1. What about computer, computer architecture and organization.
2. Computer layer.
3. Computer abstraction.
4. Layer of hardware, software and instruction set.
5. Job of compiler.
6. Do you think that as a CSE student you should have knowledge about Computer Architecture? If yes then list out your thoughts.
7. Suppose we have two implementation of same instruction set architecture. Computer A has a clock cycle time of 250 PS and a CPI of 1.8 for some program, and computer B has a clock cycle time of 500 PS and a CPI of 1.2 for the same program. Which computer is faster and how much?
8. If computer A runs a program in 10 seconds and computer B runs the same
9. program in 15 seconds, how much faster is A than B?
10. Our favorite program runs in 10 seconds on computer A, which has a 4 GHz clock. We are trying to help a computer designer build a computer, B, that will run this program in 6 seconds. The designer has determined that a substantial increase in the clock rate is possible, but this increase will affect the rest of the CPU design, causing computer B to require 1.2 times as many clock cycles as computer A for this program. What clock rate should we tell the designer to target?
11. Suppose we have two implementations of the same instruction set architecture. Computer A has a clock cycle time of 250 ps and a CPI of 2.0 for some program, and computer B has a clock cycle time of 500 ps and a CPI of 1.2 for the same program. Which computer is faster for this program, and by how much?
12. Two different compilers are being tested for a 100 MHz. machine with three different classes of instructions: Class A, Class B, and Class C, which require one, two, and three cycles (respectively). Both compilers are used to produce code for a large piece of software. The first compiler's code uses 5 million Class A instructions, 1 million Class B instructions, and 1 million Class C instructions. The second compiler's code uses 10 million Class A instructions, 1 million Class B instructions, and 1 million Class C instructions
    i) Which sequence will be faster according to MIPS?
    ii) Which sequence will be faster according to execution time?