25,26,27-

ULTRASONIC SENSOR

const int trigPin = 9;

const int echoPin = 10;

long duration;

int distance;

void setup() {

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

Serial.begin(9600);

}

void loop() {

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

duration = pulseIn(echoPin, HIGH);

distance= duration\*0.034/2;

Serial.print("Distance: ");

Serial.println(distance);

}

(2) #include <Servo.h>

Servo myservo;

void setup() {

myservo.attach(9,600,2300);

}

void loop() {

myservo.write(0);

delay(1000);

myservo.write(90);

delay(500);

myservo.write(135);

delay(500);

myservo.write(180);

delay(1500);

}

(3) #include <Stepper.h>

#define STEPS 32

Stepper stepper(STEPS, 8, 10, 9, 11);

int val = 0;

void setup() {

Serial.begin(9600);

stepper.setSpeed(200);

}

void loop() {

if (Serial.available()>0)

{

val = Serial.parseInt();

stepper.step(val);

Serial.println(val);

}

}

(4) int redLed = 12;

int greenLed = 11;

int buzzer = 10;

int smokeA0 = A5;

int sensorThres = 400;

void setup() {

pinMode(redLed, OUTPUT);

pinMode(greenLed, OUTPUT);

pinMode(buzzer, OUTPUT);

pinMode(smokeA0, INPUT);

Serial.begin(9600);

}

void loop() {

int analogSensor = analogRead(smokeA0);

Serial.print("Pin A0: ");

Serial.println(analogSensor);

if (analogSensor > sensorThres)

{

digitalWrite(redLed, HIGH);

digitalWrite(greenLed, LOW);

tone(buzzer, 1000, 200);

}

else

{

digitalWrite(redLed, LOW);

digitalWrite(greenLed, HIGH);

noTone(buzzer);

}

delay(100);

}

(5) HUMIDITY SENSOR

#include <dht.h>

dht DHT;

#define DHT11\_PIN 7

void setup(){

Serial.begin(9600);

}

void loop()

{

int chk = DHT.read11(DHT11\_PIN);

Serial.print("Temperature = ");

Serial.println(DHT.temperature);

Serial.print("Humidity = ");

Serial.println(DHT.humidity);

delay(1000);

}

(6) TEMPERATURE SENSOR

float temp;

int tempPin = 0;

void setup() {

Serial.begin(9600);

}

void loop() {

temp = analogRead(tempPin);

temp = temp \* 0.48828125;

// convert the analog volt to its temperature equivalent

Serial.print("TEMPERATURE = ");

Serial.print(temp);

Serial.print("\*C");

Serial.println();

delay(1000);

}

(7) int sensor\_pin = A0;

int output\_value ;

void setup() {

Serial.begin(9600);

Serial.println("Reading From the Sensor ...");

delay(2000);

}

void loop() {

output\_value= analogRead(sensor\_pin);

output\_value = map(output\_value,550,10,0,100);

Serial.print("Mositure : ");

Serial.print(output\_value);

Serial.println("%");

delay(1000);

}

(8) const int cD = 4;

const int cA = A0;

int val\_analogique;

void setup()

{

pinMode(cD, INPUT);

pinMode(cA, INPUT);

Serial.begin(9600);

}

void loop()

{

if(digitalRead(cD) == LOW)

{

Serial.println("Digital value : wet");

delay(10);

}

else

{

Serial.println("Digital value : dry");

delay(10);

}

val\_analogique=analogRead(cA);

Serial.print("Analog value : ");

Serial.println(val\_analogique);

Serial.println("");

delay(1000);

}

(9) int sensorPin = A0;

int sensorValue = 0;

void setup() {

Serial.begin(9600);

}

void loop() {

sensorValue = analogRead(sensorPin);

Serial.println(sensorValue);

delay(100);

}

(10) int pirSensor = 8;

int relayInput = 7;

void setup() {

pinMode(pirSensor, INPUT);

pinMode(relayInput, OUTPUT);

}

void loop() {

int sensorValue = digitalRead(pirSensor);

if (sensorValue == 1) {

digitalWrite(relayInput, LOW);

}

}

(11) const int buzzer = 9;

void setup(){

pinMode(buzzer, OUTPUT);

}

void loop(){

tone(buzzer, 1000);

delay(1000);

noTone(buzzer);

delay(1000);

}

(12) const int rs = 12, en = 11, d4 = 5, d5 = 4, d6 = 3, d7 = 2;

LiquidCrystal lcd(rs, en, d4, d5, d6, d7);

void setup() {

lcd.begin(16, 2);

lcd.print("hello, world!");

}

void loop() {

lcd.noDisplay();

delay(500);

lcd.display();

delay(500);

}

(15) const int ProxSensor=A0;

int inputVal = 0;

void setup()

{

pinMode(13, OUTPUT);

pinMode(ProxSensor,INPUT);

Serial.begin(9600);

}

void loop()

{

if(digitalRead(ProxSensor)==HIGH)

{

digitalWrite(13, HIGH);

