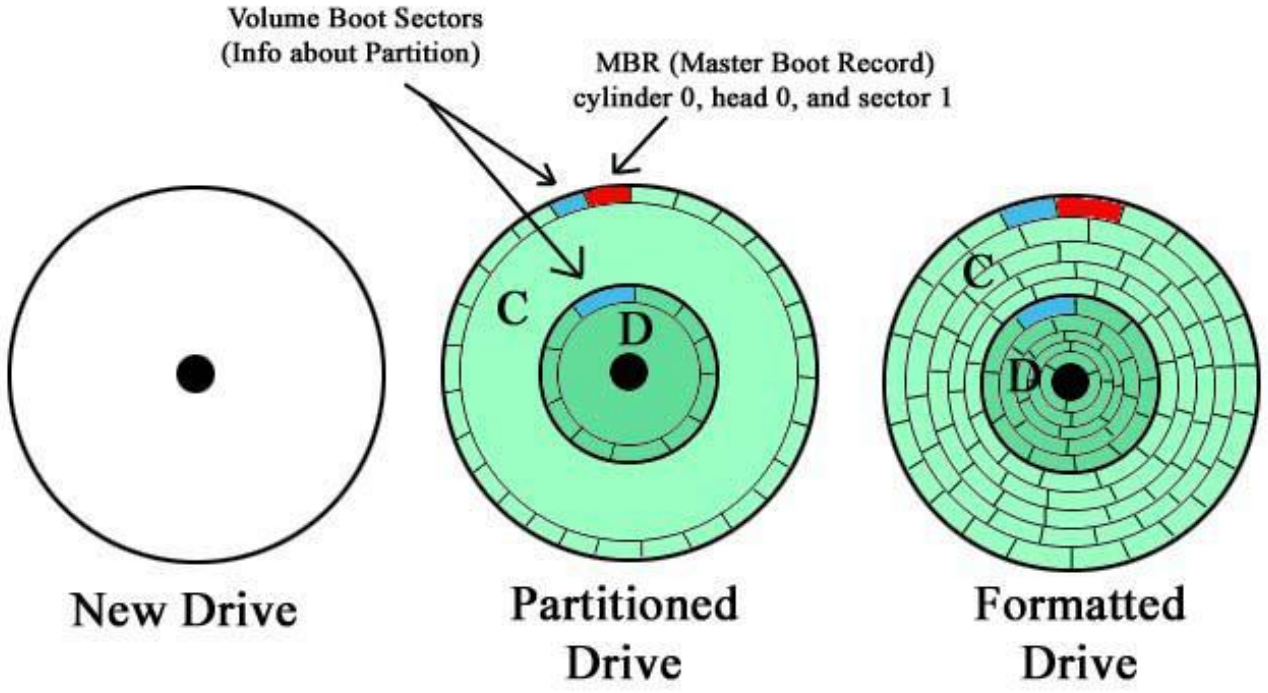
Overview of Partition

- **Disk partitioning** is the act of dividing a physical hard disk drive into multiple logical storage units.



Purpose of Partition

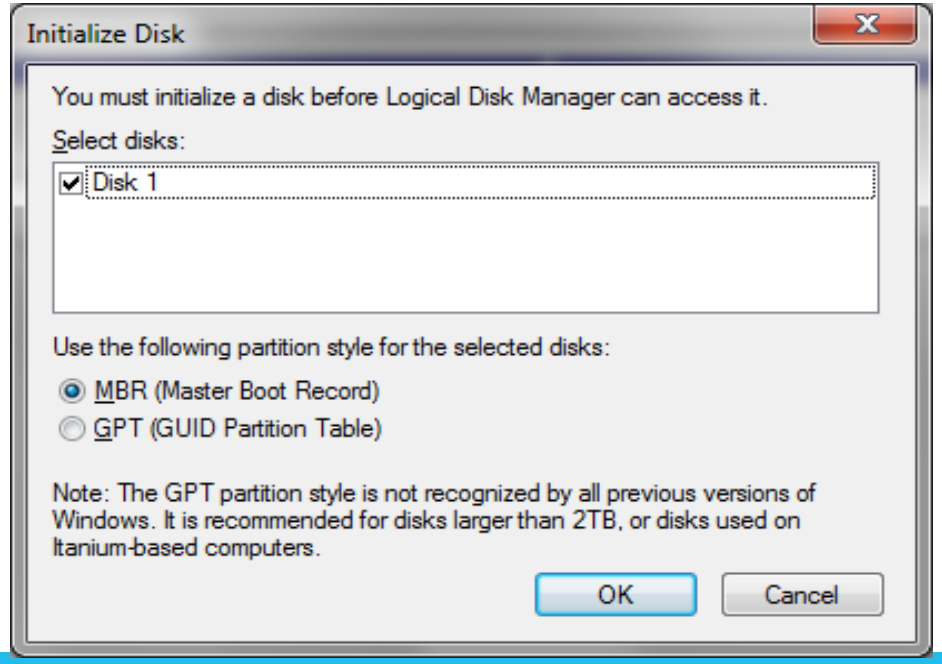
- A partition is simply a way to tell your computer that you want to split your hard disk into a number of logical disks. When you partition a hard disk, you tell the computer to treat each partition as a separate drive.



