ALTALUNE TECHNOLOGY

EMBEDDED SYSTEMS

Microprocessor & Microcontroller Classification:

- Difference between Microprocessor & Microcontroller
- Classification based on architecture
- Memory Classification

Registers & Memory of AT89C51:

- Description of RAM
- Description of CPU Registers
- Functions of SFR

Introduction of EMBEDDED C

- Introduction to Embedded C
- Difference between C & Embedded C
- Programming style
- Basic structure of C program

Constants, Variables & Data Types

- Keywords & Identifiers
- Data type & its memory representation
- Arrays and strings

Operators

- Types of Operators
- Bitwise Operators explained
- CONTROL STRUCTURES & LOOPS
- Decision making with if statement
- If….else statement
- Switch statement, and GOTO statement
- The While and Do – While statements
- For statement

Functions

- Why Functions
- Types of Functions
- A Multi functional program
- Return values & their types

Interoduction To Softwares

- Kiel Compiler
- Proteus

Interfacing of LED

- Introduction of LED's
- Interfacing Circuit Description of LED's
- Programming of LED's Interfacing

Interfacing of Seven Segment Display

- Introduction to 7 Segment Display
- Types of 7 Segment Display
- Interfacing Circuit Description of 7 Segment Display
- Programming of 7 Segment Display Interfacing

Interfacing of LCD

- Introduction to 16 x 2 LCD
- Commands of 16 x 2 LCD
- Interfacing Circuit Description of 16 x 2 LCD
- Programming of 16 x 2 LCD

Interfacing of Switches & Keyboard Matrix

- Introduction to Switches & Keyboard Matrix
- Interfacing Circuit of Switches & Keyboard Matrix
- Programming of Keyboard Matrix & Switches
- Controlling of LED's by using Switches
- Key board Matrix & LCD Interfacing Program

Interfacing of Motors

- Introduction to Motors
- Types of Motors used in Embedded System
- Programming & Controlling of motors in Embedded System

Timers & Counters Programming

- Introduction to Timers & Counters
- Difference between Timer and Counter
- Description of SFR associated with Timers & Counters
- Programming of Timers & Counters

Serial Communication Programming

- Introduction to Serial Communication
- Types of Serial Communication
- Description of SFR associated with Serial Communication
- Programming of UART

Interfacing Of ADC

- Introduction to ADC
- Programming of ADC

Sensor Interfacing

- Introduction to sensing devices
- Interfacing of IR Sensors
- Interfacing of Temperature Sensor

Embedded Networking

- I2C Bus Standard
- Bluetooth
- Zigbee
- USB
- UART

Linux Fundamentals & Device Driver Programming

- Linux Fundamentals
- Linux Commands
- VI Editors
- Introduction to Device Driver
- The Role of Device Driver
- Kernel Module Vs Application
- Types of Device Driver
- Character Driver
- Block Driver & Network Driver