**CODE**

// Let us calculate the level of the liquid in the tank.

const int trigpin = 2; //D4

const int echopin = 0; //D3

// We will define our variables distance and time(i.e duration)

long time;

int distance;

void setup()

{

pinMode(trigpin, OUTPUT); // Configuring the trigpin as output

pinMode(echopin, INPUT); // Configuring the echopin as input

Serial.begin(9600); // Will start the serial communication:

}

void loop()

{

// Initially we should make the trigger pin low.

digitalWrite(trigpin, LOW);

delayMicroseconds(2);

// Now the trigpin should be made high (level 1) for 10 micro seconds

digitalWrite(trigpin, HIGH);

delayMicroseconds(10);

digitalWrite(trigpin, LOW);

// Let us read the echopin, it returns the sound wave travel time in microseconds

duration = pulseIn(echopin, HIGH);

// Calculating the distance

distance= time\*0.034/2;

// speed=distance/time

// time is round trip for the waves

// Prints the distance on the Serial Monitor

Serial.print("Distance: ");

Serial.println(distance);

delay(2000);

}

// Now we should transfer this values to Thing Speak via the cloud.

#include "ThingSpeak.h"

#include "secrets.h"

#include <ESP8266WiFi.h>

char ssid[] = 1a2b3c;

// your network ssid(name)

char pass[] = 123abc;

// your network password

int keyIndex = 0;

// your network key index number.

WiFiClient client;

unsigned long myChannelNumber = 121005436;

const char \* myWriteAPIKey = A12BER456;

int number = 0;

void setup()

{

Serial.begin(115200); // Initialize serial

WiFi.mode(WIFI\_STA);

ThingSpeak.begin(client); // Initialize ThingSpeak

}

void loop()

{

// Connect or reconnect to WiFi

if(WiFi.status() != WL\_CONNECTED){

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

Serial.println(1a2b3c);

while(WiFi.status() != WL\_CONNECTED){

WiFi.begin(ssid, pass);

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, number, 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

}