Types of partition structure

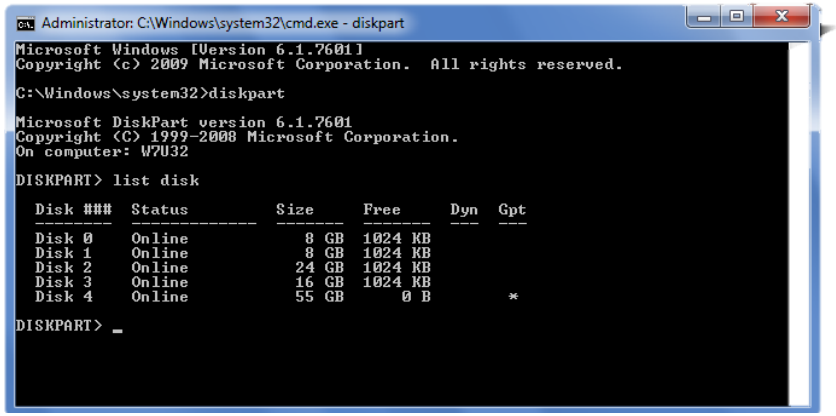
There are two types of partition structure (**Partition Style**):

- **MBR(Master Boot Record):** is a special boot sector located at the beginning of a drive, and it is the default partition table format.
  - ✓ Hard disk size maximum 2TB
  - ✓ Support 4 partitions primary or three partitions Primary and one Extended
  - ✓ Intergrade with BIOS



Types of partition structure

- **GPT (Guild Partition Table):** is a newer standard that’s gradually replacing MBR.
  - ✓ The maximum size GPT support’s 9400000000 TB
  - ✓ On windows allow up to 128 partitions
  - ✓ Doesn’t support with extended partition
  - ✓ Intergrade with UEFI(Unified Extensible Firmware Interface)

