The webcreation
creative solutions

"BUILT SUCCESS WITH,
FRESH IDEAS...!"

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Company Profile

The Web Creation,a unit of TWC Web Creation (P)Ltd., Is an ISO 9001:2008 certified company, that provides world class IT solution. The company is driven to provide customers with complete solution with their current or future web based needs. The web creation is known for its clarity in its design style and offers a complete package of affordable website design and custom website and software development.
The Web Creation collaborates with BBTech Inc, USA, 3R Foundation, USA and Vivekanand Academy, USA. The certificate issued by The Web Creation for the students shall be approved and signed by shree Ramadheen Ramsamooj the founder of Vivekanand Academy and 3R Foundation, USA.

For more details please log on at :
http://www.thewebcreations.net

Courses

Phase5
Embedded System

TIME Duration:2 months

Language Classification

Low level approach

High level approach

Advantages & disadvantages of low and high level languages

Difference between Compilers, Assemblers, and interpreters

What is machine level language

Introduction to Cross-compilers and IDE's

Brief introduction to computer architecture

Classification of Von-numan and haward architecture

Difference between RISC and CISC

Memory classification (Primary & secondary)

Memory Hierarchy

Memory organization (Code & Data)

I/O Ports

Micro controller 8051 Architecture and Pin Description.

Difference between microcontrollers and microprocessors

Introduction to ATMEL 8051 family

Block description of AT89C51

Special features of AT89C51

Programming model & instructions

Description of CPU Registers

Data memory organization

Register banks

Scratchpad area

Special Function Registers

Function of PC, SP, X, Y, and Z register

Flag register

Real world Interfacing LED

Brief introduction to p-n junction semiconductor devices and LED

Circuit description of interfacing LED

Programming LED patterns

LED Blinking

LED Rotation in one direction

LED Rotation, to and fro

Approaching LED's

Send Glass

Exercise

2

Timer/Counter programming

Description of SFR associated with timer/counter

Configuring as a timer

Configuring as Counter

Programming delay with timer

Programming event/visitor counter

Serial communication using UART

Study SFR associated with UART

Introduction UART Frame structure

Examples

Sending string to Hyper Terminal

Designing LED control command over serial link

Interrupt driven programming

SFR associated with Interrupts

Interrupt handling methods

Programming timer interrupts

Programming serial interrupts

Programming external interrupts

Real World Interfacing LCD

Internals of 16x2 LCD

Command set of HD44780 microcontroller

Writing simple program to drive LCD

Using standard LCD library

Real World Interfacing 7 segment

Theory of 7segment display

Writing decoding chart for 0-f character

Writing one digit UP/DOWN counter program

Programming 2 digit counter

Using standard 7segment library functions

Real World Interfacing keypad

Interfacing micro switch's microcontroller

Designing linear keypad

Examples

LED on/off using single uSwitch

Menu selection using linear keypad

Keypad with counter program

Interfacing matrix keypad

Using standard function of matrix keypad

Real World Interfacing motors

Different kind of Motors

Description of DC greed motors
3

Driver circuit for DC motor

Introduction to H-Bridge circuit

Interfacing Stepper Motor

USING AND CONFIGURING ADC

Introduction to ADC

Configuring SFR for ADC initialization

Writing programs to read voltages

Interfacing LM35 (Temperature sensor)

Using libraries

Using Internal/external memories

Introduction to external memory interfacing using Intel bus timing

Introduction to I2C protocol

Interfacing i2c memory (AT24C02)

SFR configuration to read/write internal memory(EEPROM)

Using library to read/write internal EEPROM

Using I2C library

Projects: Electronic Voting Machine Temperature controller Automatic Washing machine Introduction to Embedded 'C'

Extended data types

Accessing low level resource

Inter working with 'C' and Assembly

Inline functions

Inline assembly routines

Initializing internal modules using 'C'

Programming Timers/Counters in 'C'

Programming serial ports in 'C'

Using UART library

Interrupts using 'C'

Matrix keypad using 'C'

Led and Lcd interfacing in 'C'

Stepper motor & DC motor programming in 'C'