

ASSIGNMENT -1

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Wokwi link:

<https://wokwi.com/projects/362988713910381569>

Code:

```
// C++ code
//
int ultrasonic_sensor = 0;

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);
}

void setup()
{
    Serial.begin(9600);
    pinMode(9, OUTPUT);
    pinMode(10, OUTPUT);
    pinMode(10, OUTPUT);
}

void loop()
{
    ultrasonic_sensor = 0.01723 * readUltrasonicDistance(7, 6);
    Serial.println(ultrasonic_sensor);
    if (ultrasonic_sensor < 100) {
        digitalWrite(9, HIGH);
    } else {
        digitalWrite(9, LOW);
    }
    if (ultrasonic_sensor < 50) {
        tone(10, 92, 100); // play tone 30 (F#2 = 92 Hz)
```

```

    } else {
        digitalWrite(10, LOW);
    }
    delay(10); // Delay a little bit to improve simulation performance
}

```

Wokwi connection :