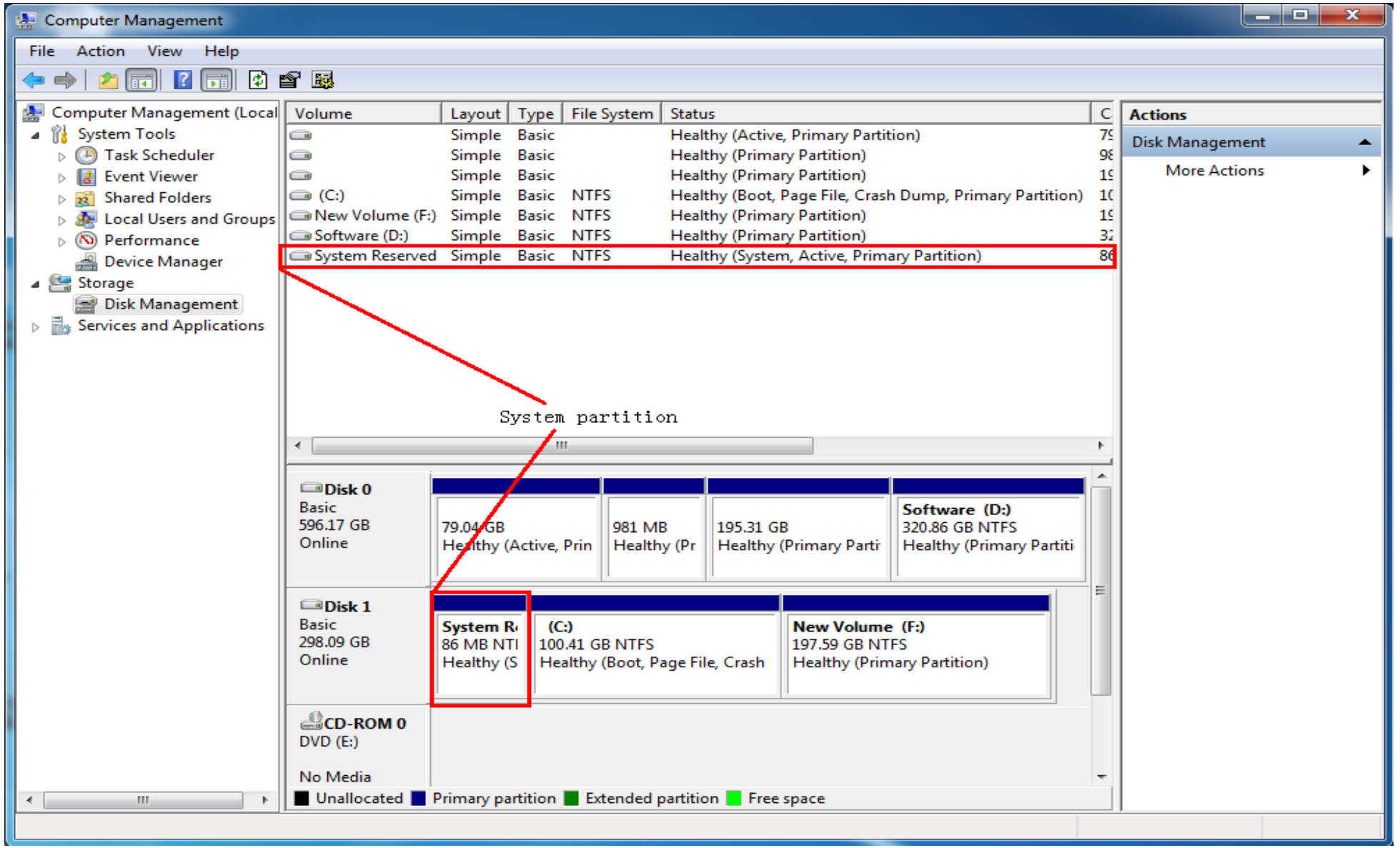


Types of partitioning

Understanding type of partition on windows:

- ✓ **Primary partition :** it’s a partition type exists in MBR disk which can supports up to 4 primary partitions or 3 primary partitions plus 1 extended partition.
- ✓ **Boot partition**: it is also a primary partition which contains the operating system folder.
- ✓ **System partition**: it is a primary partition that contains the boot loader, a piece of procedure responsible for booting the OS.

