Types of Memory
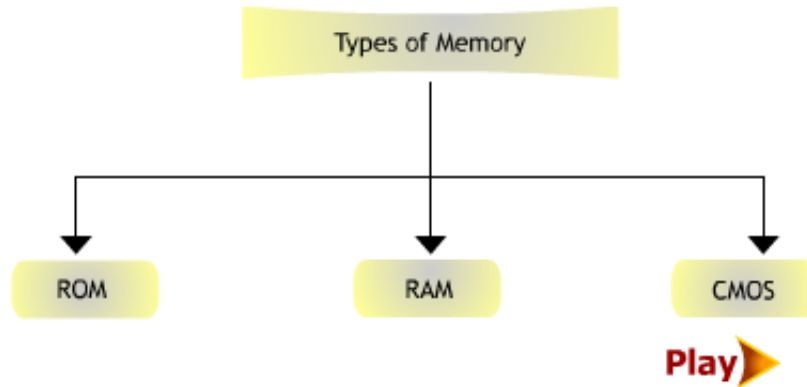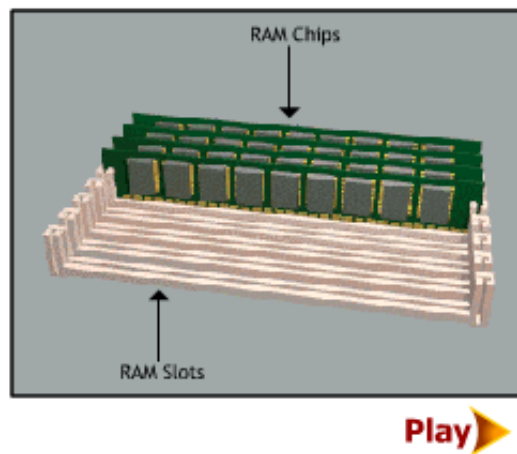
Types of Memory

ROM   RAM   CMOS

Play ▶

Random Access Memory (RAM)

While a program is being executed it requires data, this data which is required while execution of the program is stored in RAM. The contents of the Volatile memory such as RAM, are lost (erased) when there is a power failure or the power to the computer is turned off. Whenever new data is stored in RAM the previous data is erased. Thus, RAM is used to store that part of the computer's memory where information is stored temporarily, as long as you are working on it i.e. it holds the programs and their data till the computer is On. The data can be read or modified, i.e. you can read from or write on to RAM. Hence, it is called Read/Write Memory.

RAM Chips

RAM Slots

Play ▶

Read Only Memory (ROM)

Some programs are always required to run the machine. These types of progarams if stored in RAM are lost as it is a volatile memory, thus they have to be stored in nonvoltile storage i.e., that device in which the data is not erased when there is a power failure or the power to the computer is turned off. ROM provides that nonvolatile storage, therefore all those programs are stored in it.

One set of Instructions found in ROM is called the **ROM- BIOS** which stands for Read-Only Memory Basic Input Output Services. This set of programs performs the most basic control and supervisory operations for computer.

Instructions in ROM can only be read and it is not possible to write fresh information to it, hence, the name Read-Only Memory.

Complementary Metal Oxide Semiconductor Memory (CMOS)

CMOS Memory is used to store the System Configuration, the type of Disk Drives, current Date and Time, and other important information needed when the computer is turned on. When the computer is switched on, BIOS matches the information of CMOS with the peripheral devices and displays error in case of mismatching. The CMOS chips use the battery power to retain information even when the power to the computer is turned off. Unlike ROM, the information stored in CMOS Memory can be changed.