IoT Application Development with ESP32 Using ESP-IDF

Hardware & Software Requirements

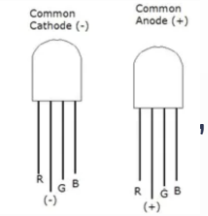
Develop a WLAN on the ESP32 and Connect to AWS IoT: Step by step programming in C Language

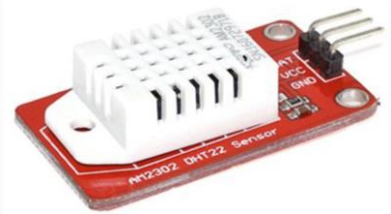
ESP32 DevKit

- DevKits from Espressif
  - Wrover DevKit → https://docs.espressif.com/projects/esp-idf/en/latest/esp32/hw-reference/esp32/get-started-wrover-kit.html
  - All Espressif DevKits → https://www.espressif.com/en/products/devkits

Other Components

- Other Hardware Components
  - RGB LED → like this 

or this 

, **be sure to check your datasheet for resistor values.**
  - AM2302 DHT22 Sensor → 

Temperature and Humidity Sensor.
  - Jumper wires and a breadboard.

Software Requirements?

Eclipse ESP-IDF Plugin

- Available for Linux, MacOS, and Windows
  - Windows install demonstrated → I'm using Windows.
  - All-in-one installer available for Windows.
    - Intalls the ESP-IDF, ESP-IDF Tools and Eclipse.
  - You can also install the Plugin into an existing Eclipse CDT installation.
  - Details here → https://github.com/espressif/idf-eclipse-plugin

- Other features of the plugin...
  - Creating a new Cmake IDF project.
  - Create ESP launch target with multi-chip support.
  - Compiling the project.
  - Flashing the project.
  - Debugging the project.
  - Viewing serial output.

Next: Course Structure