```
/*

  WriteSingleField


  Description: Writes a value to a channel on ThingSpeak every 20 seconds.


  Hardware: ESP32 based boards


  !!! IMPORTANT - Modify the secrets.h file for this project with your network connection and
ThingSpeak channel details. !!!


  Note:

  - Requires installation of EPS32 core. See https://github.com/espressif/arduino-
esp32/blob/master/docs/arduino-ide/boards_manager.md for details.

  - Select the target hardware from the Tools->Board menu

  - This example is written for a network using WPA encryption. For WEP or WPA, change the
WiFi.begin() call accordingly.


  ThingSpeak ( https://www.thingspeak.com ) is an analytic IoT platform service that allows you to
aggregate, visualize, and

  analyze live data streams in the cloud. Visit https://www.thingspeak.com to sign up for a free
account and create a channel.


  Documentation for the ThingSpeak Communication Library for Arduino is in the README.md folder
where the library was installed.

  See https://www.mathworks.com/help/thingspeak/index.html for the full ThingSpeak
documentation.


  For licensing information, see the accompanying license file.


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*/
#include "ThingSpeak.h"
#include <WiFi.h>
```

```
#define LIGHTSENSORPIN A5


char ssid[] = "Mi Phone";   // your network SSID (name)

char pass[] = "f553f9b071c6";   // your network password

int keyIndex = 0;          // your network key Index number (needed only for WEP)

WiFiClient  client;


unsigned long myChannelNumber = 1008749;

const char * myWriteAPIKey = "NSUIYEP6I0F53BG4";




void setup() {
  pinMode(LIGHTSENSORPIN, INPUT);

  Serial.begin(9600);  //Initialize serial

  WiFi.mode(WIFI_STA);

  ThingSpeak.begin(client);  // Initialize ThingSpeak
}


void loop() {
  float reading = analogRead(LIGHTSENSORPIN);

  Serial.println(reading);



  // Connect or reconnect to WiFi
  if(WiFi.status() != WL_CONNECTED){

   Serial.print("Attempting to connect to SSID: ");

   Serial.println(ssid);

   while(WiFi.status() != WL_CONNECTED){
```

```cpp
    WiFi.begin(ssid, pass); // Connect to WPA/WPA2 network. Change this line if using open or WEP network

    Serial.print(".");

    delay(5000);

  }

  Serial.println("\nConnected.");

}


  // Write to ThingSpeak. There are up to 8 fields in a channel, allowing you to store up to 8 different

  // pieces of information in a channel.  Here, we write to field 1.

  int x = ThingSpeak.writeField(myChannelNumber, 1, reading, myWriteAPIKey);

  if(x == 200){

    Serial.println("Channel update successful.");

  }

  else{

    Serial.println("Problem updating channel. HTTP error code " + String(x));

  }


  // change the value

  //number++;

  //if(number > 99){

  //  number = 0;

  //}




  delay(20000); // Wait 20 seconds to update the channel again

}
```