// defines pins numbers

const int trigPin = 2;

const int echoPin = 3;

int led=13;

// defines variables

long duration;

int distance;

void setup() {

pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output

pinMode(echoPin, INPUT); // Sets the echoPin as an Input

pinMode(led, OUTPUT);

Serial.begin(9600); // Starts the serial communication

}

void loop() {

// Clears the trigPin

digitalWrite(trigPin, LOW);

delay(1000);

// Sets the trigPin on HIGH state for 10 micro seconds

digitalWrite(trigPin, HIGH);

delay(1000);

digitalWrite(trigPin, LOW);

// Reads the echoPin, returns the sound wave travel time in microseconds

duration = pulseIn(echoPin, HIGH);

// Calculating the distance

distance= duration\*0.034/2; //s=d/t

// Prints the distance on the Serial Monitor

Serial.print("Distance(cm): ");

Serial.println(distance);

if(distance<=3)

{

digitalWrite(led, HIGH);

}

else

{

digitalWrite(led, LOW);

}

}