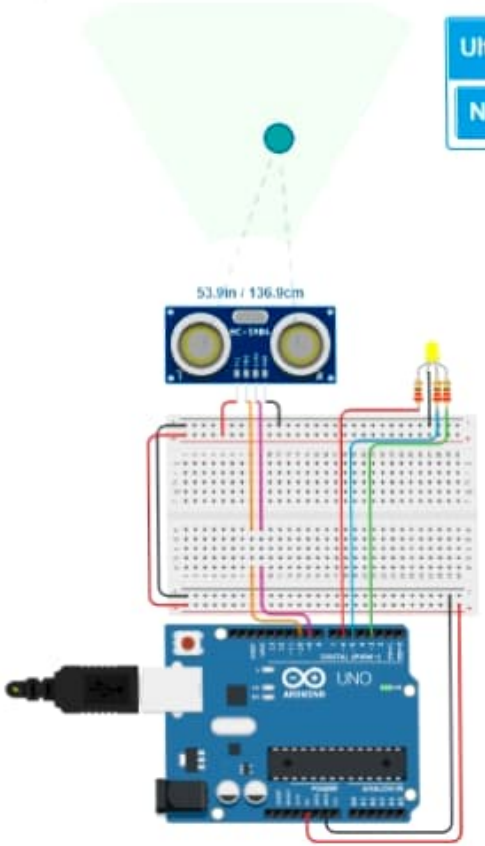
Simulator time: 00:00:14.789

Code | Stop Simulation | Send To

Ultrasonic Distance Sensor

Name 1



1 (Arduino Uno R3)

```
#define echoPin 9
#define trigPin 10

int red= 6, green= 3, blue= 5;
long duration;
int distance;



void setup() {
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
  pinMode(red, OUTPUT);
  pinMode(green, OUTPUT);
  pinMode(blue, OUTPUT);
  Serial.begin(9600);
}

void loop() {
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH);
  distance = duration * 0.034 / 2;
```

How the debugger works

1. Add breakpoints by clicking on the line numbers.
2. Hover over the variables while paused to see their value.
3. Use the buttons above to resume simulation or step one line at a time.

Serial Monitor

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#define echoPin 9
#define trigPin 10

Int red= 6, green= 3, blue= 5;
Long duration;
Int distance;



Void setup() {
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
  pinMode(red, OUTPUT);
  pinMode(green, OUTPUT);
  pinMode(blue, OUTPUT);
  Serial.begin(9600);
}

Void loop() {
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH);
  distance = duration * 0.034 / 2;
  Serial.println(distance);

 If(distance>0 && distance<=50) {
```

```
 RGB_color(255, 0, 0);
}
Else if(distance>50 && distance<=150) {
 RGB_color(255, 255, 0);
}
Else if(distance>150 && distance<=300) {
 RGB_color(0, 255, 0);
}
 Else{
   RGB_color(255,0,0); //on going out of range in tinkercad, it turns red
 }
}

Void RGB_color(int red_value, int green_value, int blue_value)
{
 analogWrite(red, red_value);
 analogWrite(green, green_value);
 analogWrite(blue, blue_value);
}
```