REVISITING PYTHON

- Variables
- Looping Statements
- Conditional Statements
- Functions
- Libraries and Classes

INTRODUCTION TO IOT

- Demystifying the IOT Paradigm
- Why IOT is the Future
- Advantages and Utility of IOT
- Real-time Applications of IOT

SETTING UP RASPBERRY PI

- Downloading the Raspberry Pi Debian OS
- Burning the OS on Memory Card
- Booting the OS for the first time
- Configuration and Boot Settings

GETTING STARTED WITH RASPBIAN OS

- Working on the OS User Interface
- Updating the Debian OS
- Creating, Opening, Deleting a File on Debian
- Creating, Changing, Deleting a Directory on Debian
- Adjusting File/Directory Permissions on Debian
- Copying and Moving a File/Directory on Debian
- Working with Python3 on Debian
- Installing Python3 Libraries in Debian
- Configuring the System Properties, Wi-Fi and Audio in Debian
- Remote Connection on Raspberry Pi using SSH and VNC

INTERFACING PI WITH THINGS

- Understanding the Raspberry Pi Library
- Pinouts and BCM Mode
- Working in the Raspberry Pi GPIOs
- Interfacing with LED
- Interfacing with Seven Segment Display
- Interfacing Switch, Motors & Relay
- Interfacing Digital Temperature Sensor

Curriculum Of IOT Using RaspberryPi

- Interfacing Ultrasonic Sensor
- Interfacing Raspberry Pi Official Camera

COMMUNICATION PROTOCOLS IN PI
- Setting up protocols for first time
- UART Protocol
- GPS Interfacing
- I2C Protocol, SPI Protocol
- EEPROM Interfacing
- Slave IC Interfacing

INTRODUCTION TO THINGSPEAK IOT
- Setting Up a Mathworks Account
- Staring the first project on Thingspeak IOT
- Setting up an IOT channel
- Generating API
- Exchanging data on Thingspeak IOT using URL & Python
- Exchanging data on Thingspeak IOT from Raspberry Pi

INTRODUCTION TO GOOGLE FIREBASE
- Setting Up a Google Account
- Staring the first project on Firebase
- Generating Domain
- Generating API
- Generating Real-time Database Channel
- Exchanging data on Firebase using Python
- Exchanging data on Firebase from Raspberry Pi

CREATING APPS
- Creating Account on App Inventor
- Creating frontend user interface of the app
- Creating backend working for the app
- Generating APK
- Exchanging data on Raspberry Pi