

In **computing**, **memory** refers to the **computer hardware integrated circuits** that store information for immediate use in a **computer**; it is synonymous with the term "**primary storage**". Computer memory operates at a high speed, for example **random-access memory** (RAM), as a distinction from **storage** that provides slow-to-access **information** but offers higher capacities.

Volatile memory is computer memory that requires power to maintain the stored information. Most modern **semiconductor** volatile memory is either static RAM (**SRAM**) or dynamic RAM (**DRAM**).

Non-volatile memory is computer memory that can retain the stored information even when not powered. Examples of non-volatile memory include read-only memory (see **ROM**), **flash memory**, most types of magnetic computer storage devices (e.g. **hard disk drives**, **floppy disks** and **magnetic tape**), **optical discs**, and early computer storage methods such as **paper tape** and **punched cards**.

**Memory management** is a form of **resource management** applied to **computer memory**. The essential requirement of memory management is to provide ways to dynamically allocate portions of memory to programs at their request, and free it for reuse when no longer needed.

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