\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* IoT Test Programs \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1) Temperature Sensor

float temp;

int tempPin = A1;

void setup() {

// put your setup code here, to run once:

Serial.begin(9600);

}

void loop() {

// put your main code here, to run repeatedly:

temp = analogRead(tempPin);

temp = temp \* (5000/1024);

Serial.print("Temperature = ");

Serial.print(temp);

Serial.print(" \*C");

Serial.println();

delay(1000);

}

=============================================================

2) Fire / Flame Sensor

int isFlamePin = 8;

int isFlame = 0;

void setup() {

// put your setup code here, to run once:

pinMode(isFlamePin, INPUT);

Serial.begin(9600);

}

void loop() {

// put your main code here, to run repeatedly:

isFlame = digitalRead(isFlamePin);

if(isFlamePin == 1) {

Serial.println("Fire !! Fire !!");

} else {

Serial.println("No Fire");

}

}

================================================================

3) Humidity Sensor

#include "DHT.h"

#define DHTPIN 2

#define DHTTYPE DHT11

DHT dht (DHTPIN, DHTTYPE);

void setup() {

// put your setup code here, to run once:

Serial.begin(9600);

Serial.println("DHT Test!");

dht.begin();

}

void loop() {

// put your main code here, to run repeatedly:

delay(2000);

float h = dht.readHumidity();

float t = dht.readTemperature();

float f = dht.readTemperature(true);

if(isnan(h) || isnan(f) || isnan(t)) {

Serial.println("Falied to read from the sensor");

return;

}

float hif = dht.computeHeatIndex(f, h);

float hic = dht.computeHeatIndex(t, h, false);

Serial.println("-----------------------------------------------");

Serial.println("Humidity: " + String(h) + " %");

Serial.println("Temperature (in \*C): " + String(t) + " \*C");

Serial.println("Temperature (in \*F): " + String(f) + " \*F");

Serial.println("Heat Index (in \*C): " + String(hic) + " \*C");

Serial.println("Heat Index (in \*F): " + String(hif) + " \*F");

}

=========================================================================

4) Touch Sensor

const int touch = 4;

void setup() {

// put your setup code here, to run once:

Serial.begin(9600);

pinMode(touch, INPUT);

}

void loop() {

// put your main code here, to run repeatedly:

int touchState = digitalRead(touch);

if(touchState == HIGH) {

Serial.println("Sensor is touched");

} else {

Serial.println("Sensor is untouched");

}

delay(1000);

}

=========================================================================

5) Tap / Knock Sensor

int tap = 4;

void setup() {

// put your setup code here, to run once:

pinMode(tap, INPUT);

Serial.begin(9600);

}

void loop() {

// put your main code here, to run repeatedly:

int value = digitalRead(tap);

if(value == HIGH) {

Serial.println("Knock Knock");

} else {

Serial.println("No Knocks");

}

delay(1000);

}

===========================================================================

6) Mercury Tilt Sensor

void setup() {

// put your setup code here, to run once:

pinMode(7, INPUT);

Serial.begin(9600);

}

void loop() {

// put your main code here, to run repeatedly:

int value = digitalRead(7);

if(value == 1) {

Serial.println("Tilted");

} else {

Serial.println("Not Tilted");

}

delay(1000);

}

============================================================================

7) Laser Emitter

int laserPin = 13;

void setup() {

// put your setup code here, to run once:

pinMode(laserPin, OUTPUT);

Serial.begin(9600);

}

void loop() {

// put your main code here, to run repeatedly:

digitalWrite(laserPin, HIGH);

delay(2000);

digitalWrite(laserPin, LOW);

delay(2000);

}

==============================================================================

8) Button Sensor

int buttonPin = 4;

void setup() {

// put your setup code here, to run once:

pinMode(buttonPin, INPUT);

Serial.begin(9600);

}

void loop() {

// put your main code here, to run repeatedly:

button\_state = digitalRead(buttonPin);

if(button\_state == true) {

Serial.println("Button Pressed");

} else {

Serial.println("Button not pressed");

}

delay(1000);

}

===========================================================================