ROBOKART.COM

INTERNET OF THINGS

Workshop Highlights

- What is Internet of Things and introduction to open Cloud Computing platforms
- Introduction to Arduino IDE and its use in Home Automation.
- How to connect Arduino to Internet and various Cloud services.
- How to send sensor data to cloud services in real time.
- Control Led's, motors and various electronic components via a webpage.
- Send tweets and update Cloud based services.
- Control electronics devices using Android Smartphone.
- Upload sensor data on Twitter using Cloud services

DAY 1:

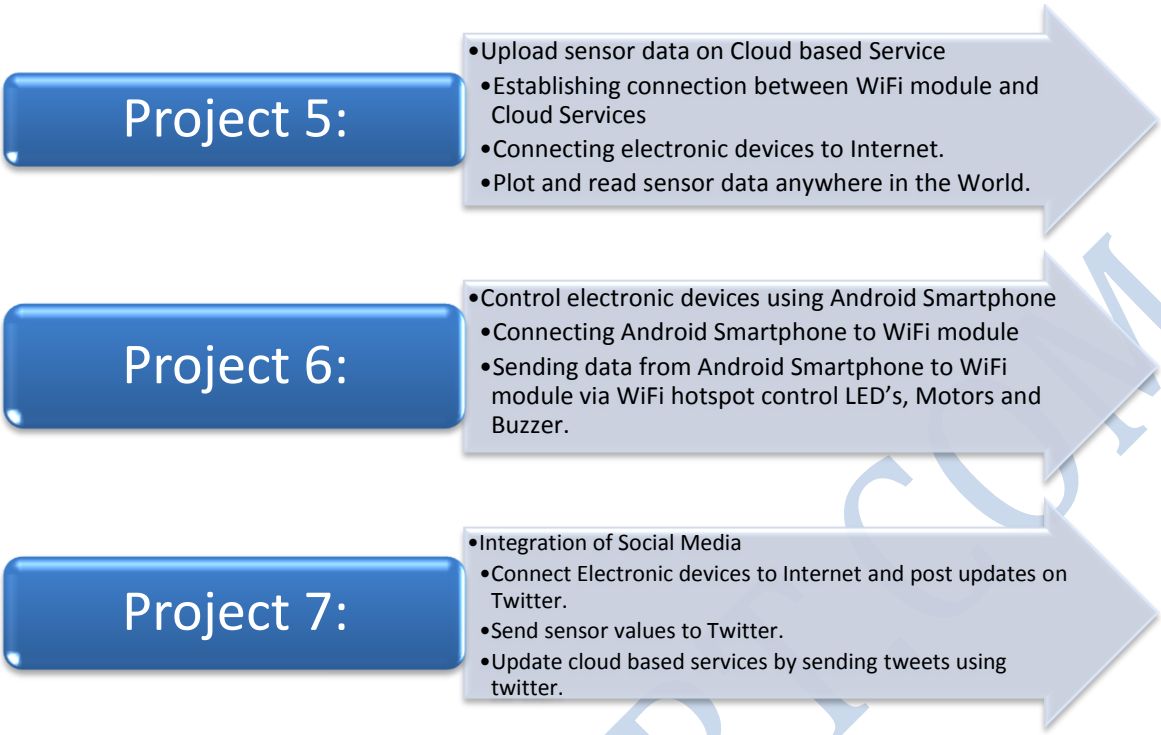
Project 1:
- Simple Blink program using Arduino's onboard LED.

Project 2:
- Control DC Motor and Buzzer using Arduino..

Project 3:
- Read sensor values and control multiple electronic devices
- Collecting readings from LM35 temperature sensor to control LED's and Buzzer
- Vary potentiometer value and control DC Motors
- Vary LDR sensor values and control Buzzer.

Project 4:
- Controlling electronic devices using webpage
- Connecting Arduino to Wifi module
- Establish Localhost connection between webpage and WiFi module.
- Send data from HTML Webpage and control various electronic devices.

DAY 2:



Workshop Benefits & Highlights:

- ✓ ***Learn & Interact with Engineer Trainer & get to know about Arduino, Sensors & All.***
- ✓ ***Receive an unparalleled education on the art of building projects & applications with personal one – on – one attention.***
- ✓ ***Learn to make your own project within 2 day'.***
- ✓ ***PowerPoint Presentation, Live Demos, Interactive Questions & Answer session & comprehensive material.***

Target Audience:

- ✓ ***Students seeking career in Robotics related Industry.***
- ✓ ***All year students from Physics, Electronics, EXTC, Engineering Stream & Enthusiast***

Certification:

Students will be certified jointly from ***E-cell IIT Bombay & Robokart.com***

The fee include (KIT CONTENT)

- ✓ **ARDUINO CIRCUIT BOARD:**
  - Micro Controller - ATMEL ATmega 328
  - Operating Voltage - 5V
  - Input Voltage 6v-20v
  - Digital I/O pins - 14 out of which 6 provide PWM
  - Analog Input Pins - 6
  - DC Current per I/O pin - 40mA.
  - Flash Memory - 32KB
  - SRAM - 1KB
  - EEPROM - 512Bytes
  - Clock Speed 16 MHz
  - USB-UART converter
  - Proper Indicator LED's
  - USB/ EXT input voltage
  - 5V output supply pins - 3
  - 3.3 V output supply pins - 1
  - Breadboard Compatibility (dimension of a 40 pin DIP IC)

- ✓ **Motor Driver**
- ✓ **DC Motor**
- ✓ **Light Sensor**
- ✓ **LM 35**
- ✓ **Potentiometer**
- ✓ **LDR**
- ✓ **Small Buzzer**
- ✓ **Battery**
- ✓ **LED**
- ✓ **USB Wires**
- ✓ **High end Wi-Fi Module**
- ✓ **Wi-Fi Power Supply Module**
- ✓ **Battery Snapper(2pin_Connector)**
- ✓ **Normal Battery Snapper(Without 2 pin Connector)**
- ✓ **Screw Driver**
- ✓ **Female to Female wires**