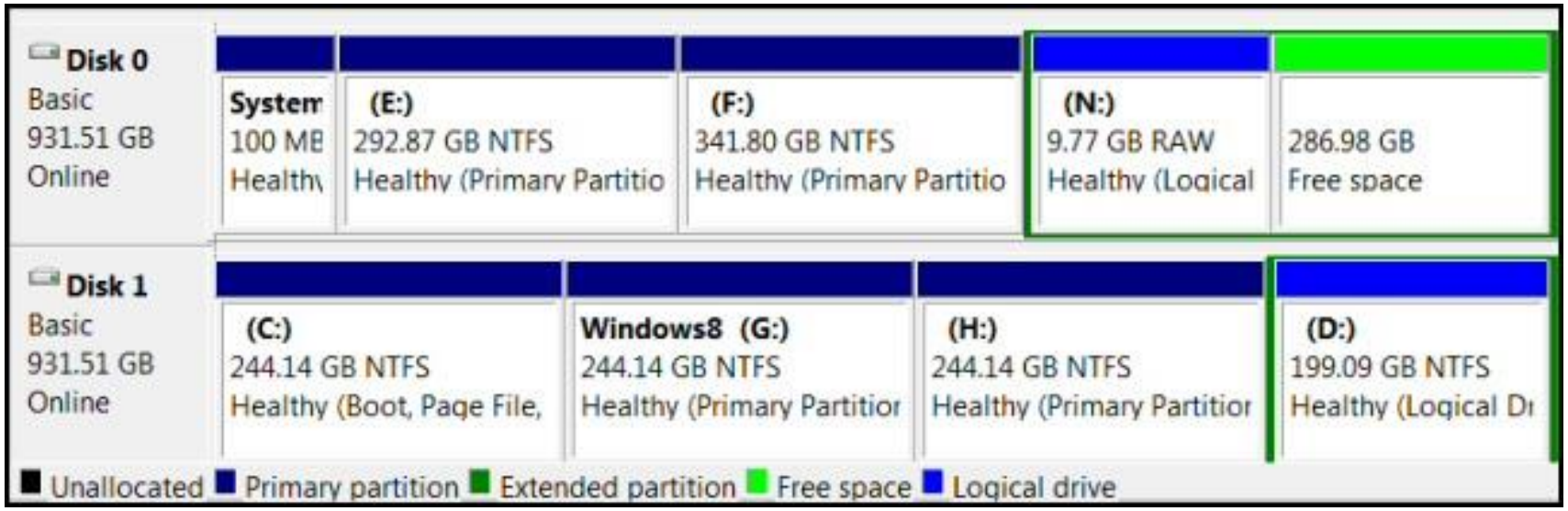
Types of partitioning



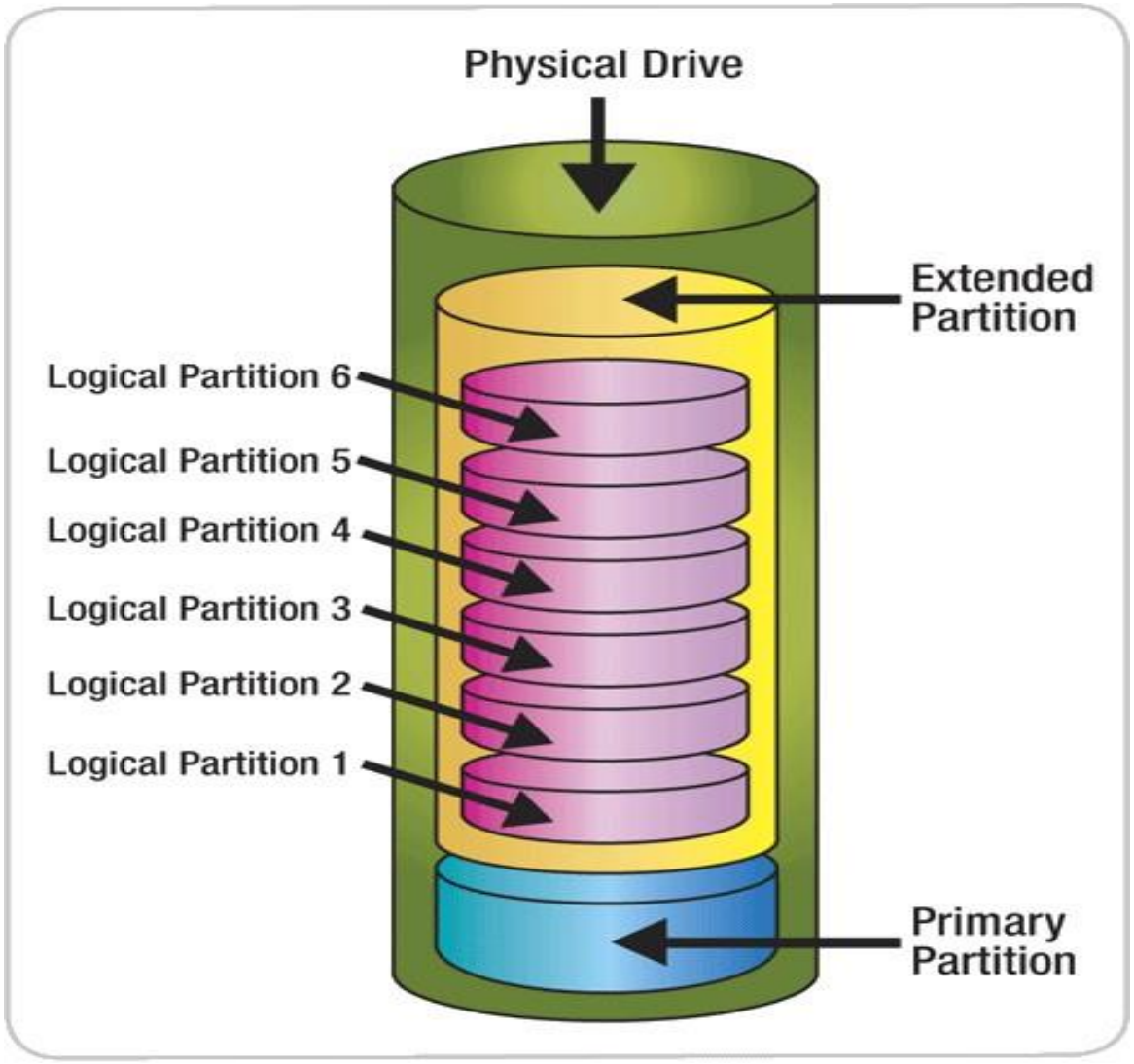
Types of partitioning

- ✓ **Extended partition**: is used to hold logical drives, and it can’t be used directly unless we partition it to multiple logical partitions which can’t be set as active.

