Arduino Course Content

SESSION I:

1. Arduino: Introduction to Open Source

- ✓ What is Open Source?
- ✓ How its influencing Embedded World
- ✓ Introduction to ARDUINO
- ✓ Types of Arduino Boards
- ✓ Wide applications

2. Arduino UNO

- ✓ Hand Shake with Arduino UNO
- ✓ Developing the environment
- ✓ *UNO:* Overview about board
- ✓ Popularity & scope

3. Microcontroller: Heart of Arduino

- ✓ What is Microcontroller
- ✓ Briefing Atmel Atmega328P
- ✓ *Atmega 328P:* PIN Diagram
- ✓ Introduction to features

SESSION II:

4. Programming: It's Practical Time

- ✓ Developing Arduino Prototyping Platform
- ✓ Introduction to Arduino software & Tools
- ✓ *Arduino IDE :* Functions( )
- ✓ *Arduino IDE:* Header files
- ✓ Developing sketch
- ✓ Programming Methodology
- ✓ Getting started with . . Led Blinking !!

5. Breadboard

- ✓ What's a Breadboard
- ✓ Internal Connection
- ✓ How it works
- ✓ Developing Circuits

6. LED

- ✓ What is LED Stands for?
- ✓ *Working:* Going its details
- ✓ Types
- ✓ PWM Programming
- ✓ Making circuits & glowing patterns

Session III

7. Serial Monitor

- ✓ Introduction ArduinoIDE Serial Monitor
- ✓ Serial Functions ( )
- ✓ Displaying values

8. Sensors: Starting IR

- ✓ What is IR?
- ✓ Schematic design of IR
- ✓ IR: working & output
- ✓ Interfacing with Arduino UNO
- ✓ **Coding**

9. Creating Robot: Running Motors

- ✓ What are Motors
- ✓ Different types of motors
- ✓ *Motor Driver IC:*L293D
- ✓ PIN Diagram
- ✓ H-Bridge
- ✓ Interfacing L293D with Arduino UNO
- ✓ **Coding**

Session IV

10. ADC

- ✓ What is ADC
- ✓ Using Analog Pins of UNO
- ✓ Introduction to Accelerometer
- ✓ **Coding**

Query Session & DEMO SESSION on future Technology