# Hard Disk Partitions

Physical Drive

Extended Partition

Logical Partition 6

Logical Partition 5

Logical Partition 4

Logical Partition 3

Logical Partition 2

Logical Partition 1

Primary Partition

Components of a Hard Disk

Spindle

Head

Platter

Power Connector

Jumper Block

IDE Connector

Cluster of 4 Sectors

Sector

Track

Read/Write Heads

Platters
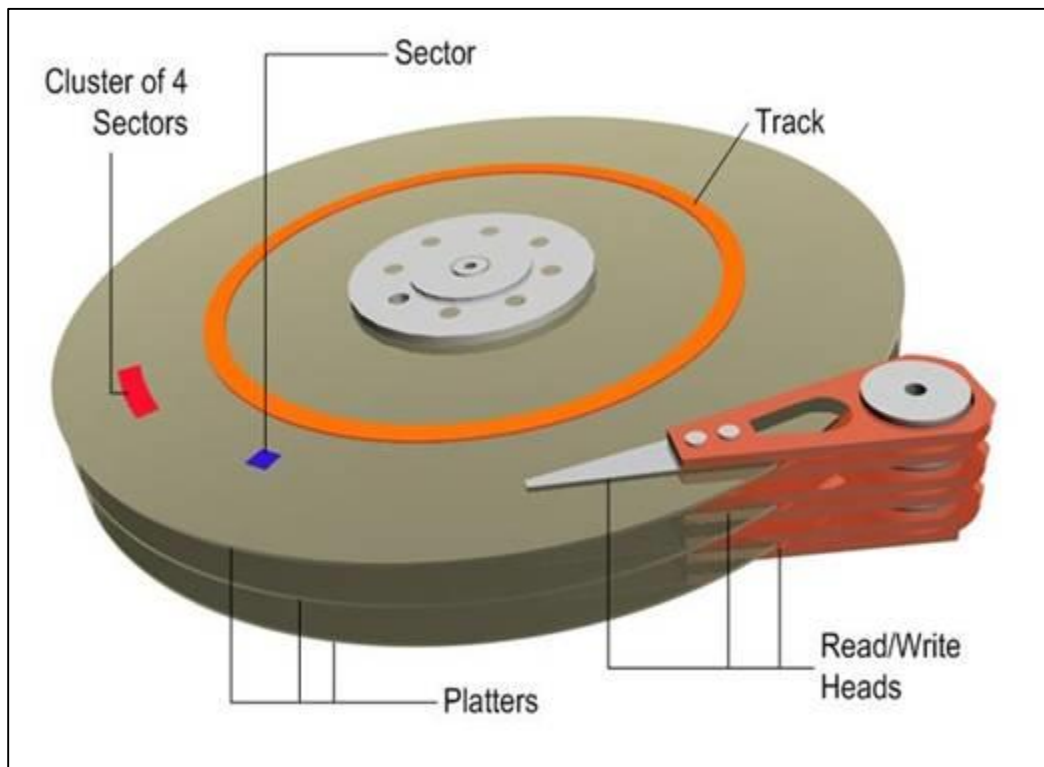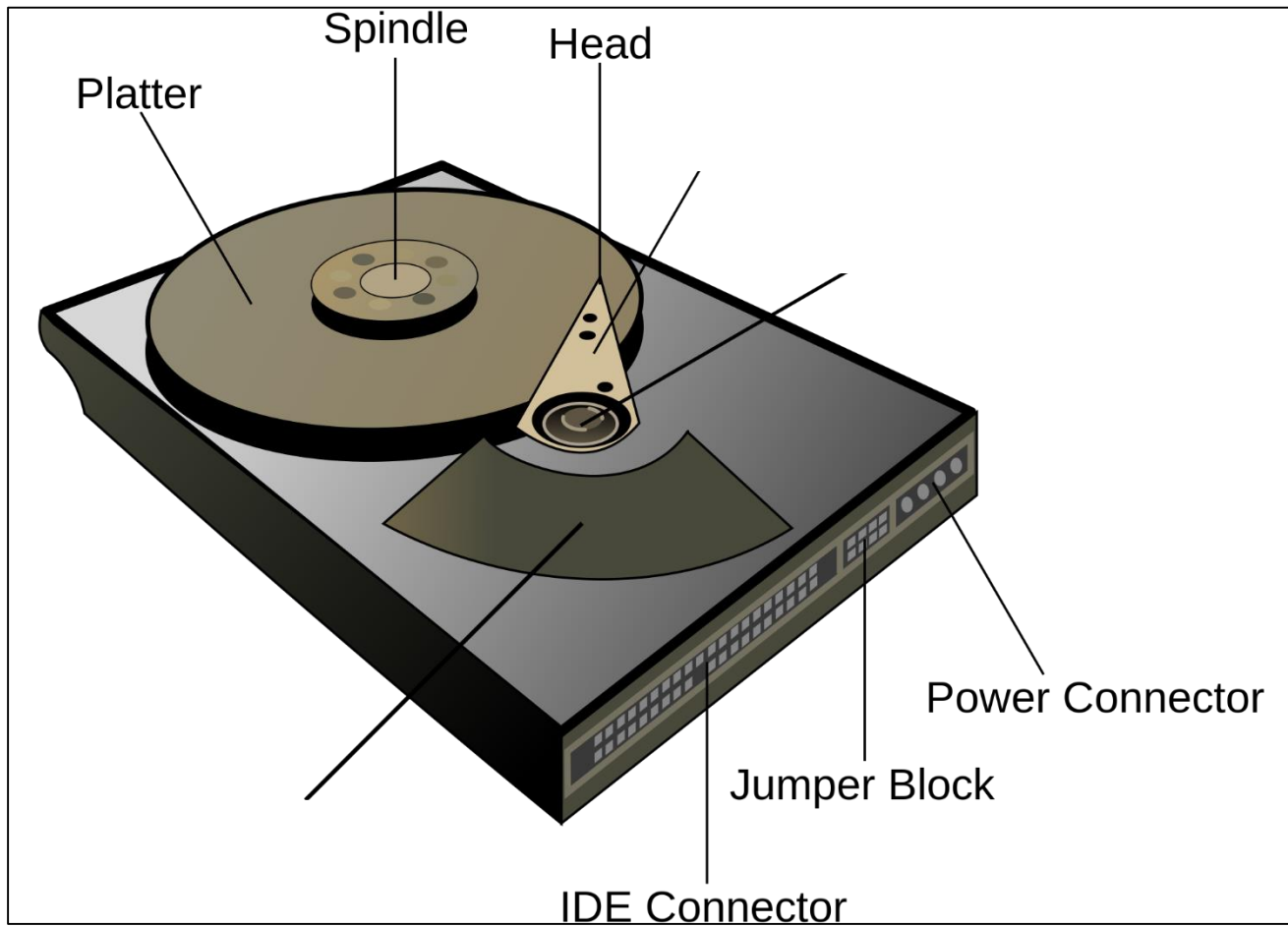
Hard Disk Mechanism
