

Types of Micro-processor

Microprocessor

There are three types of microprocessors namely, CISC, RISC, and EPIC. Before learning about them. Let us understand what is a microprocessor.

A microprocessor is basically the brain of the computer. We can also call it simply a **processor or CPU**. Furthermore, a microprocessor is basically a computer processor that is mounted on a single IC (Integrated Circuit). It means that all the functions of the processor are included on a single chip. Furthermore, the basic task of a microprocessor is to input the instructions from the memory, decode, and process them and produce the output. It performs three basic tasks while processing the information.

CISC, RISC, and EPIC

We have three basic types of microprocessors. They are as follows:

1. CISC (Complex Instruction Set Computer)

As the name suggests, the instructions are in a complex form. It means that a single instruction can contain many low-level instructions. For example, loading data from memory, storing data to the memory, performing basic operations, etc. Besides, we can say that a single instruction has multiple addressing modes. Furthermore, as there are many operations in single instruction they use very few registers.

Examples of CISC are Intel 386, Intel 486, Pentium, Pentium Pro, Pentium II, etc.

2. RISC (Reduced Instruction Set Computer)

As per the name, in this, the instructions are quite simple, and hence, they execute quickly. Moreover, the instructions get complete in one clock cycle and also use a few addressing modes only. Besides, it makes use of multiple registers so that interaction with memory is less.

Examples are IBM RS6000, DEC Alpha 21064, DEC Alpha 21164, etc.

3. EPIC (Explicitly Parallel Instruction Computing)

It allows the instructions to compute parallelly by making use of compilers. Moreover, the complex instructions also process in fewer clock frequencies. Furthermore, it encodes the instructions in 128-bit bundles. Where each bundle contains three instructions encoded in 41 bits each and a 5-bit template. This 5-bit template contains information about the type of instructions and that which instructions can be executed in parallel.

Examples are IA-64 (Intel Architecture-64), etc.