//Tech Trends Shameer

//Object Detection Alarm

// Define pins numbers

const int trigPin = 13; //Connect Trig pin in Ultrasonic Sensor to Arduino Pin 13

const int echoPin = 12; //Connect Echo pin in Ultrasonic Sensor to Arduino Pin 13

const int buzzer = 11; //Connect Positive pin of Buzzer to Arduino Pin 11

const int ledPin = 10; //Connect Positive pin of LED to Arduino Pin 10

// Define variables

long duration;

int distance;

int safetyDistance;

void setup() {

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

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

pinMode(buzzer, OUTPUT);

pinMode(ledPin, OUTPUT);

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

}

void loop() {

// Clears the trigPin

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

// Sets the trigPin on HIGH state for 15 micro seconds

digitalWrite(trigPin, HIGH);

delayMicroseconds(15);

digitalWrite(trigPin, LOW);

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

duration = pulseIn(echoPin, HIGH);

// Calculate the distance

distance= duration\*0.034/2;

safetyDistance = distance;

if (safetyDistance <= 8){

digitalWrite(buzzer, HIGH);

digitalWrite(ledPin, HIGH);

}

else{

digitalWrite(buzzer, LOW);

digitalWrite(ledPin, LOW);

}

// Print the distance on the Serial Monitor

Serial.print("Distance: ");

Serial.println(distance);

}