# CODE FOR STIMULATION

const int trigPinA = 9;

const int echoPinA = 8;

const int trigPinB = 11;

const int echoPinB = 10;

const int ledA =4;

const int ledB =3;

const int buzzerA = 7;

const int buzzerB = 6;

long durationA, durationB;

int distanceA, distanceB;

void setup() {

Serial.begin(9600);

pinMode(trigPinA, OUTPUT);

pinMode(echoPinA, INPUT);

pinMode(trigPinB, OUTPUT);

pinMode(echoPinB, INPUT);

pinMode(ledA, OUTPUT);

pinMode(ledB, OUTPUT);

pinMode(buzzerA, OUTPUT);

pinMode(buzzerB, OUTPUT);

}

void loop() {

// Measure distance from SensorA

digitalWrite(trigPinA, LOW);

delayMicroseconds(2);

digitalWrite(trigPinA, HIGH);

delayMicroseconds(10);

digitalWrite(trigPinA, LOW);

durationA = pulseIn(echoPinA, HIGH);

distanceA = durationA \* 0.034 / 2;

// Measure distance from SensorB

digitalWrite(trigPinB, LOW);

delayMicroseconds(2);

digitalWrite(trigPinB, HIGH);

delayMicroseconds(10);

digitalWrite(trigPinB, LOW);

durationB = pulseIn(echoPinB, HIGH);

distanceB = durationB \* 0.034 / 2;

Serial.println(distanceA);

Serial.println(distanceB);

// If SensorA detects a vehicle less than 100 cm, activate LED2

if (distanceA < 100) {

digitalWrite(ledB, HIGH);

// If less than 50 cm, also activate Buzzer2

if (distanceA < 50) {

digitalWrite(buzzerB, HIGH);

} else {

digitalWrite(buzzerB, LOW);

}

} else {

digitalWrite(ledB, LOW);

digitalWrite(buzzerB, LOW);

}

// If SensorB detects a vehicle less than 100 cm, activate LED1

if (distanceB < 100) {

digitalWrite(ledA, HIGH);

// If less than 50 cm, also activate Buzzer1

if (distanceB < 50) {

digitalWrite(buzzerA, HIGH);

} else {

digitalWrite(buzzerA, LOW);

}

} else {

digitalWrite(ledA, LOW);

digitalWrite(buzzerA, LOW);

}

delay(100);

}