

## **ATmega 16 microcontroller**

**Duration: 1 month[5 days a week, 2 hours a day, total 40 hours]**

•Introduction to AVR architecture, Comparison of AVR with other CISC & RISC based systems and Microprocessors, AVR family Categories and importance (AT tiny/ ATmega/ Xmega), Atmega 16 pin details and specifications (with package detail), Instruction set / Bus architecture, RAM, FLASH, UART and other peripherals, Interrupts, timer, Counters,.

**Software:** Introduction to AVR studio, Writing C programs in AVR studio, Compiling, Linking and simulating these programs, AVR boot loader, burning the hex file in to the flash memory of AVR Microcontroller.

### **List of Practical's:**

1. Interfacing discrete LED
2. Interfacing seven segment led, Decimal Counter.
3. Interfacing LCD.
4. Hex keypad Interfacing.
5. Timer & Interrupt.
6. Serial Communication.
7. Stepper Motor Control.
8. SPI
9. I2C