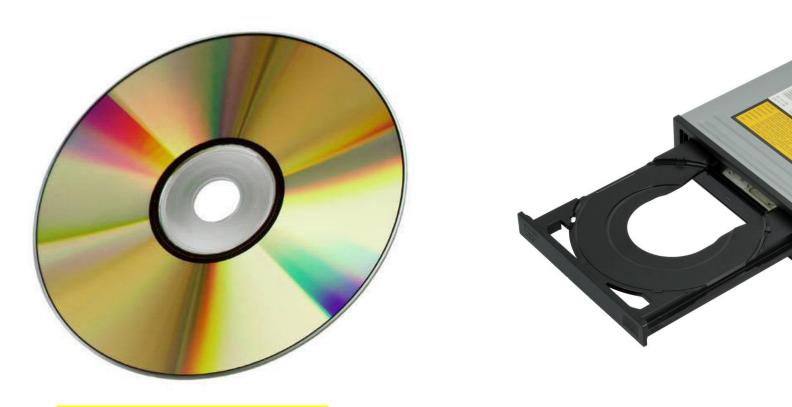
You've just completed a project on your computer and want to back it up. You decide to save it on a USB flash drive. Which of the following best describes the storage media in this situation?

- A) The USB port on your computer
- B) The USB flash drive itself
- C) The memory chip inside the USB flash drive
- D) The computer's operating system

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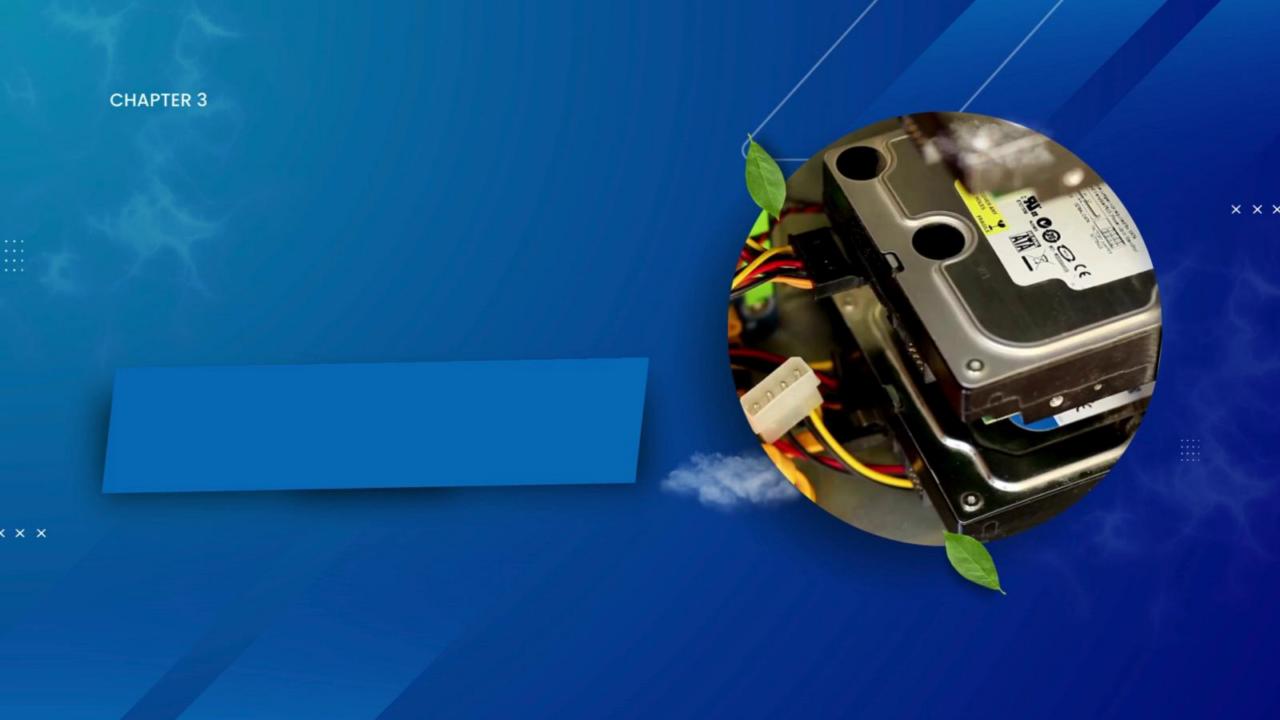
- A) The USB port on your computer
- B) The USB flash drive itself
- C) The memory chip inside the USB flash drive
- D) The computer's operating system

### Which of the two images belongs to the storage media?

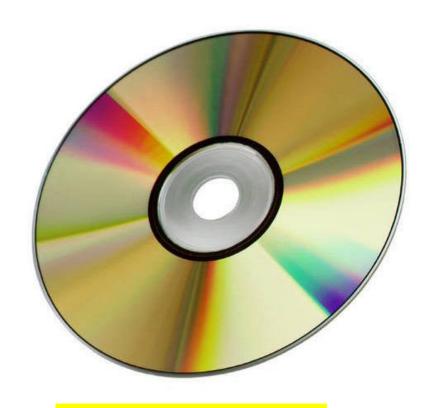




Storage device



A storage device is the hardware that allows you to read from or write to the storage media while the Storage media refers to the material or substance that actually holds the data.





