



Adani Institute of Infrastructure

Management • Engineering

“The Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

Understanding Internet of Things is the next big things and KARD INDIA being the provider of all latest and new technology which industry demands provides you the updated IOT with all you require to get aware WHAT THE HACK THIS INTERNET OF THINGS IS? ”

IOT Course Content

INTRODUCTION TO IOT:

- ✓ What is Internet of Things ?
- ✓ Getting started with IoT
- ✓ Introduction to Internet of Things (IoT)
- ✓ Why as IOT?
- ✓ How IOT became 21st Century Hottest Topic
- ✓ How Internet of Things works
- ✓ How Things Talk to Internet

IOT ARCHITECTURE

ESP8266 Node-MCU: Hardware Introduction

- ✓ What is ESP8266 node-MCU
- ✓ Hardware Knowledge
- ✓ Hand Shake with ESP8266
- ✓ Developing the Environment
- ✓ Overview about the board
- ✓ Popularity & Scope

THE PIN DIAGRAM



- ✓ Introduction to PIN Diagram
- ✓ PIN Outputs and PIN Inputs
- ✓ Feature that makes it different
- ✓ Analog and Digital Pinout

SETTING UP THE IDLE

CONTROLLING THE DIGITAL OUTPUT ENVIRONMENT

- ✓ *Working:* Going its details
- ✓ Types
- ✓ Programming LEDS
- ✓ Making Circuits on Breadboard & Glowing Patterns

SENSORS

- ✓ What is Sensor?
- ✓ How Sensors works?
- ✓ Knowing your sensors
- ✓ Interfacing Elements : PINS & Values

INTERFACING various SENSORS: DHT11, PIR, HQ135

CREATING WEBAPP for IOT

IOT Based HOMEAUTOMATION

- ✓ Creating Webpage Button
- ✓ Adding up required WEBPGE Elements
- ✓ Controlling Devices

CLOUD COMPUTING

- ✓ What is Cloud Computing
- ✓ Cloud Architecture
- ✓ Popular Cloud Computing Services for Sensor Management.
- ✓ Connecting ESP8266 to Cloud



INTERACTING WITH CLOUD:

- ✓ Interacting with Physical world
- ✓ Monitoring Sensor Data

WEBSERVER: *Creating Webserver & Monitoring Data*

Being Social: *ESP8266 Node MCU TAKING TO SOCIAL MEDIA*

PRACTICALS & PROJECTS:

Setting up the IDLE

LED Interfacing using GPIO

Integrating Sensors & Reading Environmental Physical Values.

Sensor Interfacing:

Creating WebApp for IOT

Sensor Controlled Home Automation

Live Temperature Feed on Webserver

Being Social:

- Sensor tweeting data on Twitter.
Sending Analog Data on Cloud Server.



Data from Environmental Sensors to Cloud Server.

Controlling Home Appliances from any part of the World

KIT CONTENT:

- ✓ ESP8266 Node MCU
- ✓ Micro USB
- ✓ LED
- ✓ Buzzer
- ✓ DHT11 Sensor
- ✓ IR Sensor
- ✓ Relay Module
- ✓ Breadboard
- ✓ Male to Male Wire