```
#include <ESP32Servo.h>
const int TRIG_PIN  = 10;  // Arduino pin connected to Ultrasonic Sensor's TRIG pin
const int ECHO_PIN  = 11;  // Arduino pin connected to Ultrasonic Sensor's ECHO pin
const int SERVO_PIN = 5; // Arduino pin connected to Servo Motor's pin
const int DISTANCE_THRESHOLD = 25; // centimeters
Servo servo; // create servo object to control a servo
// variables will change:
float duration_us, distance_cm;
void setup() {
  Serial.begin (9600);       // initialize serial port
  pinMode(TRIG_PIN, OUTPUT); // set arduino pin to output mode
  pinMode(ECHO_PIN, INPUT);  // set arduino pin to input mode
  servo.attach(SERVO_PIN);   // attaches the servo on pin 9 to the servo object
  servo.write(0);
}
void loop() {
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
duration_us = pulseIn(ECHO_PIN, HIGH);
  distance_cm = 0.017 * duration_us;
if(distance_cm < DISTANCE_THRESHOLD)
    servo.write(0); // rotate servo motor to 90 degree
  else
    servo.write(90);  // rotate servo motor to 0 degree
  Serial.print("distance: ");
  Serial.print(distance_cm);
  Serial.println(" cm");

  delay(1000);
}
```

Ultrasonic_Led.ino

```
int IR_Pin = 8; // Connect the IR sensor to pin 5
int redLEDPin =6 ; // Connect the red LED to pin 10
int greenLEDPin = 7; // Connect the green LED to pin 11// Connect the yellow LED to pin 12

void setup() {
  Serial.begin(9600);
  pinMode(IR_Pin, INPUT);
  pinMode(redLEDPin, OUTPUT);
  pinMode(greenLEDPin, OUTPUT);
}

void loop() {

int IR_Level = digitalRead(IR_Pin);
  if (IR_Level == LOW) {
    digitalWrite(redLEDPin, HIGH);
    digitalWrite(greenLEDPin, LOW);
  } n
  else if (IR_Level == HIGH) {
    digitalWrite(redLEDPin, LOW);
    digitalWrite(greenLEDPin, HIGH);
  }


}

```