EMBEDDED SYSTEMS

C PROGRAMING AND DATA STRUCTURE
- C Fundamentals
- Operators and Expressions
- Data Input and Output
- Control Statements
- Functions and Program Structure
- Arrays & Pointers
- Pre processor directives
- Bit wise operators
- Structures and Unions
- STACK Queue Abstract Data Types
- Binary Tree & Sorting Techniques

C++ PROGRAMMING CONCEPTS
- Introduction to Object Oriented Concepts
- Introduction to C++ Programming Classes
- Objects and Functions
- Constructor and Destructor
- Pointers & references
- Polymorphism and Inheritance

8051 MICRO CONTROLLER
- RAM & ROM
- EPROM & EEPROM
- FLASH EEPROM
- 8051 Micro controller Architecture
- Instruction Set
- Interrupts and Serial communication
- Interfacing Techniques
- Digital & Analog
- Parallel & Serial
- Synchronous & Asynchronous

EMBEDDED C PROGRAMMING
- Cross Compiler
- Use of #Pragma Function
- C language Extension for 8051
- Using Pointers and arrays in a cross compiler
- Assembly Language Interfacing
- Downloading to Target and Verifying
- Interrupt generation techniques
- Interrupt interface

ADVANCED C PROGRAMMING
- Memory architecture
- Segmentation and Paging
- ROM BIOS calls
- Hardware access with BIOS Calls
- Memory Management
- Shared memory & System Initialization
- PIC 18F Architecture

PIC 18FXXX MICRO CONTROLLER
- I/O ports and Timer Module
- Capture
- Compare
- PWM module and ADC
- Interrupts
- PIC18F Development Tool
- C Programming with PIC

EMBEDDED HARDWARE BASICS
- Electronic components
- Active and passive Components
- Concepts of Analog
- Signal Conditioning Circuits
- Digital Circuits
- Concepts Of Power Supply (Ac & Dc)
- Applications of Semiconductor
- Sensor Interfacing Techniques
- Handling the Lab Equipment's (DSO, FG etc)

ARM11 - S3C6410
- Introduction to ARM Architecture
- Interfacing Examples with LPC21xx
- ARM11-S3C6410 Registers
- Exceptions Handling
- Instruction Set Summary
- Thumb State ARM Based Controller
- S3C6410 Features
- System Control Block
- Vectored Interrupt Controller
- Pin Configurations
- Downloading Into the Target
- Connecting JTAG
- Real Time Debugging.
- Electronic components
- Signal conditioning circuits
- Sensor interfacing

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EMBEDDED NETWORKING

- I2C Bus Standards
- CAN
- Bluetooth
- Zigbee
- USB

LINUX FUNDAMENTALS

- Linux Fundamentals
- Linux Commands
- VI Editor
- Kernel Programming

DEVICE DRIVER PROGRAMMING

- Introduction to device driver
- The Role of the Device Driver
- Kernel Modules versus Applications
- Types of device drivers
- General mechanisms
- Character drivers
- Block drivers

EMBEDDED RTOS

- Introduction to RTOS,
- RTOS Components
- Introduction to Micro C / OS II
- Inter task communication techniques
- Scheduling algorithm
- Kernel Structure

ANDROID

- Mobile Application Development
- Overview
- Booting Android Development
- Building an Android application
- User interfaces
- Intents and services.
- Data Processing.
- Socket programming.
- Mobile communication, Multimedia & GPS

VC ++

- Over view VC++
- SDI, MDI, Dialog based
- application
- working with controls
- Networking & Socket
- Programming
- DLL, COM & ADO

WIN CE

- Windows programming basics
- Controls and menu
- Modules process and thread
- Serial communication
- OS Design
- Booting the client with WIN CE
- using DHCP

PROJECT