- ✓ **Logical partition**: is hold files unrelated to the Operating System. Used to store data, audio, video, etc.

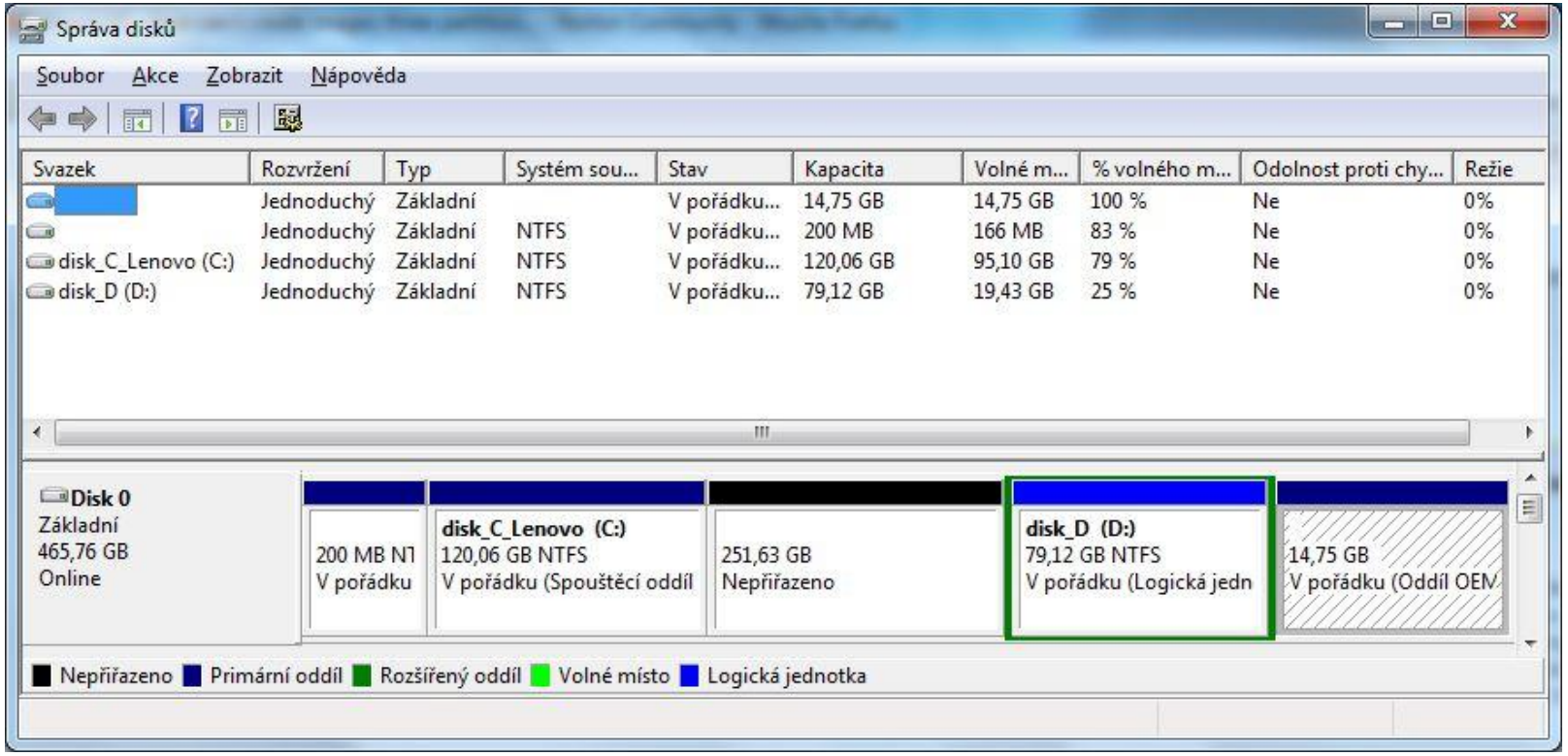


Types of partitioning



Tools for partitioning

- **Diskmgmt.msc:** is an extension of the Microsoft Management Console that allows full management of the disk-based hardware recognized by Windows.



