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**Topic:**smart home

**Code:**

```
int lightsensor = A0;
```

```
int pirsensor = 2;
```

```
int buzzer = 4;
```

```
int led=8;
```

```
void setup()
```

```
{
```

```
  pinMode(lightsensor, INPUT);
```

```
  pinMode(pirsensor, INPUT);
```

```
  pinMode(buzzer, OUTPUT);
```

```
  pinMode(led,OUTPUT);
```

```
  Serial.begin(9600);
```

```
}
```

```
void loop()
{
  lightsensor = analogRead(lightsensor);
  pirsensor = digitalRead(pirsensor);
  if (lightsensor < 700) {
    if (pirsensor == HIGH) {
      digitalWrite(led,HIGH);
      digitalWrite(buzzer,HIGH);
      delay(1000);
    } else {
      digitalWrite(buzzer, LOW);
      digitalWrite(led,LOW);
      delay(1000); //
    }
  } else {
    digitalWrite(buzzer, LOW);
    digitalWrite(led,LOW);
    Serial.println(lightsensor);
  }
  delay(1000);
}
```

The screenshot shows a Proteus simulation environment. On the left, an Arduino Uno is connected to a breadboard. The breadboard contains a PIR sensor, a buzzer, and an LED. Wires connect the sensor's VCC to the Arduino's 5V pin, its GND to the Arduino's GND pin, and its OUT pin to the buzzer's positive terminal. The buzzer's negative terminal is connected to the Arduino's GND pin. The LED's anode is connected to the Arduino's digital pin 13, and its cathode is connected to the Arduino's GND pin. A data table for the PIR sensor is displayed, showing Target X: 108.19, Target Y: -178.67, and Target V: -235.05. On the right, the C++ code for the Arduino is shown, which includes a setup function for the PIR sensor, buzzer, and LED, and a loop function that reads the PIR sensor's output and controls the buzzer and LED accordingly.

PIR Sensor	
Name	pirsensor
Target X	108.19
Target Y	-178.67
Target V	-235.05

```

1 // C++ code
2 //
3 int lightsensor = A0;
4 int pirsensor = 2;
5 int buzzer = 4;
6 int led=3;
7
8 void setup()
9 {
10   pinMode(lightsensor, INPUT);
11   pinMode(pirsensor, INPUT);
12   pinMode(buzzer, OUTPUT);
13   pinMode(led,OUTPUT);
14   Serial.begin(9600);
15 }
16
17 void loop()
18 {
19   lightsensor = analogRead(lightsensor);
20   pirsensor = digitalRead(pirsensor);
21   if (lightsensor < 700) {
22     if (pirsensor == HIGH) {
23       digitalWrite(led,HIGH);
24       digitalWrite(buzzer,HIGH);
25       delay(1000);
26     } else {
27       digitalWrite(buzzer, LOW);
28       digitalWrite(led,LOW);
29       delay(1000); // Wait for 1000 milliseconds
30     }
31   } else {
32     digitalWrite(buzzer, LOW);
33     digitalWrite(led,LOW);
34     Serial.println(lightsensor);
35   }
36 }
37
38 Serial Monitor
  
```