



Oasis Technologies Pvt. Ltd.

ARM7- Course Schedule

Total Day's: 15(31T+ 29P)

Session 1: ARM Architecture

Details: RISC Vs CISC processor, ARM Designing Philosophy , Embedded Software & Hardware, Registers , Current Program Status Register, Pipeline , Exceptions, Interrupts, and the Vector Table , Core Extensions , Architecture Revisions , ARM Processor Families

Duration: 2 Day, 5T+3P

Assignments: 1)WAP for LED blinking
2)Use Debug and Release Mode of operation

Session 2: Introduction to the ARM Instruction Set

Details: Data Processing Instructions, Branch Instructions, Load-Store Instructions, Software Interrupt Instruction, Program Status Register Instructions, Loading Constants, ARMv5E Extensions, Conditional Execution.

Duration: 3 Day, 6T+6P

Assignments: 1) Write at least one program for every Group of instruction.

Embedded C

Session 3: C and Assembly interfacing

Details: How to use assembly program in c and vice-versa, what is ARM procedure call (APCS)

Duration: 1 Day, 2T+2P

Assignments:
1) WAP for interfacing C and assembly.

Session 4: Exception and Interrupt Handling

Details: Exception Handling, Interrupts, Interrupt Handling Schemes

Duration: 5 Day, 10T+10P

Assignments: 1) Write a program for interrupt which will blink the LED's.
2) Write a program for accept key from key and display it on 7 segment display.
3) Write a program for UART for transmission of a string.
4) WAP for ADC
5) WAP for display your name on LCD



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Session 5: ARM Optimization Technique

Details: Overview of C Compilers and Optimization, Basic C Data Types , C Looping Structures , Register Allocation , Function Calls , Pointer Aliasing , Structure Arrangement Bit-fields , Unaligned Data and Endianness

Duration: 2 Day, 4T+4P

Assignments:1)Write some program on optimization technique

Session 6: Introduction to the Thumb Instruction Set

Details: Thumb Register Usage , ARM-Thumb Inter working , Other Branch Instructions , Data Processing Instructions , Single-Register Load-Store Instructions , Multiple-Register Load-Store instructions , Stack Instructions , Software Interrupt Instruction

Duration: 1 Day, 2T+2P

Assignments: 1) Write at least one program for every Group of instruction