**CODE:**

#include <Servo.h>

const int trigPin = 8;

const int echoPin = 7;

const int servopin = 6;

// defines variables

Servo sg90;

long duration;

int distance;

void setup() {

sg90.attach(servopin);

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

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

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

}

void loop() {

// Clears the trigPin

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

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

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

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;

// Prints the distance on the Serial Monitor

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

// Serial.println(distance);

if( distance < 400)

{

sg90.write(0);

delay(500);

}

else

{

sg90.write(180);

}

}