

Lab Sheet: 1

Draw Flowchart and write the Program in EdSim51

1. Study the basic structure of Micro-controller 8051. Also study the basic functionality of EdSim51 Simulator.

2. Write a program for addition of two numbers where data are available:

- With immediate mode
- Registers
- Memory
- Register Indirect
- From KeyPad
- At memory location accessed through indirect memory addressing. Also check whether address generated within available memory location.

Check output for Decimal and Hexadecimal

3. Repeat the problem for addition of two 16 bit numbers.

4. Repeat the Problem for Subtraction of two 16 bit numbers.

5. Implement module operator that divide an 8 bit numbers by another 8 bit number and gives remainder of that.

6. Compute factorial of number 4 using PUSH and POP stack instructions. You are required to check the content of stack at different stages during factorial computation.

7. Copy a block of 10 data from memory block to another memory block where memory is addressed through indirect mode .you are required to transfer only positive numbers only .

8. Check whether given number in prime or not.

9. Compute prime factor of a given number.