ARM-1980

Acron Archimedes

CISC-Complex instruction set architecture

-High performace

-Energy Efficient

-Led to creation of first ARM1 in 1985

ARM  
Behave:

-What instruction it has

-what instruction do

Describe

-what functionality the software can rely on the hardware to provide

ARM Architecture :

Specifics

-instruction set

-Register set

-Exception model

-Memory Model

\_Debug,troe and profiling

RISC:

Reduced instruction set Computer

-simple instruction

-simple addressing model

-Lood Store Architecture

-Big Endiory/Little Endion(MSB/LSB)

Micro Architecture:

Build and desing of a processor is referred to as micro architecture

Includes

-pipeline length and layout

-number &size of caches

-cycle counts for individual instruction

-optional features are implemention

Ip core:

Implemention in VHDL(Verilog of a block of hardware logic )

Processor Family

-ARM1(1985)/ARM11(2002)

-Cortex family in 2005

-Cortex(Letter and Number)

-New processors, with an improved design, better performance and new features

Profiles:

-A,R,M

ARM Licensee their IP to customers:

-Architecture

-Processor Cores

SOC:

System on chip

-Multimedia Encoders/Decoders

-Direct Memory Access(DMA)

-ARM CPU

-Digital Signal Processor(DSP)

-Network Interface Controller

-Audio

-USB

-Video

-Memory

-Storage

ARM Documentation:

ARM-Architecture Reference Manual

TRM-Technical Reference Manual

CIM-Configuration and Integration Manual

-SOC Datasheet