Mindluster Platform

About the course Computer Architecture basics

Computer Architecture basics course, in this course explore the fundamental principles of computer architecture, including CPU design and memory hierarchy.

Computer Science Category's Courses

Course Lesson(96)

Lesson 1 : **Introduction to Computer Organization and Architecture COA**

Lesson 2 : **Basics of Computer Architecture**

Lesson 3 : **Classifications of Computer Architecture**

Lesson 4 : **Introduction to Memory**

Lesson 5 : **Memory Hierarchy Interfacing**

Lesson 6 : **Memory Interfacing â€“ Solved PYQs**

Lesson 7 : **Introduction to Cache Memory**

Lesson 8 : **Direct Memory Mapping**

Lesson 9 : **Direct Memory Mapping â€“ Solved Examples**

Lesson 10 : **Direct Memory Mapping â€“ Solved PYQs Part 1**

Lesson 11 : **Direct Memory Mapping â€“ Solved PYQs Part 2**

Lesson 12 : **Direct Memory Mapping â€“ Solved PYQs Part 3**

Lesson 13 : **Direct Memory Mapping â€“ Hardware Implementation**

Lesson 14 : **Associative Mapping**

Lesson 15 : **Associative Mapping â€“ Solved Examples**

Lesson 16 : **Associative Mapping â€“ Solved PYQ**

Lesson 17 : **Set Associative Mapping**

Lesson 18 : **Set Associative Mapping â€“ Solved Examples Part 1**

Lesson 19 : **Set Associative Mapping â€“ Solved Examples Part 2**

Lesson 20 : **Set Associative Mapping â€“ Solved PYQs Part 1**

Lesson 21 : **Set Associative Mapping â€“ Solved PYQs Part 2**

Lesson 22 : **Cache Memory Mapping â€“ A Comparative Study**

Lesson 23 : **Cache Memory Mapping â€“ Solved PYQ**

Lesson 24 : **Set Associative Mapping â€“ Bonus PYQs**

Lesson 25 : **Cache Design An Overview**

Lesson 26 : **Cache Replacement Policies RR FIFO LIFO Optimal**

Lesson 27 : **Cache Replacement Policies MRU LRU Pseudo LRU LFU**

Lesson 28 : **LRU Cache Replacement Policy Solved PYQs**

Lesson 29 : **Cache Coherence Problem Cache Coherency Protocols**

Lesson 30 : **Snooping based Cache Coherency Protocol**

Lesson 31 : **Directory based Cache Coherency Protocol**

Lesson 32 : **Introduction to Primary Memory**

Lesson 33 : **Primary Memory â€“ Architecture of ROM Part 1**

Lesson 34 : **Primary Memory â€“ Architecture of ROM Part 2**

Lesson 35 : **Primary Memory â€“ Architecture of ROM Part 3**

Lesson 36 : **Primary Memory â€“ Architecture of ROM Part 4**

Lesson 37 : **ROM â€“ Solved Examples**

Lesson 38 : **Primary Memory â€“ RAM**

Lesson 39 : **Primary Memory â€“ Solved Example**

Lesson 40 : **Introduction to Secondary Memory**

Lesson 41 : **Secondary Memory â€“ Hard Disk Drives**

Lesson 42 : **Hard Disk Drives Solved Problems Set 1**

Lesson 43 : **Hard Disk Drives â€“ Recording Density Rotational Speed**

Lesson 44 : **Hard Disk Drives Solved Problems Set 2**

Lesson 45 : **Hard Disk Drives Solved Problems Set 3**

Lesson 46 : **Hard Disk Drives Solved Problems Set 4**

Lesson 47 : **Hard Disk Drives Solved Problems Set 5**

Lesson 48 : **Secondary Memory â€“ Solid State Drives**

Lesson 49 : **Introduction to Number Systems**

Lesson 50 : **Binary Number System**

Lesson 51 : **Octal Number System**

Lesson 52 : **Hexadecimal Number System**

Lesson 53 : **Conversion to Decimal Number System**

Lesson 54 : **Conversion from Decimal Number System**

Lesson 55 : **Number System â€“ Solved Problems Set 1**

Lesson 56 : **Number System â€“ Solved Problems Set 2**

Lesson 57 : **Number System â€“ Solved Problems Set 3**

Lesson 58 : **Number System â€“ Solved Problems Set 4**

Lesson 59 : **Introduction to Complementary Number Systems**

Lesson 60 : **Complementary Number Systems Examples**

Lesson 61 : **Diminished Radix and Radix Complement**

Lesson 62 : **Subtraction in Diminished Radix Complement**

Lesson 63 : **Subtraction in Radix Complement**

Lesson 64 : **Representations of Binary Numbers**

Lesson 65 : **Representations of Binary Numbers Solved Problems**

Lesson 66 : **Sign bit Extension Part 1**

Lesson 67 : **Sign bit Extension Part 2**

Lesson 68 : **Overflow in Signed and Unsigned Numbers**

Lesson 69 : **Introduction to Binary Codes**

Lesson 70 : **8421 Excess 3 and 3321 Codes**

Lesson 71 : **Binary Codes Solved Problems**

Lesson 72 : **BCD Addition**

Lesson 73 : **BCD Adder**

Lesson 74 : **Excess 3 Addition**

Lesson 75 : **Gray Code**

Lesson 76 : **Error Detection**

Lesson 77 : **Error Correction**

Lesson 78 : **Problem of Encoding in Error Detection and Correction**

Lesson 79 : **Hamming Code**

Lesson 80 : **Hamming Code â€“ Solved Problems**

Lesson 81 : **Floating Point Numbers**

Lesson 82 : **Representations of Floating Point Numbers**

Lesson 83 : **Explicit vs Implicit Normalization of Floating Point Numbers**

Lesson 84 : **Floating Point Numbers Solved Problems**

Lesson 85 : **IEEE Standard for Floating Point Arithmetic IEEE 754**

Lesson 86 : **IEEE 754 Single and Double Precision**

Lesson 87 : **IEEE 754 Solved Problems Set 1**

Lesson 88 : **IEEE 754 Solved Problems Set 2**

Lesson 89 : **Binary Multiplication**

Lesson 90 : **The Concept of Booth s Algorithm**

Lesson 91 : **The Implementation of Booth s Algorithm**

Lesson 92 : **Binary Division**

Lesson 93 : **The Concept of Restoring Division**

Lesson 94 : **Implementation of Restoring Division**

Lesson 95 : **Improving the Hardware of Restoring Division**

Lesson 96 : **Non Restoring Division**

Related courses

Linear Algebra for Computer Scientists

Insertion Sort

Bubble Sort

GCSE Computer Science

Random Access Memory

Binary Trees

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