

## **RASPBERRY PI Course Content**

**Overview:** It is a new technology which is as small as credit card sized computer so that u can control anything just by programming in a suitable way as per the application.

### **Day 1**

#### **Session 1: Introduction to**

- Basic electronics
- Resistors
- Capacitors.
- Inductors
- Voltage regulator
- Relay

#### **Session 2:**

- Introduction to microcontroller.
- Difference between micro processor and microcontroller.
- Introduction to raspberry pi
- Architecture and hardware specifications.
- Introduction to ARMs
- GPIOs

#### **Session3:**

- Introduction to programming.
- History to scratch program
- My first program on scratch.
- LED blinking on scratch.
- Introduction of python programming

## Day 2

### Session 1:

- Setting up raspberry pi.
- Flashing and loading the SD card with OS
- Booting the OS
- Intro of items on desktop
- Enabling GPIO pins
- LED interfacing using the GPIO

### Session 2:

- Interrupt concept.
- Edge trigger and synTick interrupt
- Writing interrupt service routine

### Section 3:

- Programming for on board RGB(tri-color) led and switches.
- LED and switches interface using breadboard.
- Home Automation

### Session 4:

- Competition
- Certificate Distribution