ChatGPT Prompts:

# Prompt:

I'm working on a project in the arduino ide 2.0, using the esp32 dev module board. Using MQTT Pubsubclient I'm publishing sensor data from the mpu6050 in every void loop(). Now I'd like to publish the temperature on a topic called "temp/K05", but only every second. How can I make sure, that the temperature topic is published only every second, whilst retaining the constant publishing of sensor data of the gyro and accelerometer?

# Answer:

unsigned long lastTempPublishTime = 0;

const unsigned long tempPublishInterval = 1000; // 1000 milliseconds = 1 second

unsigned long currentMillis = millis();

// Publish temperature only once every second

if (currentMillis - lastTempPublishTime >= tempPublishInterval) {

// Code to read the temperature from the sensor and publish it

float temperature = readTemperature(); // Replace with your temperature reading logic

// Convert the temperature value to a string

char temperatureStr[10];

sprintf(temperatureStr, "%.2f", temperature);

// Publish the temperature value to the topic "temp/K05"

client.publish("temp/K05", temperatureStr);

// Update the last publish time

lastTempPublishTime = currentMillis;

}

// Code to read and publish sensor data from the MPU6050

// ...

// Remaining code in the loop

// ...

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