}

else

{

digitalWrite(13, LOW);

}

inputVal = analogRead(ProxSensor);

Serial.println(inputVal);

delay(1000);

}

(16) int ledPin=13;

int sensorPin=7;

boolean val =0;

int threshold=0;

void setup(){

pinMode(ledPin, OUTPUT);

pinMode(sensorPin, INPUT);

Serial.begin (9600);

}

void loop (){

val =analogRead(sensorPin);

Serial.println (val);

if (val>=threshold) {

digitalWrite(ledPin, HIGH);

}

else {

digitalWrite(ledPin, LOW);

}

}

(17) #include <Wire.h>

#include <Adafruit\_BMP085.h>

Adafruit\_BMP085 bmp;

void setup()

{

Serial.begin(9600);

if (!bmp.begin())

{

Serial.println("BMP180 sensor not found");

}

}

void loop() {

Serial.print("Temperature = ");

Serial.print(bmp.readTemperature());

Serial.println(" \*C");

Serial.print("Altitude = ");

Serial.print(bmp.readAltitude(101500));

Serial.println(" meters");

Serial.println();

delay(1000);

}

(18) int sensorPin = A0;

void setup() {

Serial.begin(9600);

}

void loop() {

Serial.println(analogRead(sensorPin));

delay(200);

}

(19) int vibr\_pin=3;

int LED\_Pin=13;

void setup() {

pinMode(vibr\_pin,INPUT);

pinMode(LED\_Pin,OUTPUT);

}

void loop() {

int val;

val=digitalRead(vibr\_pin);

if(val==1)

{

digitalWrite(LED\_Pin,HIGH);

delay(1000);

digitalWrite(LED\_Pin,LOW);

delay(1000);

}

else

digitalWrite(LED\_Pin,LOW);

}

(20) int buzzer = 8;

void setup() {

pinMode(buzzer, OUTPUT); // set pin 8 as output

}

void loop() {

for (int i = 0; i < 80; i++) {

digitalWrite(buzzer, HIGH);

delay(1);

digitalWrite(buzzer, LOW);

delay(1);

}

delay(50);

for (int j = 0; j < 100; j++) {

digitalWrite(buzzer, HIGH);

delay(2);

digitalWrite(buzzer, LOW);

delay(2);

}

delay(100);

}

(22) int buzzer = 8 ;

int LED = 7 ;

int flame\_sensor = 4 ;

int flame\_detected ;

void setup()

{

Serial.begin(9600) ;

pinMode(buzzer, OUTPUT) ;

pinMode(LED, OUTPUT) ;

pinMode(flame\_sensor, INPUT) ;

}

void loop{

flame\_detected = digitalRead(flame\_sensor) ;

if (flame\_detected == 1)

{

Serial.println("Flame detected...! take action immediately.");

digitalWrite(buzzer, HIGH);

digitalWrite(LED, HIGH);

delay(200);

digitalWrite(LED, LOW);

delay(200);

}

else

{

Serial.println("No flame detected. stay cool");

digitalWrite(buzzer, LOW);

digitalWrite(LED, LOW);

}

delay(1000);

}

(23) #define relay A0

#define interval 1000

void setup() {

pinMode(relay, OUTPUT);

}

void loop()

{

digitalWrite(relay, HIGH);

delay(interval);

digitalWrite(relay, LOW);

delay(interval);

}

(24) const int ap1 = A5;

const int ap2 = A4;

const int ap3 = A3;

int sv1 = 0;

int ov1 = 0;

int sv2 = 0;

int ov2= 0;

int sv3 = 0;

int ov3= 0;

void setup() {

// initialize serial communications at 9600 bps:

Serial.begin(9600);

}

void loop() {

analogReference(EXTERNAL); //connect 3.3v to AREF

// read the analog in value:

sv1 = analogRead(ap1);

// map it to the range of the analog out:

ov1 = map(sv1, 0, 1023, 0, 255);

// change the analog out value:

delay(2);

//

sv2 = analogRead(ap2);

ov2 = map(sv2, 0, 1023, 0, 255);

//

delay(2);

//

sv3 = analogRead(ap3);

ov3 = map(sv3, 0, 1023, 0, 255);

// print the results to the serial monitor:

Serial.print("Xsensor1 = " );

Serial.print(sv1);

Serial.print("\t output1 = ");

Serial.println(ov1);

Serial.print("Ysensor2 = " );

Serial.print(sv2);

Serial.print("\t output2 = ");

Serial.println(ov2);

Serial.print("Zsensor3 = " );

Serial.print(sv3);

Serial.print("\t output3 = ");

Serial.println(ov3);

delay(3000);

}

(25) int pirSensor = 8;

int relayInput = 7;

void setup() {

pinMode(pirSensor, INPUT);

pinMode(relayInput, OUTPUT);

}

void loop() {

int sensorValue = digitalRead(pirSensor);

if (sensorValue == 1) {

digitalWrite(relayInput, LOW); // The Relay Input works Inversly

}

}