

# Introduction to IoT

## Requirements:

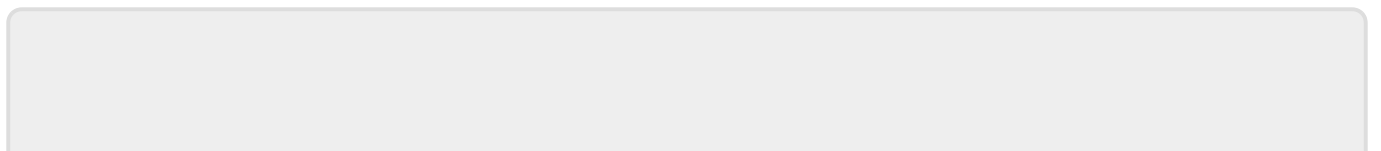
- Basic programming knowledge, preferably C or C++.
- Basic knowledge in electricity

## Materials:

- Personal computer
- Operating system: Any
- Internet connection
- Dev board: Wemos D1 Mini
- Micro-USB to USB-A cable
- Breadboard
- Jumper wires
- Sensors:
  - sensor 1
  - sensor 2
  - sensor x
- Actuator:
  - actuator 1
  - actuator x

## Session Outline:

- Setup development environment
  - Install Arduino IDE
  - Install libraries
  - Drivers? others softwares?
- Hardware review
- Coding Warm-up
  - LED Blink
  - Sensor reading?
- Communication protocols
  - HTTP
  - MQTT
  - Websocket
- The Things Network
- Firmwares
  - Tasmota
- Node-RED
- Dashboarding
  - Grafana



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