Difference Between RISC & CISC

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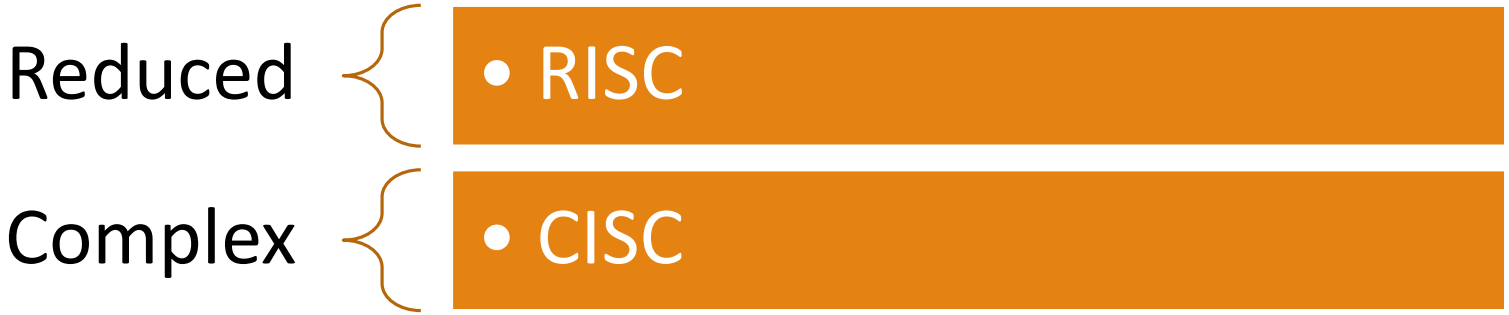
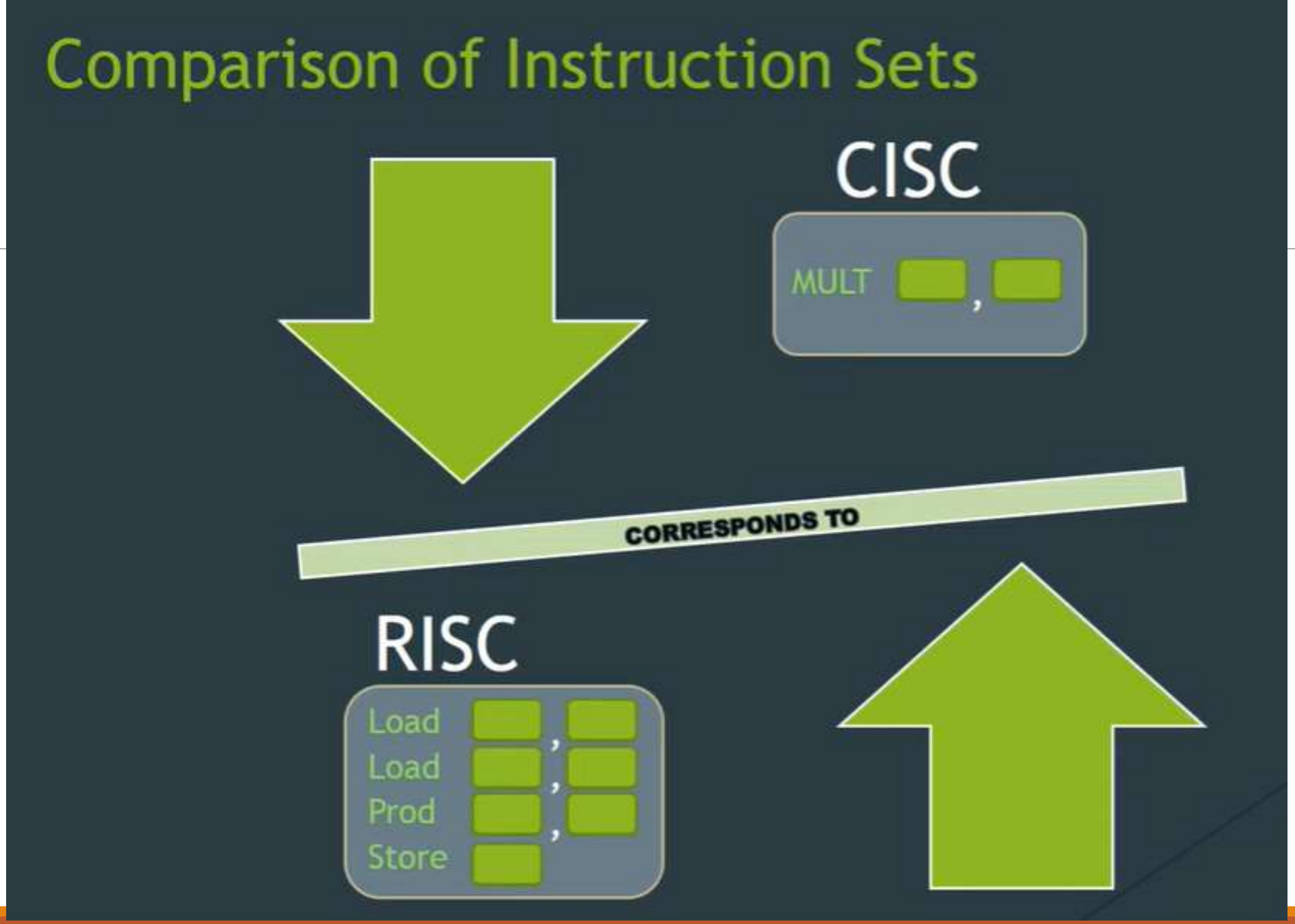
Wait…Where did RISC/CISC Come From?

Q1.) What is Processor?? Another Term for CPU

Q2.) What does it Do?? Fetching, Decoding, Executing, WriteBack

Q3.) 2 Architecture Types of Micro-Processor:




Comparison of Instruction Sets
CISC
MULT
CORRESPONDS TO
RISC
Load
Load
Prod
Store

	RISC [Reduced Instruction Set Computer]	CISC [Complex …]
Name me Kya Rakha Hai?	REDUCED = Few Instruction	COMPLEX = Large Number of Instruction
Instruction Format	uses a small set of instructions of uniform length [Fixed Length, Easily Decoded]	hundreds of instructions of variable sizes [Variable Length Instruction Format]
Clock Time	These are simple instructions which are generally executed in one clock cycle [1 line of Assembly = 1 Clock cycle]	Instruction may take more than single clock cycle to get executed. [1 line of Assembly = Multiple Clock cy.]
Addressing Modes	Few Addressing Modes [4-5]	Large Variety Of Addressing Modes[12]
Array/If-else Support??	Less Data types [Doubtful]	More Data types
FOCUS on?	Software (Code is Long but Simple)	Hardware (Why? -> Code is Short & Complex)
Kitne Register Chahiye?	More || Easy to Pipeline	Less (Why?) [operation get performed in memory itself]
USE Kaha Hai?	SPARC, POWER PC, SnapDragon ->Mobile Phones (Why? [Power Efficient])	Intel Processor in PPT Machine, AMD

CISC

The primary goal of CISC architecture is to complete a task in as few lines of assembly as possible.

This is achieved by building processor hardware that is capable of understanding and executing a series of operations.

Then Who is the Winner? RISC || CISC ?

ANSWER : Both are Best at there Own Field

1. RISC -> Perform Easy TASKs FASTER & Takes Less Energy
2. CISC -> Takes Time, But can Perform Complex Tasks! & Takes More Energy…

Rise of EPIC !! (Not Ice-Cream!)

A. Explicitly Parallel Instruction Computing
B. best features of RISC and CISC processors are combined in the architecture
C. implements parallel processing of instructions