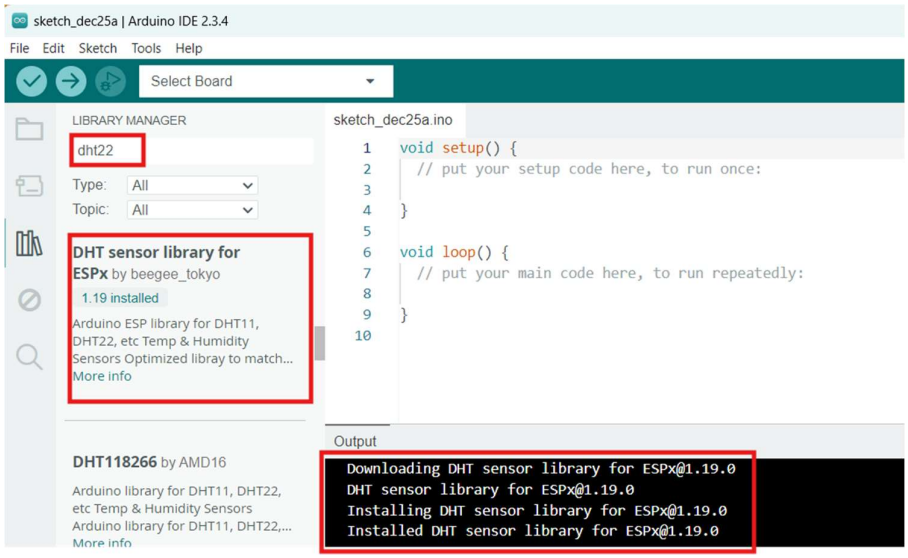
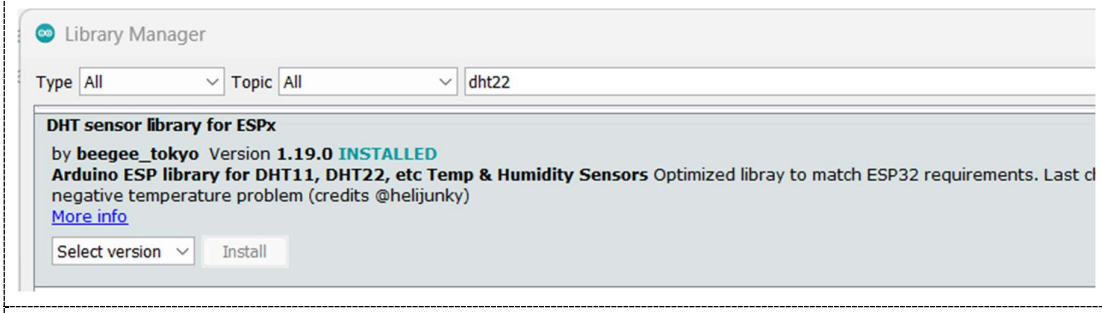
Getting Start ESP32: ESP32 GPIO + ESP32 Interface
Mission 8/12 – ESP32 + DHT22

1. Read https://randomnerdtutorials.com/esp32-dht11-dht22-temperature-humidity-sensor-arduino-ide/
2. Add Library: Sketch → Include Library → Manage
3. Filter with "dht22", Select DHT sensor Library for ESPx by beegee_tokyo Version 1.19.0