Activity #1

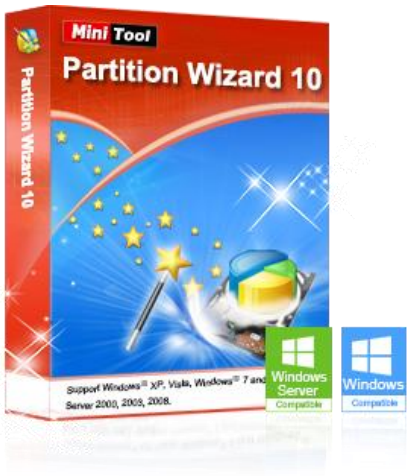
Instructor

- Students will must to listen becarefuly
- Instructor demo to students by using interface diskmgmt.msc:
  - Create primary partition
  - Create extended partition
  - Create logical partition
  - Format partition
  - Shrink partition, assign letter to partition
  - Extend partition

Software of Partitioning

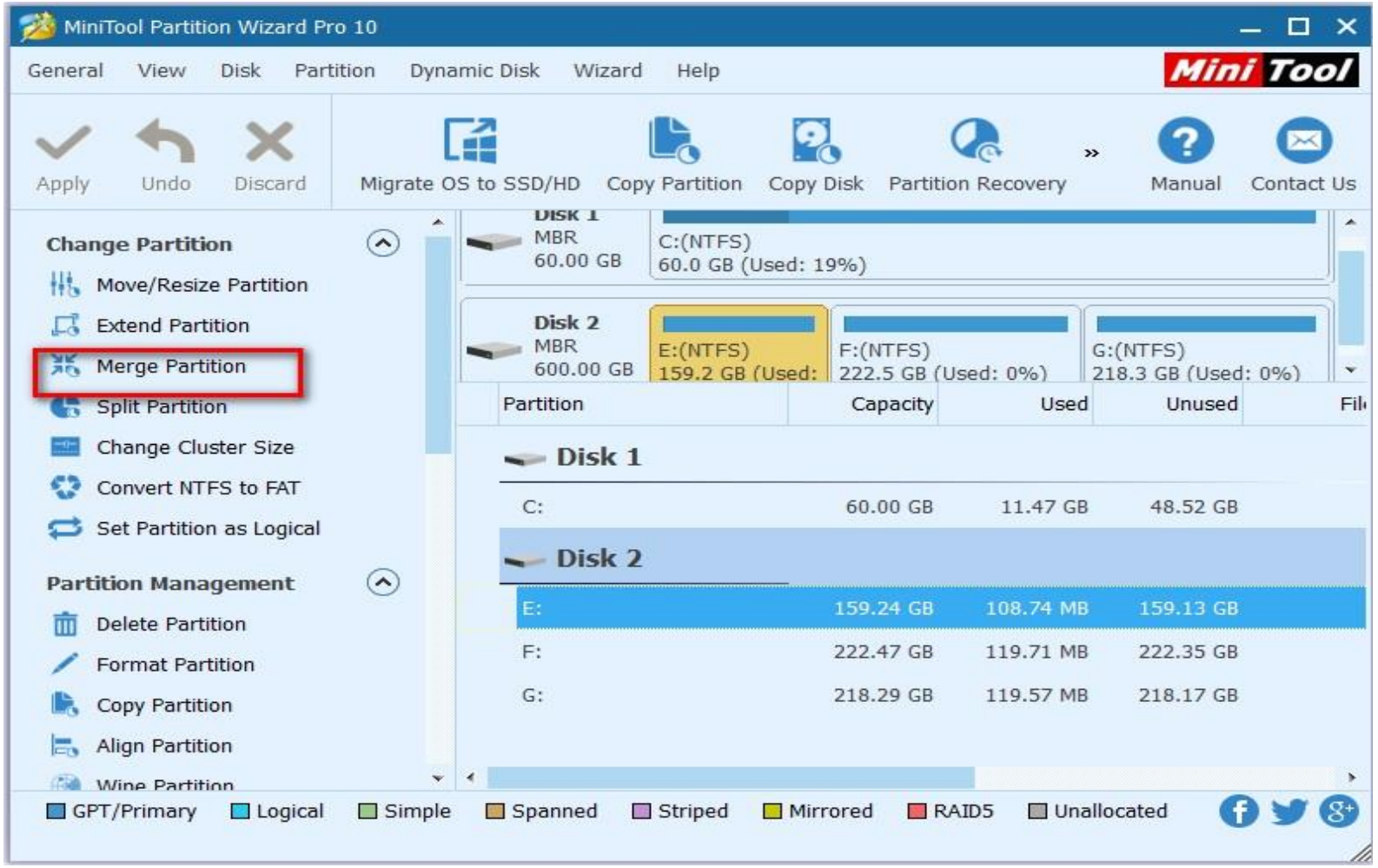
There are many software's or third-party that used to partitioning hard disk drive:

