

Lecture 5: Processor Basics

1. Steps of a computer program execution
2. Basics on fixed and variable length instruction format (as theory)
3. $X \leftarrow (a+b)/c$ show the instructions for this expression using 0, 1, 2, 3 operand instruction format
4. Math using Endian mode (showed in class using hexa data and hexa address)
5. Advanced features of commercial microprocessor
6. Pipeline

Lecture 4: Data Representation

1. From decimal/denary to binary, hexa and octal
2. From ascii to binary, hexa and octal (remember the ascii values of 'A' and 'a')
3. Study slide 10, the sequence table and remember that in octal 10 is after 7 and in hexa A is after 10
6. Negative number conversion
7. Converting expressions into universal gate (nor and nand)

Lecture 3: (difficult questions are provided from this chapter)

1. System design properties
2. K-map for full adder and decomposition of full adder to half adder, truth table and schematic diagram of half and full adder
3. Need of HDL
4. SLIDE 10 AND 11. (Most of you couldn't write the design problem in Quiz1. Study it properly)
5. Gate level - Flipflop
6. Importance of schematic diagrams showed in slide 15
7. Combinational vs sequential circuit
8. Basics of ripple carry adder
9. Processor level (basic diagram of internal organization)
- ****10. System bus
11. Cache memory and input output device

Lecture 1 and 2: discussed in class (least amount of question from here)