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/**
 * DHT11 Sensor Reader
 * This sketch reads temperature and humidity data from the DHT11 sensor and prints the values to the serial port.
 * It also handles potential error states that might occur during reading.
 *
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 * Version: 2.1.0
 * License: MIT
 */

// Include the DHT11 library for interfacing with the sensor.
#include <DHT11.h>

// Create an instance of the DHT11 class.
// - For Arduino: Connect the sensor to Digital I/O Pin 2.
// - For ESP32: Connect the sensor to pin GPIO2 or P2.
// - For ESP8266: Connect the sensor to GPIO2 or D4.
DHT11 dht11(2);

void setup() {
    // Initialize serial communication to allow debugging and data readout.
    // Using a baud rate of 9600 bps.
    Serial.begin(9600);
    digitalWrite(D4,OUTPUT);

    // Uncomment the line below to set a custom delay between sensor readings (in milliseconds).
    // dht11.setDelay(500); // Set this to the desired delay. Default is 500ms.
}

void loop() {
```

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  int temperature = 0;
  int humidity = 0;

  // Attempt to read the temperature and humidity values from the DHT11 sensor.
  int result = dht11.readTemperatureHumidity(temperature, humidity);

  // Check the results of the readings.
  // If the reading is successful, print the temperature and humidity values.
  // If there are errors, print the appropriate error messages.
  if (result == 0) {
    Serial.print("Temperature: ");
    Serial.print(temperature);
    Serial.print(" °C\tHumidity: ");
    Serial.print(humidity);
    Serial.println(" %");
  } else {
    // Print error message based on the error code.
    Serial.println(DHT11::getErrorString(result));
  }
}
```