

Common Storage Devices



Computer Fundamentals
Lesson 3-1

Objectives:

- Explain the need for storage devices for computers.
- Distinguish between memory and storage.
- Distinguish between storage devices and media.

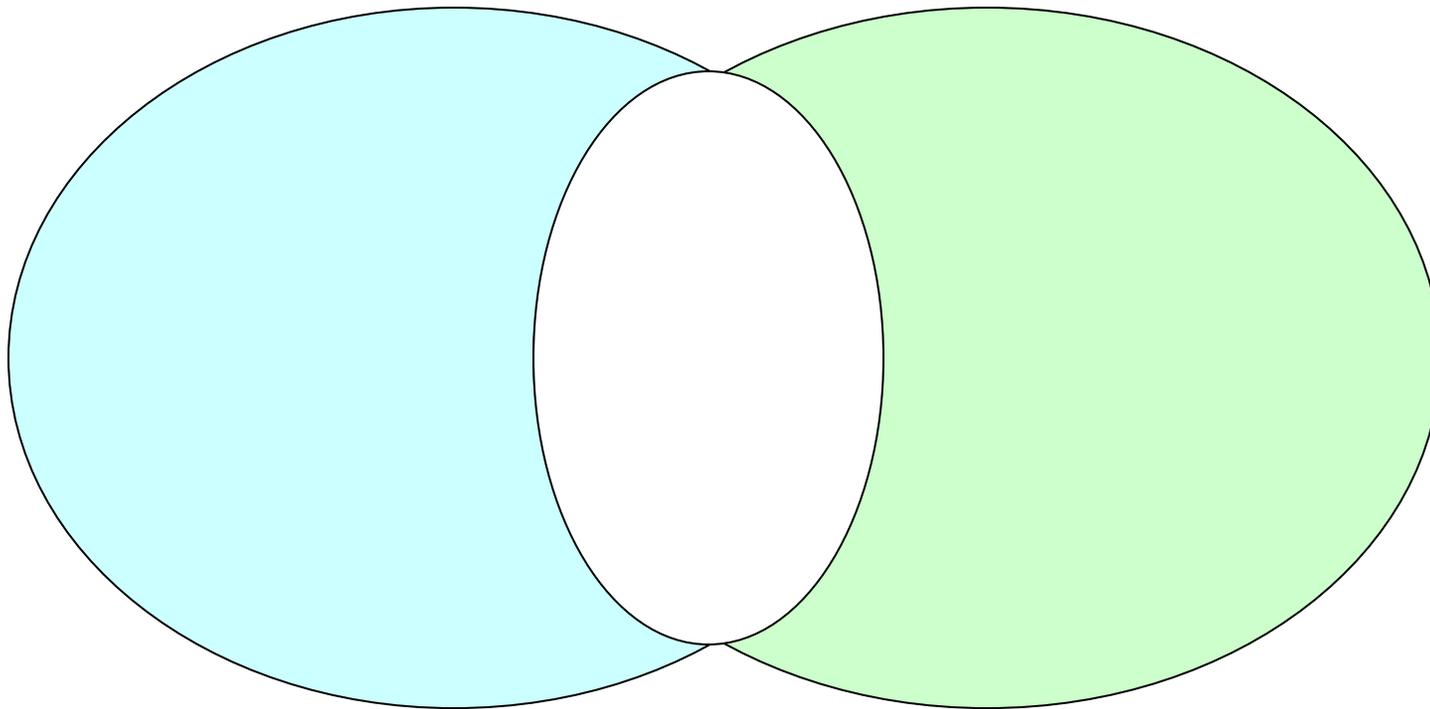
Key Terms:

- storage device
- memory
- Basic Input/Output System (BIOS)
- file

Compare and Contrast

Backpack

Storage Device



What are Storage Devices?

They are the computer's hardware components that retain data even after the power is turned off.

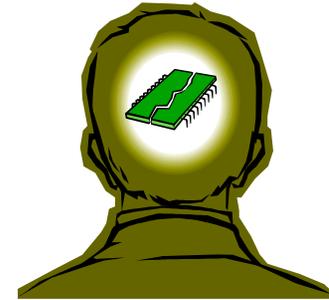


System Startup

Computer storage devices are a key part of a computer's startup process. Without a storage device to hold startup information permanently, a computer would not know what to do when you turned it on.

When you start a computer, it looks for information that tells it what to do. The **Basic Input/Output System**, or BIOS, is a set of programs that tells the computer equipment how to start up.

Connections



Science The study of memory does not only apply to computer science. Some psychologists have noted similarities in the ways human and computer memories function.

Some research supports an input output model of human memory. They see memory as a storage device that is limited in capacity. According to this theory, how much a person can learn (input) may be limited by how much he or she forgets (output).

Memory VS Storage

When people talk about computer **memory**, they usually mean a set of chips that acts as a **temporary** workspace in the computer.

This memory, called random access memory, or RAM, stores data and program instructions needed by the CPU.

RAM holds data and programs while they are being used. As you use the computer, you constantly work with the contents of RAM.

Storage VS Memory

Differences between storage and memory:

- The two work differently. Remember that RAM uses chips to temporarily store information. These chips depend on a constant supply of power to keep their contents; when the power is lost, the chips lose their contents.

Storage uses different methods to store data permanently, so it isn't lost when the power is turned off.

- A PC has more storage capacity than memory. Even though some PCs can hold as much as 1GB of RAM, their hard drives will be many times larger.

Storage Media and Storage Devices

Storage has two components: storage media and storage devices.

Storage Media

In terms of storage, a medium is an object that physically holds data or program instructions. **Floppy disks, magnetic tapes, and compact discs are examples of storage media.** (The word *media* is the plural of *medium*.)

Storage Devices

A storage device is a piece of hardware that holds the storage medium, sends data to the medium, and retrieves data from the medium. **Floppy disk drives, hard drives, CD-ROM and DVD-ROM drives, and tape drives are all examples of storage devices.**