- ✓ MiniTool partition Wizard Free
- ✓ Active@partition manager
- ✓ Gparted



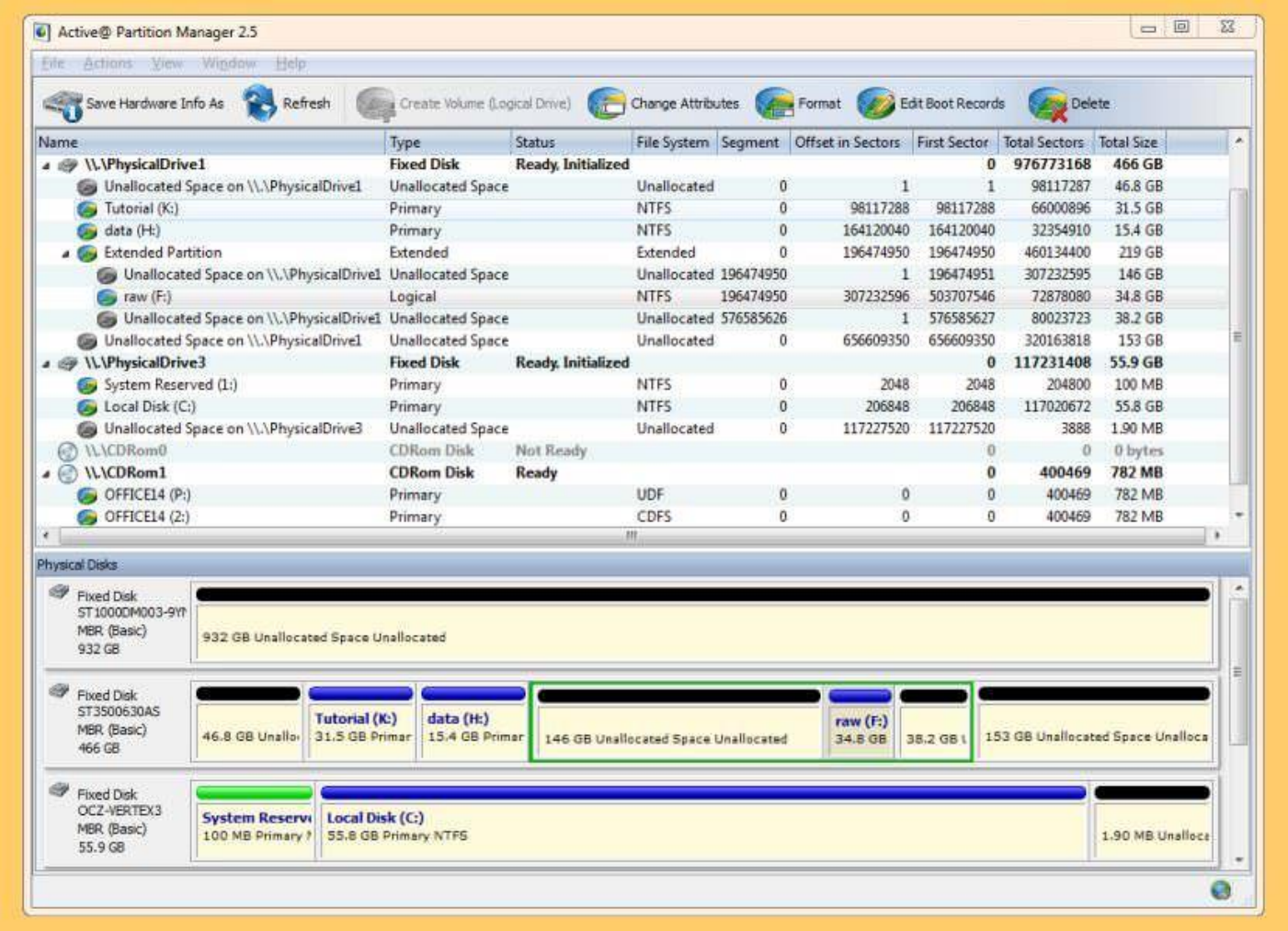
Software of Partitioning

- MiniTool partition Wizard Free



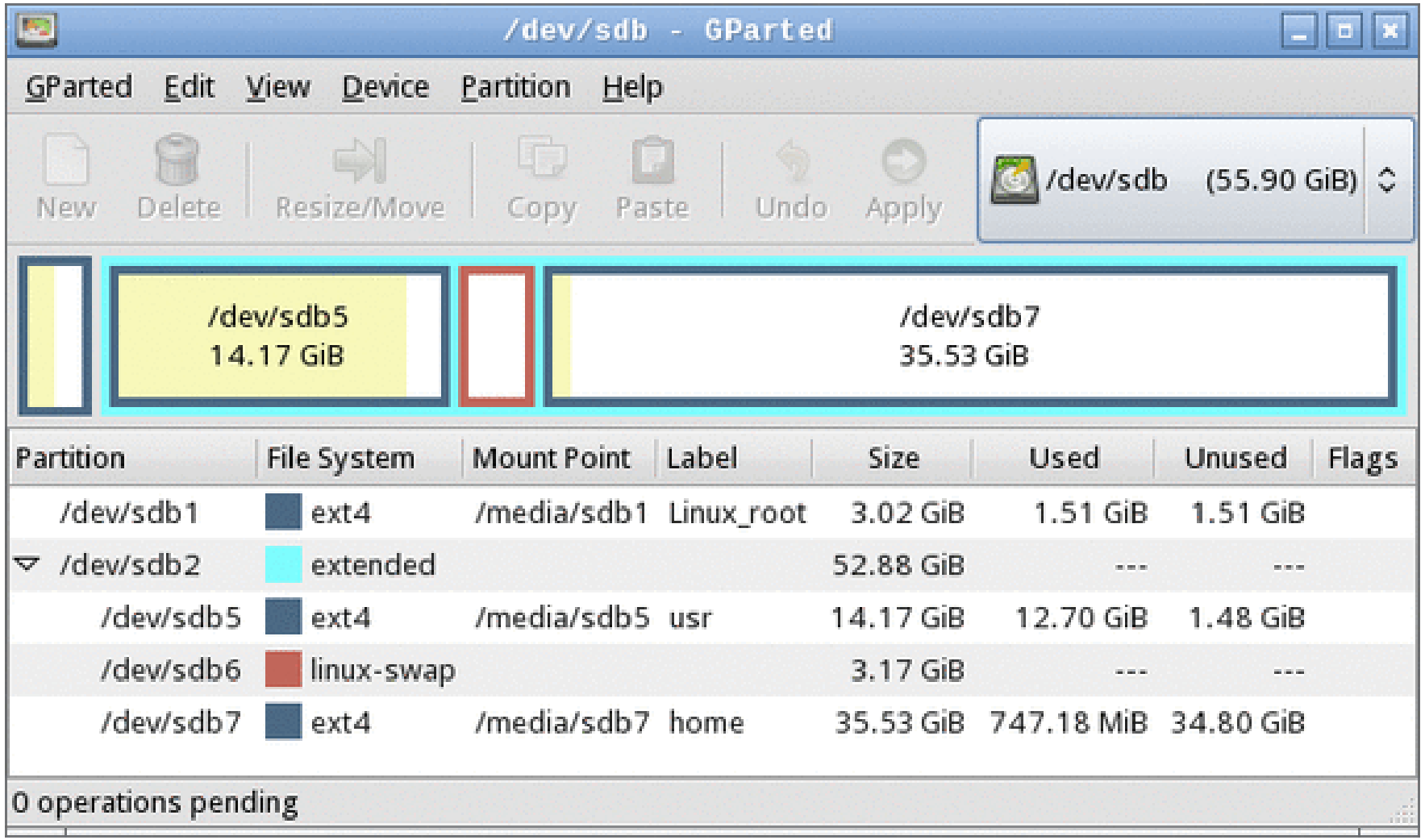
Software of Partitioning

- Active@partition manager



Software of Partitioning

- Gparted softeware



Activity #3

Instructor Demo

- Instructor demo to students how to used software for partitioning hard disk
- Create partition primary, extended partition, logical partition
- Delete partition and shrink partition, extend partition

Practice

- Practice using software for partitioning hard disk
- Create partition primary, extended partition, logical partition
- Delete partition, shrink partition, extend partition
- Change structure hard disk to GPT and testing practice

ANY QUESTION