

ASSIGNMENT 4

PROGRAM:

HC-SR04.INO

HC-SR04 Ultrasonic Sensor Example.

Turn the LED on when an object is within 100cm range.

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*/

```
#define ECHO_PIN 2
#define TRIG_PIN 3

void setup() {
    Serial.begin(115200);
    pinMode(LED_BUILTIN, OUTPUT);
    pinMode(TRIG_PIN, OUTPUT);
    pinMode(ECHO_PIN, INPUT);
}

float readDistanceCM() {
    digitalWrite(TRIG_PIN, LOW);
    delayMicroseconds(2);
    digitalWrite(TRIG_PIN, HIGH);
    delayMicroseconds(10);
    digitalWrite(TRIG_PIN, LOW);
    int duration = pulseIn(ECHO_PIN, HIGH);
    return duration * 0.034 / 2;
}

void loop() {
    float distance = readDistanceCM();

    bool isNearby = distance < 100;
    digitalWrite(LED_BUILTIN, isNearby);

    Serial.print("Measured distance: ");
    Serial.println(readDistanceCM());

    delay(100);
}
```

DIAGRAM.JSNO

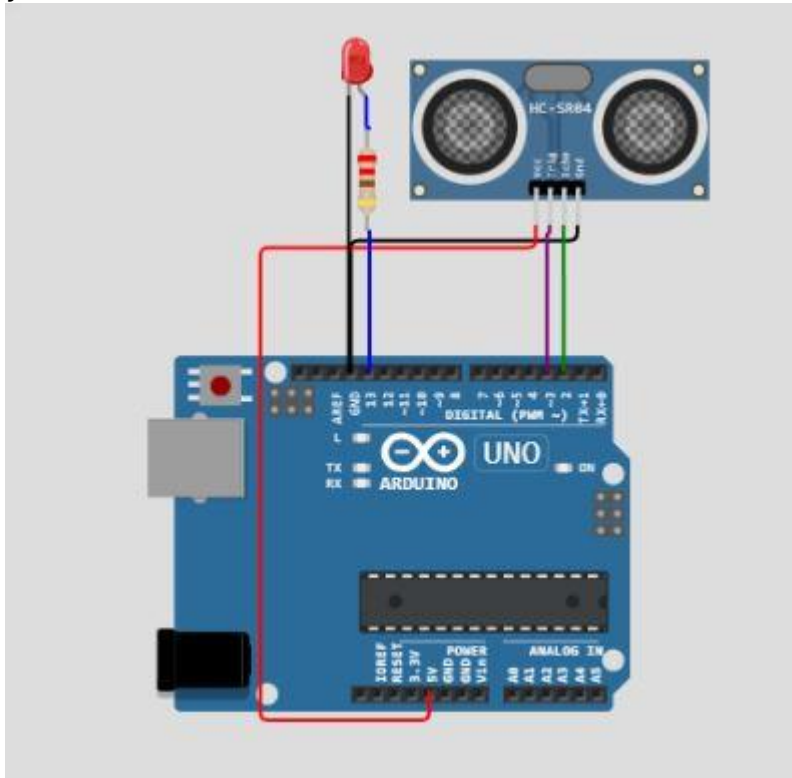
```
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```

```

[ "uno:2", "ultrasonic:ECHO", "green", [ ] ],
[ "uno:3", "ultrasonic:TRIG", "purple", [ "*", "v4" ] ],
[ "uno:5V", "ultrasonic:VCC", "red", [ "v16", "h-96", "*", "v12" ] ],
[ "uno:GND.1", "led:C", "black", [ ] ],
[ "r1:1", "led:A", "blue", [ ] ],
[ "uno:13", "r1:2", "blue", [ ] ]
]
}

```



[LINK](https://wokwi.com/projects/290056311044833800)

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