# **Arduino Foundation**

Level 7 | 48 Hrs. | Age group: 10 yrs. +

#### Description

This course gives students an excellent platform to develop simple to complex projects in Arduino. Arduino is a Micro-Controller where kids can code in C/C++ and then simulate the function of the circuit as per the instruction given in the code. Students learn to simulate circuits using sensors and controllers. It is fun to learn and implement simple to advanced automation projects

### Skills you will Develop

- **▼** Logical Thinking
- ▼ Exposure to C/C++ Programming skills
- ▼ Exposure to Basic Embedded System
- Creativity
- Hardware interfaced with Software Technical skills

### What will you Learn?

- ▼ 40+ Projects on Arduino Foundation
- ▼ Use of GPIO Pins
- ▼ Taking Digital Input then giving Digital Output
- ▼ Giving Digital Output in a Sequence
- ▼ Giving Analog Output in PWM mode
- ▼ Taking Analog Input from Sensors
- ▼ Exposure to Serial Communication
- Some Applications of Arduino Foundation:
  - ▼ One LED Blinking
  - ▼ Interface RGB LED
  - ▼ Blink LEDs Using FOR Loop

## Eligibility

- ▼ Interest towards Coding as well as Electronics Circuits
- Previous knowledge of Electronics and Circuits (Level 6) and Block Programming Courses

- ▼ Fading of an LED Using PWM
- Measure Temperature Using Temperature Sensor
- ▼ Measure Distance Using Ultrasonic Sensor
- ▼ Multiple Tone Keyboard
- ▼ Controlling Servo motor with tilt sensor
- Interfacing Piezo buzzer and PIR sensor to detect humans
- ▼ Control Light bulb using Relay DPST
- Read Analog Voltage using Potentiometer
- Interfacing 7 Segment Display
- Electronic Dice

