

Team ID : NM2023TMID10858

Team Member 3 : SWATHI.P

Wokwi link: <https://wokwi.com/projects/363259657232183297>

Code:

```
const int buzzerPin =5;
const int ledPin = 6;
const int motionPin =7;
const int buttonPin =12;
const int triggerPin =12;
const int echoPin=13;
const int speakerPin=10;
const int pitch=262;
boolean buzzer_mode =false;
int ledState =LOW;
long previousMillis = 0;
long interval =100;

double duration,distance;

void setup()
{
  Serial.begin(9600);
  Serial.println("buzzerPin");
  pinMode(buzzerPin,INPUT);
  pinMode(buttonPin,INPUT);
  delay(5000);
  pinMode(triggerPin,OUTPUT);
  pinMode(echoPin,INPUT);
  pinMode(ledPin,OUTPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
  if (digitalRead(motionPin))
```

```
    buzzer_mode = true;
```

```
  if (buzzer_mode)
```

```
  { unsigned long currentMillis = millis();
```

```
    if (currentMillis - previousMillis > interval)
```

```
    { previousMillis = currentMillis;
```

```
    if (ledState == LOW)
```

```
      ledState = HIGH;
```

```
    else
```

```
      ledState = LOW;
```

```
    digitalWrite(ledPin, ledState);
```

```
  }
```

```
  tone(buzzerPin, 1000);
```

```
}
```

```
  if (buzzer_mode == false)
```

```
    noTone(buzzerPin);
```

```
    digitalWrite(ledPin, LOW);
```

```
  int button_state = digitalRead(buttonPin);
```

```
  if (button_state) { buzzer_mode = false; }
```

```
  Serial.println(button_state);
```

```
digitalWrite(trigerPin, LOW);
delayMicroseconds(2);
digitalWrite(trigerPin, HIGH);
delayMicroseconds(10);
digitalWrite(trigerPin, LOW);
delayMicroseconds(2);

duration =pulseIn(echoPin,HIGH);

distance = (duration/2)*0.0343;

if(distance<200)
{
    digitalWrite(ledPin, HIGH);
    tone(speakerPin,pitch);
    delay(300);

    digitalWrite(ledPin, LOW);
    noTone(speakerPin);
    delay(300);
}
else
    digitalWrite(ledPin, LOW);
    noTone(speakerPin);
}
```

Schematics:

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Simulation

Code

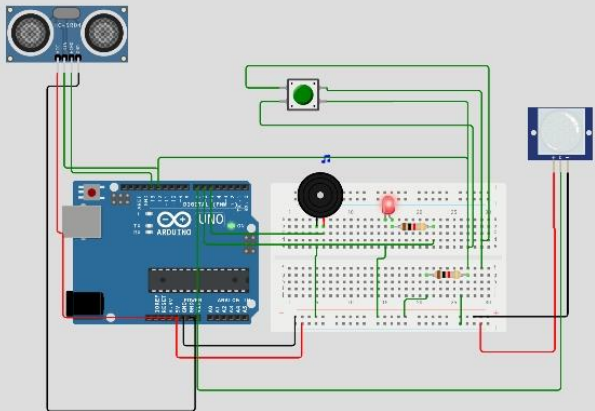
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Simulation Code

sketch.ino diagram.json Library Manager

```
1
2 const int buzzerPin =5;
3 const int ledPin = 6;
4 const int motionPin =7;
5 const int buttonPin =12;
6 const int triggerPin =12;
7 const int echoPin=13;
8 const int speakerPin=10;
9 const int pitch=262;
10 boolean buzzer_mode =false;
11 int ledState =LOW;
12 long previousMillis = 0;
13 long interval =100;
14
15 double duration,distance;
16
17 void setup()
18 {
19   Serial.begin(9600);
20   Serial.println("buzzerPin");
21   pinMode(buzzerPin,INPUT);
22   pinMode(buttonPin,INPUT);
23   delay(5000);
24   pinMode(triggerPin,OUTPUT);
25   pinMode(echoPin,INPUT);
26   pinMode(ledPin,OUTPUT);
27 }
28
29 void loop()
30 {
```

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Simulation Code

sketch.ino diagram.json Library Manager

```
30 {
31   if (digitalRead(motionPin))
32     buzzer_mode = true;
33
34   if (buzzer_mode)
35   {
36     unsigned long currentMillis = millis();
37     if (currentMillis - previousMillis > 1000)
38     {
39       previousMillis = currentMillis;
40       if (ledState == LOW)
41         ledState = HIGH;
42       else
43         ledState = LOW;
44       digitalWrite(ledPin, ledState);
45     }
46     tone(buzzerPin, 1000);
47   }
48   if (buzzer_mode == false)
49     noTone(buzzerPin);
50     digitalWrite(ledPin, LOW);
51
52   int button_state = digitalRead(buttonPin);
53   if (button_state) {buzzer_mode = true;
54     Serial.println(button_state);
55
56     digitalWrite(trigerPin, LOW);
57     delayMicroseconds(2);
58     digitalWrite(trigerPin, HIGH);
59     delayMicroseconds(10);
```

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Simulation Code

sketch.ino diagram.json Library Manager

```
58 digitalWrite(trigerPin, HIGH);
59 delayMicroseconds(10);
60 digitalWrite(trigerPin, LOW);
61 delayMicroseconds(2);
62
63 duration = pulseIn(echoPin, HIGH);
64
65 distance = (duration/2)*0.0343;
66
67 if(distance<200)
68 {
69     digitalWrite(ledPin, HIGH);
70     tone(speakerPin,pitch);
71     delay(300);
72
73     digitalWrite(ledPin, LOW);
74     noTone(speakerPin);
75     delay(300);
76 }
77 else
78     digitalWrite(ledPin, LOW);
79     noTone(speakerPin);
80 }
81
82
83
```