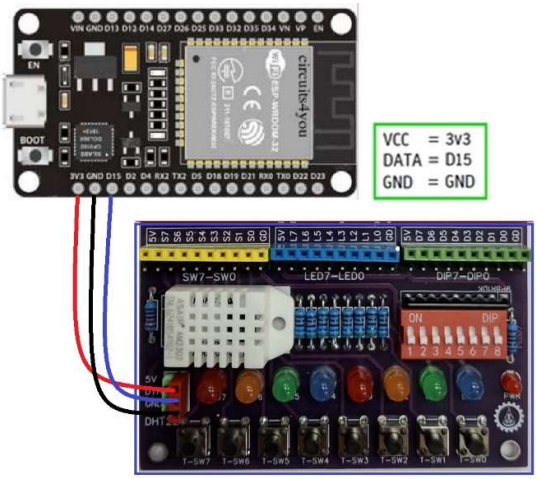




DHT sensor Library for ESPx by beegee_tokyo Version 1.19.0

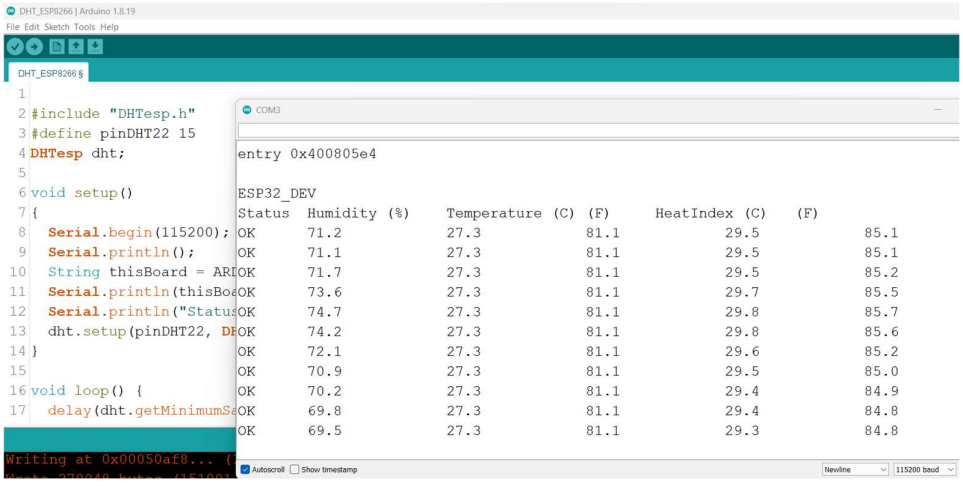
4. Test Code “Test0801-Hello DHT22”

```
#include "DHTesp.h"
#define pinDHT22 15
DHTesp dht;

void setup()
{
 Serial.begin(115200);
 Serial.println();
 String thisBoard = ARDUINO_BOARD;
 Serial.println(thisBoard);
 Serial.println("Status\tHumidity (%)\tTemperature (C)\t(F)\tHeatIndex (C)\t(F)");
 dht.setup(pinDHT22, DHTesp::DHT22);
}

void loop() {
 delay(dht.getMinimumSamplingPeriod());
 float humidity = dht.getHumidity();
 float temperature = dht.getTemperature();

 Serial.print(dht.getStatusString());
 Serial.print("\t");          Serial.print(humidity, 1);
 Serial.print("\t\t");        Serial.print(temperature, 1);
 Serial.print("\t\t");        Serial.print(dht.toFahrenheit(temperature), 1);
 Serial.print("\t\t");
 Serial.print(dht.computeHeatIndex(temperature, humidity, false), 1);
 Serial.print("\t\t");
 Serial.println(dht.computeHeatIndex(dht.toFahrenheit(temperature), humidity,
true), 1);
 delay(2000);
}
```



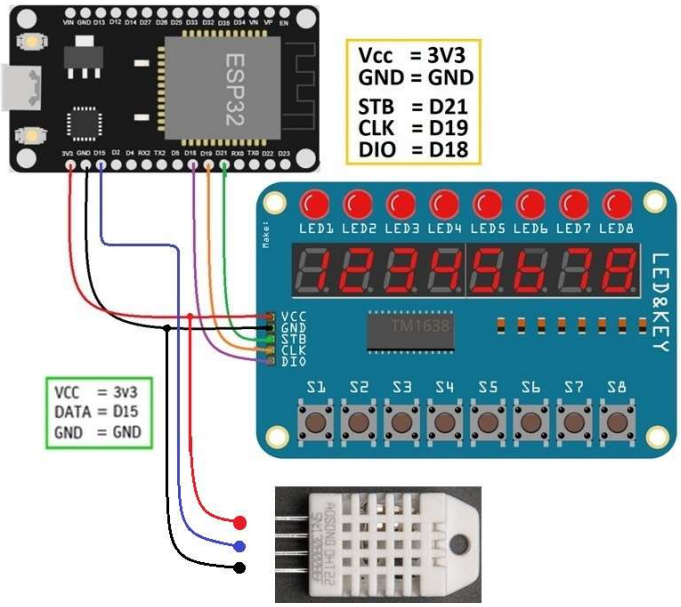
← Serial Monitor

← 115200



5. Test Code “Test0802 - DHT22 on TM1638”

```
#include "DHTesp.h"
#include <TM1638plus.h>

#define pinDHT22 15
#define  pin_STB 21
#define  pin_CLK 19
#define  pin_DIO 18

TM1638plus tm(pin_STB, pin_CLK , pin_DIO);
DHTesp dht;

void setup() {
 Serial.begin(115200);
 tm.displayBegin();
 tm.brightness(6);
 dht.setup(pinDHT22, DHTesp::DHT22);
}

void loop() {
 int intData, singleData;
 tm.reset();
 float Humid = dht.getHumidity();
 float Tempp = dht.getTemperature();
 Serial.print("\n Tempp('C),Humid(%) = ");
 Serial.print(Tempp, 1);
 Serial.print(", ");
 Serial.print(Humid, 1);

 intData = (int)(Tempp * 10);
 tm.displayASCII(0, 't');
 singleData = intData % 10; intData /= 10;
 tm.displayHex(3, singleData);
 singleData = intData % 10; intData /= 10;
 tm.displayASCIIwDot(2, 0x30 + singleData);
 singleData = intData % 10; intData /= 10;
 tm.displayHex(1, singleData);

 intData = (int)(Humid * 10);
 tm.displayASCII(4, 'h');
 singleData = intData % 10; intData /= 10;
 tm.displayHex(7, singleData);
 singleData = intData % 10; intData /= 10;
 tm.displayASCIIwDot(6, 0x30 + singleData);
 singleData = intData % 10; intData /= 10;
 tm.displayHex(5, singleData);

 delay(2000);
}
```



- How display on MAX7219 7Segment Board?