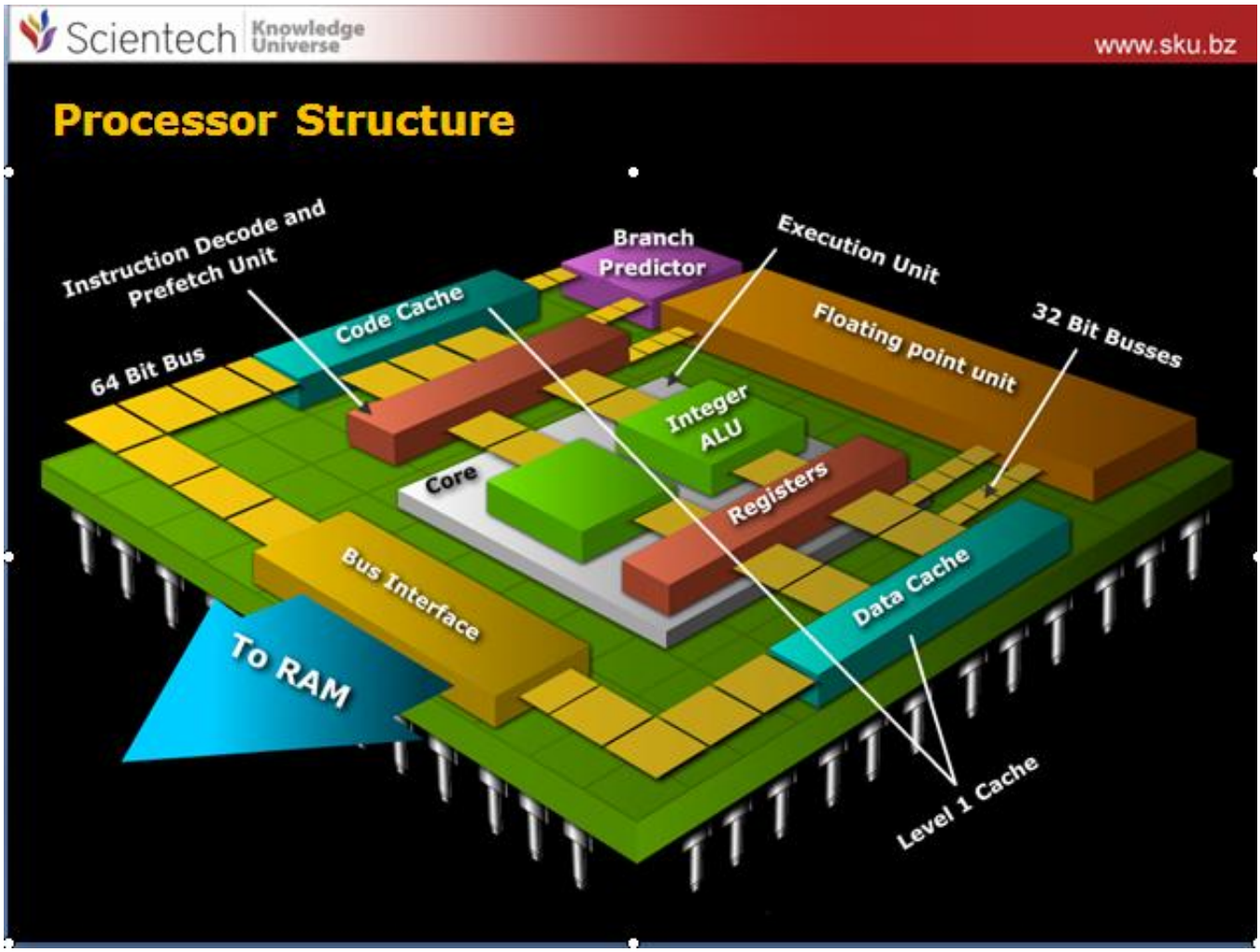
SKU-Computer System Organization

This Subject covers computer architecture as well as computer organization and design. Computer architecture is concerned with the structure and behavior of the various functional modules of the computer and how they interact to provide the processing needs of the user. Computer organization is concerned with the way the hardware components are connected together to form a computer system. Computer design is concerned with the development of the hardware for the computer taking into consideration a given set of specifications

The course is developed as a self-study package with easy to-navigate interface, introduces the basic concepts of computer system organization by use of Animations, simulation and examples.



Topics covered in SKU-Computer System Organization:

Computer Basics and CPU

Topics covered: Von Neumann model, various subsystems, CPU, Memory, I/O, System Bus, CPU and Memory registers, Program Counter, Accumulator, Instruction register, Micro operations, Register Transfer Language, Instruction Fetch, decode and execution, data movement and manipulation, Instruction formats and addressing modes of basic computer.8085 microprocessor organization

Control Unit Organization

Topics covered: Hardwired control unit, Micro and nano programmed control unit, Control Memory, Address Sequencing, Micro Instruction formats, Micro program sequencer, Microprogramming

Arithmetic and Logic Unit: Arithmetic Processor, Addition, subtraction, multiplication and division, Floating point and decimal arithmetic and arithmetic units, design of arithmetic unit.

Input Output Organization

Topics covered: Modes of data transfer – program controlled, interrupt driven and direct memory access, Interrupt structures, I/O Interface, Asynchronous data transfer, I/O processor,8085 I/O structure, 8085 instruction set and basic programming. Data transfer –Serial / parallel, synchronous/asynchronous, simplex/half duplex and full duplex.

Memory organization

Topics covered: Memory Maps, Memory Hierarchy, Cache Memory - Organization and mappings. Associative memory, Virtual memory, Memory Management Hardware.

Multiprocessors

Topics covered: Pipeline and Vector processing, Instruction and arithmetic pipelines, Vectored array processors, Interconnection structure and inter-processor communication.

Print shots of SKU-Computer System Organization: