Internet of Things

using NodeMCU

A two days workshop on
Internet of Things using NodeMCU.

Workshop Content

Session 1
Introduction Of Internet Of Things

     Introduction of IOT
     Why do we need IoT?
     Role of IoT In Various Field
     Application of IOT
     Future Scope of IOT
     Architecture Of IOT

Session 2
IoT Components

     Sensor
     Cloud
     Networking
     Arduino
     Raspberry Pi
     Node MCU
     ESP8266
     Various Cloud Provider

Session 3
NodeMCU Programming

     Introduction to Node Mcu
     Introduction of Node Mcu Architecture
     Interfacing I/o Devices with NodeMcu
     Interfacing DhT11 and Ultersonic Sensor
     Connecting nodemcu with wifi gateway
     Server ,client Configuratio
     Hosting Html Web site into NodeMCU

Session 4
Serial Communication Programming
Introduction of Serial Communication

USART-Serial Communication Protocol

Serial Communication Library

Communication Between NodeMCU and Computer

Interfacing DhT11 and Ultersonic Sensor

Controlling Home Appliances using Computer

Displaying Room Temperature on serial monitor

Session 5
Introduction of ThingSpeak
What is ThingSpeak

Collecting Sensor Data on Thingspeak Cloud

Analysis Data

Sending Room Temperature over ThingSpeak

Sending UlteraSonic Sensor Data Over ThingSpeak

Session 6
Implementation of MQTT Protocol
Introduction to Node MCU

Introduction of MQTT Protocol

Publish Subscribe Architecture

Concept of Broker

Understand working of broker, web-sockets demo and mqtt phone-app

Installing MQTT Protocol in NodeMcu

Controlling Devices or home Appliances Using MQTT Protocol

List of Projects / Practicals
1. Integrating Sensors & Reading Environmental Physical Values.
2. Controlling Devices using Web page.
3. Collecting Sensor Data on Thingspeak Cloud.
4. Controlling Devices using Web page.
5. Weather Station.
6. Smart Home Automation.
7. Monitor Water and Air Temperature with NodeMCU and MQTT.
8. Transmit NodeMCU Data to Google Sheets.
9. Controlling Home Appliances Using Node MCU Via MQTT.
10. Controlling Device Using Voice

Prerequisites & Eligibility

- This is a basic level workshop and however knowledge of C and PHP will be very much helpful.
- The course and curriculum of this workshop is more inclined towards Electronics / Electricals / Computer Science/ Information Technology / Related streams to it however anybody can join this workshop even from different department.
- Mode of Training/Teaching will be English only.

Workshop Fees, Dates & Certification

- Fees: Rs. 1350 per participant.
- Certification from Blitzschlag'19 MNIT Jaipur & EISystems Services.
- Internship Vouchers by EISystems
- One kit will be provided to a group of 5 participants for workshop duration only.
- Dates: 1st & 2nd of February 2019
- Venue: MNIT Jaipur

Contact Us

We ensure that you will find our training programs extremely beneficial for your students. If you have any queries kindly get back to us. We are looking forward to a quick and positive response from you and a long term association with your esteemed organization.

 Thanks & Regards,

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Note:
Important: Course & Structure of Workshop may subject to change without any notification to host institution.
In case of any damage in the kit, it will be the responsibility of participant/group to pay Rs. 1800 for the damaged kit and this will be entrusted by college authorities itself.

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