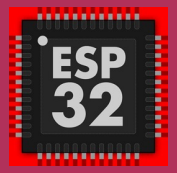
Hibiscus Sense ESP32 Development Board Project

CISCO CERTIFICTION ON CONNECTING THINGS & BIG DATA ANALYTICS
JUL/AUG 2022



1. To Do

- Things that you need to do before proceed this project:

  i. Install Arduino IDE 2.0.1 from here.
  Skip this step if you have installed previous (legacy – 1.8.x) version into your system.

  ii. Install **Hibiscus Sense Board ESP32 IoT Development Board** driver.
  Please refer to any of these link:
  Hibiscus-Sense-Arduino or ESP32 install Arduino IDE 2 in 90 seconds #ESP32

  iii. Install Node-RED into your system.
  Please refer notes in this link.

  iv. A quick reference on **Message Queuing Telemetry Transport** (MQTT) here.

2. Hibiscus Sense ESP32 IoT Development Board

- Familiarize yourself with Hibiscus Sense board by going through the following links.
- Do the exercises before proceed to next level.

  - Hibiscus-Sense-Arduino
  - Introduction to Hibiscus Sense
  - Learning Material Preparation
  - Connect Hibiscus Sense to Computer's USB Port
  - Exercise 1: Control Blue LED on GPIO2 (Strobe Light Effect)
  - Exercise 2: Control Blue LED on GPIO2 (Glowing Light Effect))
  - Exercise 3: Control Blue LED on GPIO2 (Breathing Light Effect)
  - Exercise 4: Control Small Buzzer on GPIO13
  - Exercise 5: Serial Communication (Hibiscus Sense & Computer)
  - Exercise 6: Monitor Pushbutton Status on GPIP0 (LED ON/OFF)
  - Exercise 7: Control RGB LED on GPIO16
  - Exercise 8: Monitor Proximity Value from APDS9960
  - Exercise 9: Monitor Gesture Direction using APDS9960
  - Exercise 10: Monitor Environmental Value using BME280
  - Exercise 11: Monitor 6-axis Motion Tracking using MPU6050
  - Exercise 12: IoT using Blynk

**** Exercise 8 to 12 requires additional libraries to be installed into your system.**

3. END

END