

Centre for Electronic Governance

(Established by Govt of Rajasthan)

Training Program: IOT (Internet of Things)

Duration: 1 Months (60 Hrs.)

Prerequisites: Basic knowledge of C programming. Beginners are also welcome.

1. Arduino: IDE installation and environment setup. Details of Arduino and how to structure the source code. Using Arduino as Node or Gateway.
2. How to build connected apps. Understanding the Data exchange mechanism (JSON), HTTP and REST APIs.
3. IoT Connectivity – Using GSM and ESP8266 for bringing internet connectivity to Arduino.
4. Sensor board – Using sensors (analog and digital) with Arduino. Connecting Temp, DHT, Reed, Power, Proximity and Light sensors.
5. Other Sensors – Moisture sensor, Sound sensor, Flex sensor, Touch sensor
6. More Interfaces – 4x4 keypad, 7 Segment, LED, LED Matrix, Servo Motor, Nokia LCD.
7. Data transmission using – RF and BT.
8. Using GPS for location.
9. Sending the data to IoT cloud – Thingspeak.
10. Performing the IoT analytics using Python language.
11. Storing information in Database – MongoDB
12. Client-server Communication – HTTP and MQTT.
13. Raspberry usage demo – Making it as broker.
14. Projects and code challenges

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