Storage media

Storage device

# MAGNETIC MEDIA AND MAGNETIC STORAGE DEVICE

#### MAGNETIC MEDIA AND MAGNETIC STORAGE

#### **MAGNETIC TAPE DRIVES**





#### MAGNETIC TAPE DRIVES

Very tiny strip of plastic coated in a magnetic layer.





#### Uses of Magnetic tape

- clearing bank cheques
- Utility billing (gas, electricity, water)
- producing pay slip

#### Advantage

- less expensive (per byte)
- very strong technology
- Huge data storage because it can hold anywhere between 1 to 15 terabytes of data per tape in a compact format.
- Data transfer rate is fast

#### Disadvantage

- Very slow data access time
- When updating, another tape is needed

#### **Questions:**

#### Cost of Magnetic tape drive?

Expensive or Less Expensive

### Magentic tape has a huge data, provide the data storage size.

1 Megabyte is equal to 1,024 Kilobytes (KB).

Megabyte or Terabyte?

1 Terabyte (TB) = 1,024 Gigabytes (GB) = 1,048,576 Megabytes (MB)

#### **Questions:**

## When updating a data using magnetic tape drive, do we need to use another tape to update the files or not?

Yes, we need to use another master tape to update the data because that is feature of the device

#### HARD DISC DRIVES (HDD)

One of the most common methods used to store data on a computer



#### Uses of Hard Disc Drive (HDD)

- store the operating system, system software and other working data files
- used in real time system automatic stock control
- used in file server for computer network

#### Advantages

- Very fast data transfer rate, fast access time to data
- Have very large memory capacity (range from 500 GB to 20 TB and can have even higher capacities.)

#### Note:

- Magnetic tape drive ranging from a few gigabytes (GB) to several terabytes (TB) per tape cartridge.
- Hard disc drive ranging from 500 GB to 20 TB.

#### Disadvantages

- Fairly easily damage
- Have many moving parts which can affect the overall reliability

# OPTICAL MEDIA AND OPTICAL STORAGE DEVICE

#### 1. CD/DVD OPTICAL DISKS

 widely used for data storage, media playback, and distribution before the advent of flash drives, cloud storage, and streaming services, which have largely replaced them in recent years.





**OPTICAL STORAGE DEVICE** 

#### Uses of CD-R/DVD-R

- home recordnig of music (CD-R)
- used to store data

#### Advantage

- cheap
- once burned (and finalized) they behave like a ROM

#### Disadvantage

- can only be recorded once, if an error occurs then the disk has to be thrown away.
- Not editable
- Not all CD/DVD players can read

#### **CD-DVD RW DISC**



- Used in CCTV system
- can be use to backup device
- can be written over many times
- but it is expensive

#### **Questions:**

#### Cost of Magnetic tape drive?

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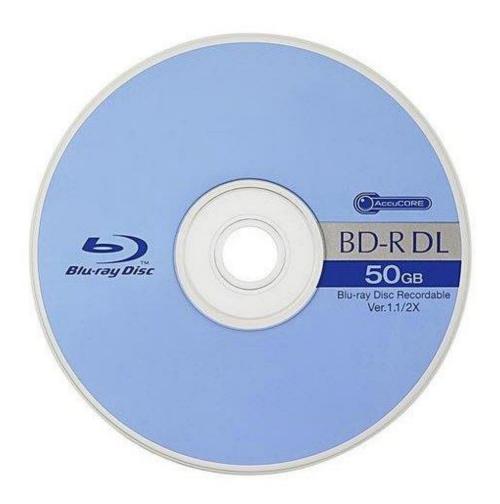
#### **Questions:**

## When updating a data using magnetic tape drive, do we need to use another tape to update the files or not?

Yes, we need to use another master tape to update the data because that is feature of the device

#### 2. BLU-RAY DISKS

 is a high-capacity optical disc format designed for storing high-definition video, audio, and data.



#### **Uses of BLU-RAY DISC**

- Home video console
- Storing and playing back movies
- computer can use it for data storing

#### Advantage

- very large storage capacity
- very fast data transfer
- data access speed is faster

#### Disadvantage

- expensive disc
- encryption problem

# SOLID STATE MEDIA AND SOLID STATE STORAGE DEVICE

#### 1. SOLID STATE DRIVES (SSD)

 are a type of data storage device that use flash memory to store and retrieve data, providing faster and more reliable performance compared to traditional Hard Disk Drives (HDDs).



#### **Uses of SOLID-STATE DRIVE**

backing storage

#### Advantage

- more reliable (likely to fail, lose data, or encounter errors)
- data access speed is faster
- lower power consumption
- it runs much cooler than HDD
- very thin
- data transfer speed is much faster

#### Disadvantage

- expensive disc
- encryption problem

#### 2. PEN DRIVES

- are small portable device that make use of solid state technology
- connect it to computer using USB port



#### **Uses of SOLID-STATE DRIVE**

- used for security device
- data storage

#### Advantage

- very compact and portable media
- very robust

#### Disadvantage

 cannot write protect the data/file by making it read only