



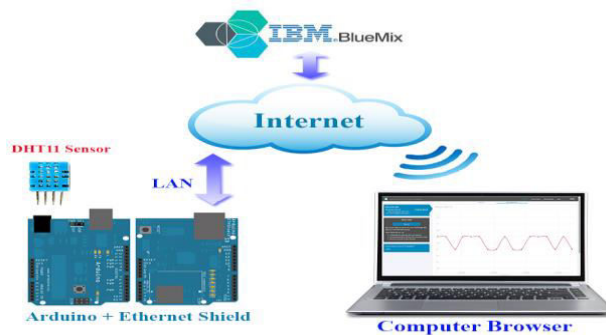
# Embedded Technosolutions

Venture of IIT Bombay & VJTI Alumni

**3** Times IIT Bombay Robo Competition Winner

**Industrial Certified**  
**Embedded Systems with Wireless IOT**

Government of India (MSME) & IIT Bombay Alumni Recognized



**B R A N D**  
**PROMISE**

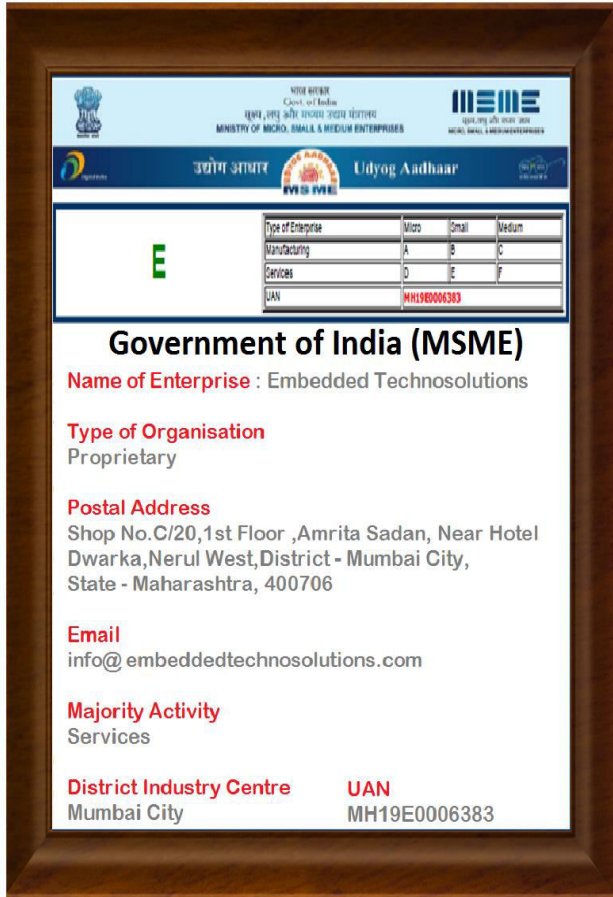
**We Guarantee You that, You Can Develop Your Projects by  
Your Own After This Training Program**



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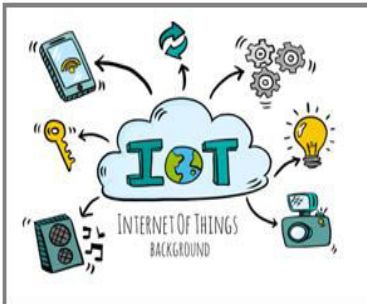
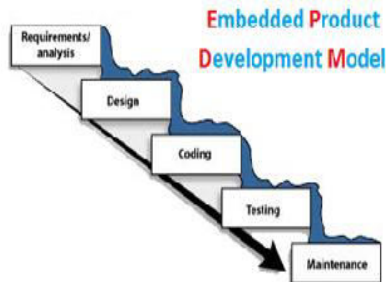
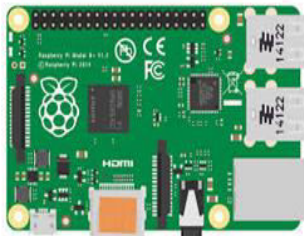
**Government of India (MSME) & ISO 9001-2015**  
**Approved Organisation**  
**Running by IIT Bombay & VJTI Alumni**



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## Chapter 1

- Introduction to Embedded System with Arduino
- Scope of Arduino in Embedded Systems

## Chapter 2

- Introduction to Arduino series
- Hardware architecture of Arduino controller Series
- Controller I/O ports
- Memories of controller
- Concept of Serial communication ,Interrupt etc.

## Chapter 3

- Introduction of Embedded Arduino Software



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- Introduction of Embedded C Programming and programming concepts for Arduino
- Introduction of program flashing and error correction

### **Chapter 4**

- I/O interfacing concept
- Led Blinking logic and delay generation routine

### **Chapter 5**

- Character LCD 16x2 interfacing logic and concept
- Introduction of LCD command and data signals
- LCD based programming
- Practical project based on character LCD

### **Chapter 6**

- Matrix keypad interfacing logic and concept
- Introduction of key pad interfacing using polling method
- Matrix keypad programming



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- Practical project based on matrix keypad

### **Chapter 7**

- Introduction to serial communication
- Serial communication concept
- Introduction of serial communication firmware and registers
- Serial communication programming
- Practical application based on Serial communication

### **Chapter 8**

- Introduction of interrupts in controller
- Interrupt logic and concept
- Interrupt routines / programming
- Key interfacing using interrupt
- Practical application based on interrupt

### **Chapter 9**

- Introduction of ADC



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- ADC interfacing
- ADC programming

### **Chapter 10**

- Introduction of DTMF mobile technology
- DTMF technology interfacing in real application
- DTMF programming
- Practical project design based on DTMF technology with Arduino

### **Chapter 11**

- Introduction to RF & RFID communication
- RFID technology interfacing in real application
- RFID module programming
- Practical project design based on RFID technology with Arduino

### **Chapter 12**

- Introduction of I2C Protocol
- I2C protocol interfacing in real application



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- I2C module programming
- Practical project design based on I2C protocol with Arduino

### **Chapter 13**

- Introduction of Bluetooth Communication
- Bluetooth technology interfacing in real application
- Bluetooth module programming
- Practical project design based on Bluetooth technology

### **Chapter 14**

- Introduction of IOT with Arduino
- Wi-Fi technology interfacing in real application
- Wi-Fi module programming
- Practical project design based on Wi-Fi IOT

### **Chapter 15**

Practical designing of a project based on above technology with Arduino





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## **Live Projects :**

### **Embedded Systems & Wireless IOT Based**

<b>1</b>	Traffic Light System
<b>2</b>	RFID Security System Based Door Authentication
<b>3</b>	DTMF Technology Based Universal Home Automation
<b>4</b>	Wireless Appliance Controlling System using Android App
<b>5</b>	Notice Board
<b>6</b>	Room Temperature Controlling System with PC Interface
<b>7</b>	Password Protected Locker System
<b>8</b>	Wi-Fi IOT based Device Control