

COMPUTER ARCHITECTURE

Computer architecture is the theory behind the design of a computer. In the same way as a building architect sets the principles and goals of a building project as the basis for the draftsman's plans, so too, a computer architect sets out the computer architecture as a basis for the actual design specifications.

There are several usages of the term, which can be used to refer to: the design of a computer CPU architecture, instruction set, addressing modes, and techniques such as SIMD (Single Instruction Multiple Data) and MIMD (Multiple Instruction Multiple Data) parallelism, etc.

The less formal usage refers to a description of the requirements (especially speeds and interconnection requirements) or design implementation for the various parts of a computer (such as memory, motherboard, electronic peripherals, or most commonly the CPU.)

Architecture is often defined as the set of machine attributes that a programmer should understand in order to successfully program the specific computer (i.e., being able to reason about what the program will do when executed). For example, part of the architecture are the instructions and the width of operands manipulated by them. Similarly, the frequency at which the system operates is not part of the architecture.

A. Lea el texto con atención y complete las siguientes ideas.

1. Llamamos arquitectura de las computadoras a
y constituye la base para Quien
establece las especificaciones es el diseñador, del mismo modo que lo hace
....., quien decide

2. La arquitectura de computadoras puede hacer referencia al
.....,
y a

3. El conjunto de atributos de la máquina que el programador debe conocer para
....., es decir, para ser capaz de
....., constituye una definición de
.....

4. No se considera parte de la arquitectura a
mientras que a y a
sí.

MODELO DE EXAMEN FINAL REGULAR - A

An instruction set architecture (ISA) describes the aspects of a computer architecture visible to a programmer, including the native datatypes, instructions, registers, addressing modes, memory architecture, etc.).

"Instruction set architecture" is sometimes used to distinguish this set of characteristics from the microarchitecture, which is the set of processor design techniques used to implement the instruction set. Computers with different microarchitectures can share a common instruction set.

This image shows a full page of white paper with horizontal dashed lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.