

RPI Workshop Content

1. Understanding and Introduction to RPi

- What is SOC?
- Versions of Raspberry Pi & Their Difference
- Raspberry Pi 3
- Basics of Electronics
- Hardware Description
- Pin Configuration

2. OS Installation on SD Card

- Downloading Image
- Study Various Operating Systems Available
- Making SD Card: Formatting and Partitions
- Raspberry Pi SD Installer

3. OS Configuration

- Booting Into Desktop
- GUI Version
- CLI Desktop
- Changing Timezone
- Other Options
- Raspi-Config
- Test

4. Network Setup

- Setting Up Using GUI
- Setting Up Using Command Line
- Finding Pi's IP Address
- Connecting with Wi-Fi/ LAN/ Datacard

5. GPIO

- Study GPIO Pins
- Libraries Using Git
- Configuring GPIO Pins

6. Pi using SSH

- Enabling SSH
- Logging in using Putty
- Run Basic Commands
- Use GPIO

7. Linux

- Understanding Linux
- File Structure

- Linux Commands
- Permissions

8. Using Python

- Understanding Python
- Condition Statement
- Loops
- Importing Libraries
- Functions

Practical's Covered

- Basic Python Functionalities
- Using GPIO Pins for Output
- Interfacing a Sensor
- Controlling LED with a Switch
- Home Automation System using Pi