Computer Architecture

Tutorial - 09

Answer all questions.

01. What is meant by an instruction?

02. Instruction Set Architecture (ISA), is the part of the computer architecture related to?

03. Instruction format contains of two main parts. What are they?

04. Where are instructions stored?

05. How are instructions stored?

06. An instruction differs from another instruction by 3 main factors? What are they?

07. A computer that is used for simple numerical problems, uses 6 bits for an opcode, and 12 bits for a memory address. What is the size of its instruction?

08. A computer that is used for simple numerical problems, uses 6 bits for an opcode, and 12 bits for a memory address. How many different instructions can it have?

09. A computer that is used for simple numerical problems, uses 9 bits for an opcode, and 25 bits for a memory address. What is the maximum memory size that it can address? (Hint: Assume that 2^20 is about 1M).

10. Memory address of the instruction format contains of two parts. What are they?