

```

#include <Servo.h>

long readUltrasonicDistance(int triggerPin, int echoPin)
{
    pinMode(triggerPin, OUTPUT); // Clear the trigger
    digitalWrite(triggerPin, LOW);
    delayMicroseconds(2);
    // Sets the trigger pin to HIGH state for 10 microseconds
    digitalWrite(triggerPin, HIGH);
    delayMicroseconds(10);
    digitalWrite(triggerPin, LOW);
    pinMode(echoPin, INPUT);
    // Reads the echo pin, and returns the sound wave travel time in microseconds
    return pulseIn(echoPin, HIGH);
}

Servo servo_3;

void setup()
{
    pinMode(0, INPUT);
    pinMode(13, OUTPUT);
    pinMode(0, OUTPUT);
    servo_3.attach(3, 500, 2500);
    pinMode(A5, INPUT);
    pinMode(12, OUTPUT);
    pinMode(A4, INPUT);
    pinMode(11, OUTPUT);
}

```

```

void loop()
{
    if (digitalRead(0) == 1) {
        digitalWrite(13, HIGH);
    } else {
        digitalWrite(0, LOW);
    }

    if (0.01723 * readUltrasonicDistance(0, 0) >= 100) {
        servo_3.write(90);
        delay(1000); // Wait for 1000 millisecond(s)
    } else {
        servo_3.write(0);
        delay(1000); // Wait for 1000 millisecond(s)
    }

    if (analogRead(A5) <= 100) {
        digitalWrite(12, HIGH);
    } else {
        digitalWrite(12, LOW);
    }

    if ((-40 + 0.488155 * (analogRead(A4) - 20)) < 30) {
        digitalWrite(11, HIGH);
    } else {
        digitalWrite(11, LOW);
    }
}

```

