

## **Raspberry Pi Course Content (15 Days)**

### **1. Introduction to Raspberry Pi**

- Different Models of Raspberry Pi
- Why Raspberry Pi
- Peripherals of Raspberry Pi.
- Applications of Raspberry Pi.
- Future of Micro Computing.

### **2. Preparing Your Raspberry Pi for First Use**

- Different Operating Systems for Raspberry pi
- Getting Started With NOOBS
- Getting things ready for first use.
- NOOBS OS inside out.
- Booting for the First time.

### **3. Setting Up for a Perfect Pi Experience**

- Operation Procedures.
- Do's and Don'ts.
- Updating Pi to Latest softwares.
- Setting various Options and Personalizing.
- First introduction to the LINUX terminal.
- Introduction to the Open Source Software Library.
- The Linux Files Organization Structure.
- NOOBS Configuration Files.
- Connecting to the Network and Troubleshooting.

### **4. Introduction to LINUX Environment**

- Operation Procedures.
- LINUX Shell.
- SHELL Scripting.
- Introduction to various Functions

## **5. Getting Familiar with the GPIO Pins of your Pi -1**

- Pin numbering Formats
- The Voltage hazard Information.
- The LED Interfacing
- The First Button Interface with Raspberry Pi
- General information on other pins and their functionality.
- UART example.

## **6. Using Raspberry Pi for Applications.**

- Web Browser Experience.
- Mp3 Player.
- Video Player
- Online Video Streaming.

## **7. Setting Up Pi to be Accessed Remotely.**

- Remote Computing Basics
- Connecting Raspberry Pi to a Remote Access Client.
- Using Raspberry Pi Remotely.

## **LIVE Projects Covered**

- LED Running Lights.
- Buttons Interfacing
- Buzzer Interfacing
- 7-Segment display Interfacing
- RGB LED Interfacing.
- Motor Interfacing.
- UART interfacing.
- TTL Level converter interfacing for Other Controller's Interface.
- Suggested Projects
- Problem Solving
- Troubleshooting

## Raspberry Pi KIT

- Reading Material
- Two Raspberry Pi 2(and above) compatible OS.
- Software for different Applications
- Raspberry Pi Motor Driver Board.
- Other Accessories :
  - 5 x LED
  - 2 x Push Button Switch
  - 1 x Small Breadboard
  - 10 x Connecting Wires