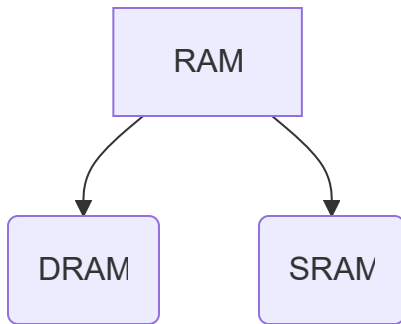


Random Access Memory (RAM)

Tags: RAM, DRAM, SRAM, Cache Memory, CPU, ROM,

"It is called "random access" because it's just as quick for the computer to read or write information from any one part of a **RAM** memory chip as from any other"



Dynamic Random Access Memory(DRAM)

- is used for main memory
- the most common form of computer memory

capacitor - stores something

Transistor - switch on/off

Static Random Access Memory (SRAM)

- based on different technology (**Flip-flop technology**)
- **Flip-Flop Technology** takes 4 or 6 transistors to build a memory cell, which does not require to be refresher
- SRAM uses more transistors, therefore it gets less memory per chip.

Differences

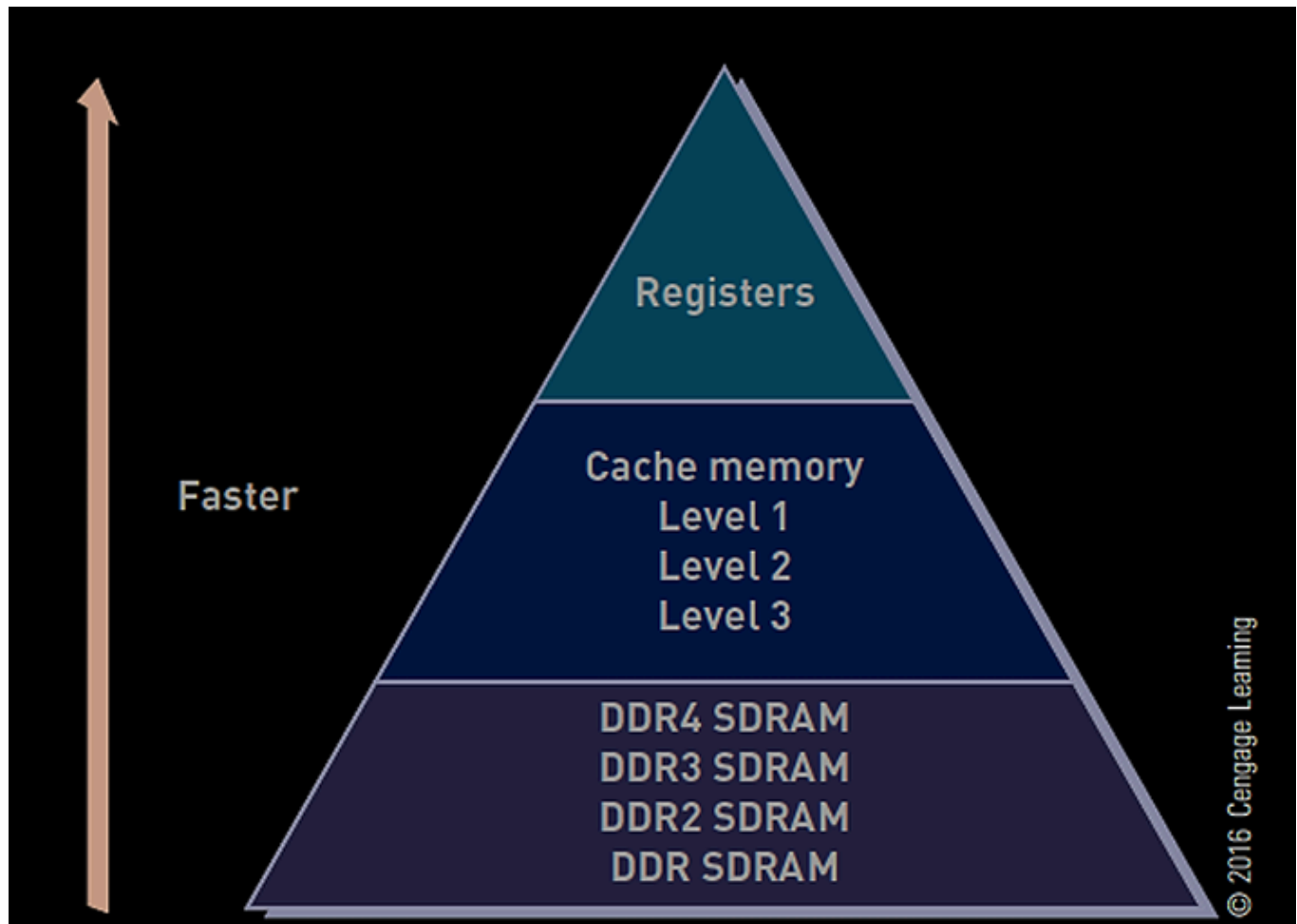
- **SRAM** is faster but it is also more expensive
- **SRAM** is mostly used for CPU cache, and **DRAM** is used to form most part of primary memory

Cache Memory

~high-speed memory that a processor can access more rapidly than main memory.

- a hardware cache used by the CPU to reduce the average cost *(time & energy)

Speed of Various Types of Storage



ROM memory

- **Read-Only Memory(ROM)** - is nonvolatile
- it provides **permanent** storage for data and instructions that do not change.

volatile - not stable(depends on the power) - if there is no power coming to the device, in RAM we lose all data

in ROM, there is a **BIOS** (basic input-output system) - when we switch our computer, there is a small portion of software to help to start all other parts of computer to work

Types of ROM

- **EPROM** - erasable programmable **ROM**
- **EEPROM** - electrically erasable programmable **ROM**