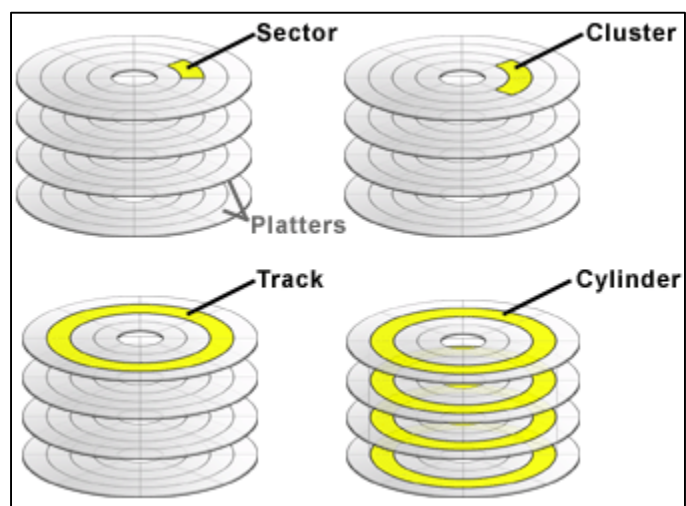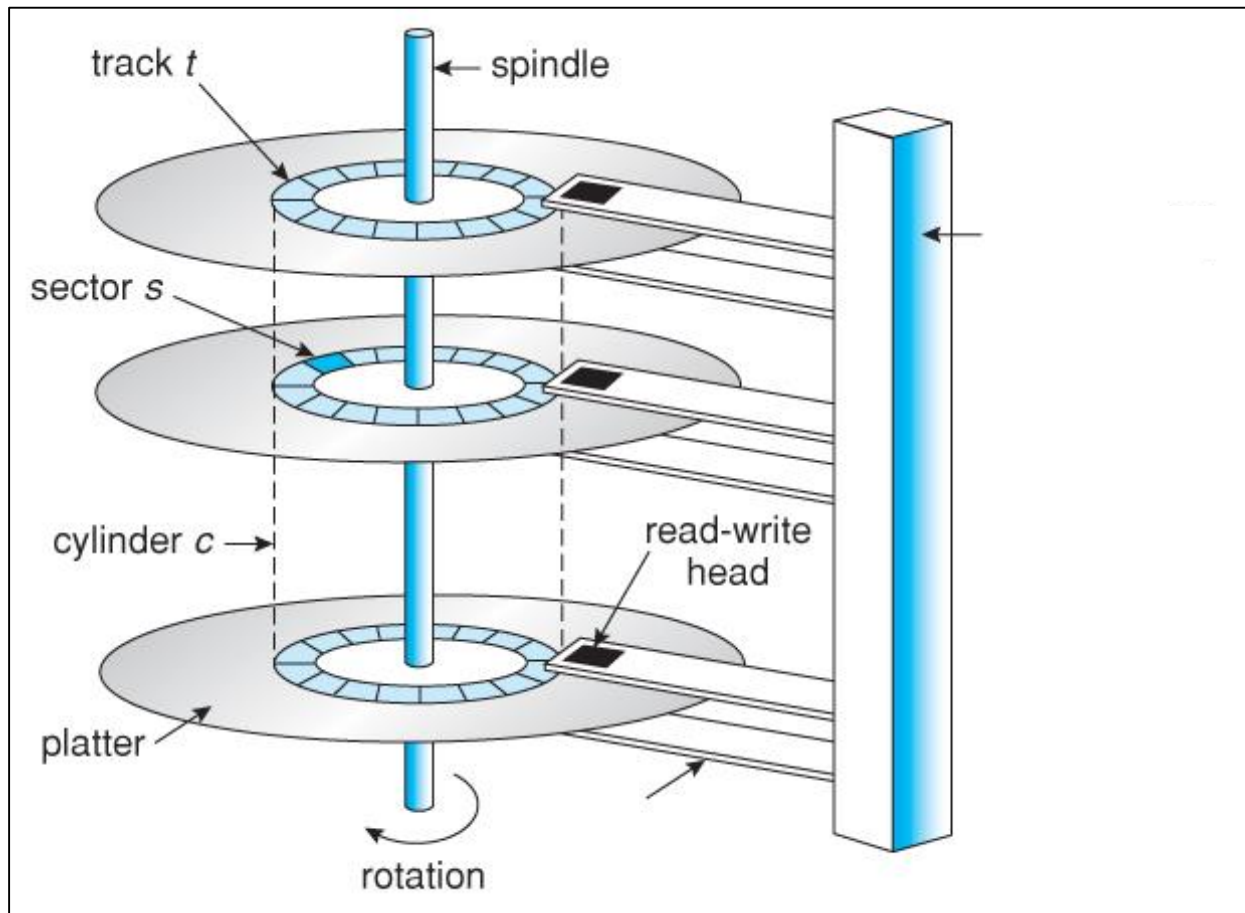
File System Comparison

	NTFS	FAT32	FAT16
	New Technology File System	32-bit File Allocation Table	File Allocation Table
Operating System	Windows NT Windows 2000 Windows XP Windows Vista Windows 7 Window 8 Windows 10	Windows 98 Windows ME Windows 2000 Windows XP	DOS All versions of Microsoft Windows
Max Volume Size	256TB (using 64KB clusters)	2TB	2GB
Max Files on Volume	Nearly Unlimited	Nearly Unlimited	~65000
Max File Size	Limit Only by Volume Size	4GB	2GB
Max Clusters Number	Nearly Unlimited	268435456	65535
Max File Name Length	Up to 255	Up to 255	Standard - 8.3 Extended - up to 255
Unicode File Names	Unicode Character Set	System Character Set	System Character Set
Compression	Yes	No	No
Object Permissions	Yes	No	No
Built-In Security	Yes	No	No
Recoverability	Yes	No	No
Performance	Low on small volumes High on Large	High on small volumes Low on large	Highest on small volumes Low on large
Fault Tolerance	Max	Minimal	Average