- **CISC:**
  The main idea is that a single instruction will do all loading, evaluating, and storing operations just like a multiplication command will do stuff like loading data, evaluating, and storing it, hence it's complex.

  Characteristic of CISC –

  1. Complex instruction, hence complex instruction decoding.
  2. Instructions are larger than one-word size.
  3. Instruction may take more than a single clock cycle to get executed.
  4. Less number of general-purpose registers as operations get performed in memory itself.
  5. Complex Addressing Modes.
  6. More Data types.

- **RISC:**
  The main idea behind this is to make hardware simpler by using an instruction set composed of a few basic steps for loading, evaluating, and storing operations just like a load command will load data, a store command will store the data.

  Characteristic of RISC –

  1. Simpler instruction, hence simple instruction decoding.
  2. Instruction comes undersize of one word.
  3. Instruction takes a single clock cycle to get executed.
  4. More general-purpose registers.
  5. Simple Addressing Modes.
  6. Fewer Data types.
  7. A pipeline can be achieved.

Difference –

RISC	CISC
Focus on software	Focus on hardware
Uses only Hardwired control unit	Uses both hardwired and microprogrammed control unit
Transistors are used for more registers	Transistors are used for storing complex Instructions
Fixed sized instructions	Variable sized instructions
Can perform only Register to Register Arithmetic operations	Can perform REG to REG or REG to MEM or MEM to MEM
Requires more number of registers	Requires less number of registers
Code size is large	Code size is small
An instruction executed in a single clock cycle	Instruction takes more than one clock cycle
An instruction fit in one word.	Instructions are larger than the size of one word
Simple and limited addressing modes.	Complex and more addressing modes.
RISC is Reduced Instruction Cycle.	CISC is Complex Instruction Cycle.

RISC	CISC
The number of instructions are less as compared to CISC.	The number of instructions are more as compared to RISC.
It consumes the low power.	It consumes more/high power.
RISC is highly pipelined.	CISC is less pipelined.
RISC required more RAM.	CISC required less RAM.
Here, Addressing modes are less.	Here, Addressing modes are more.