Internet of Things

Internet of Things is the technology which takes communication to a whole new level. Using the Internet we can not only communicate with each other over long distances but we can now even communicate with the machines that we use the most in our daily lives.

In this incredible workshop by HT India Labs, students will learn how to connect to and control electronic devices and appliances remotely from a computing device. They will also learn how to connect their physical devices to social media platforms such as twitter to create a network of connected devices which communicate with each other using the most powerful tool- The Internet. It is a Workshop with a hands on approach on the various IoT applications available.

Topics to be covered in workshop:

Introduction to the Internet of Things

The Internet of Things
The Basics of Sensors & Actuators
Introduction to Cloud Computing

The AVR Platform

The AVR Open-Microcontroller Platform
AVR Basics
AVR Board Layout & Architecture

Reading from Sensors

Programming fundamentals (C language)

AVR Programming & Interface of Sensors

Interfacing sensors with AVR

Programming AVR

Reading from Sensors

Project 1: Simple LED Program for AVR

Project 2: Integrating Sensors & Reading Environmental Physical Values.

Project 3: Reading Environmental Values on Android Smartphone.

Talking to your Android Phone with AVR

Connecting AVR with Mobile Device.

The Android Mobile OS.

Using the Bluetooth Module

Project 4: Voice Controlled Mini Home Automation using Android Smartphone

Project 5: Control Devices using Localhost Web Server for Home Automation.

Integrating Ethernet Module & Testing DHCP Connection

Creating Program for Localhost Web Server for controlling devices.

Project 6: Being Social on Twitter & update status on Twitter through AVR

Make Electronics Gadget Talk to Internet

Integrating Ethernet Module

Creating App on Twitter

Project 7: Send Voltage & Analog Data on Cloud Server.

Cloud Computing

Communicating with the Cloud using Web Services.

Cloud Computing & IoT.

Popular Cloud Computing Services for Sensor Management.

Project 8: Use AVR to Upload free data from Environmental Sensors to Cloud Server.

Project 9: Automatically Tweet Sensor Data on Twitter.

Project 10: Receive Automatic Call Notification on Mobile Phone for Burglar Alarm using IoT Platform.

Project 11: Control Electronic Devices from anywhere across the world using Internet & Mobile App.

Duration: The duration of this workshop will be two consecutive days, with 6-7 hour session each day in a total of 12-14 hours.

Fees: Rs. 1350/- per participant (Take Away IoT Kit in a Group of 5 Members).

Or

Rs. 1000/- per participant (Without Take Away IoT Kit)

* This fee is inclusive of all taxes.