

AHSANULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

PROJECT REPORT

TITLE: MOTION SENSING LIGHT

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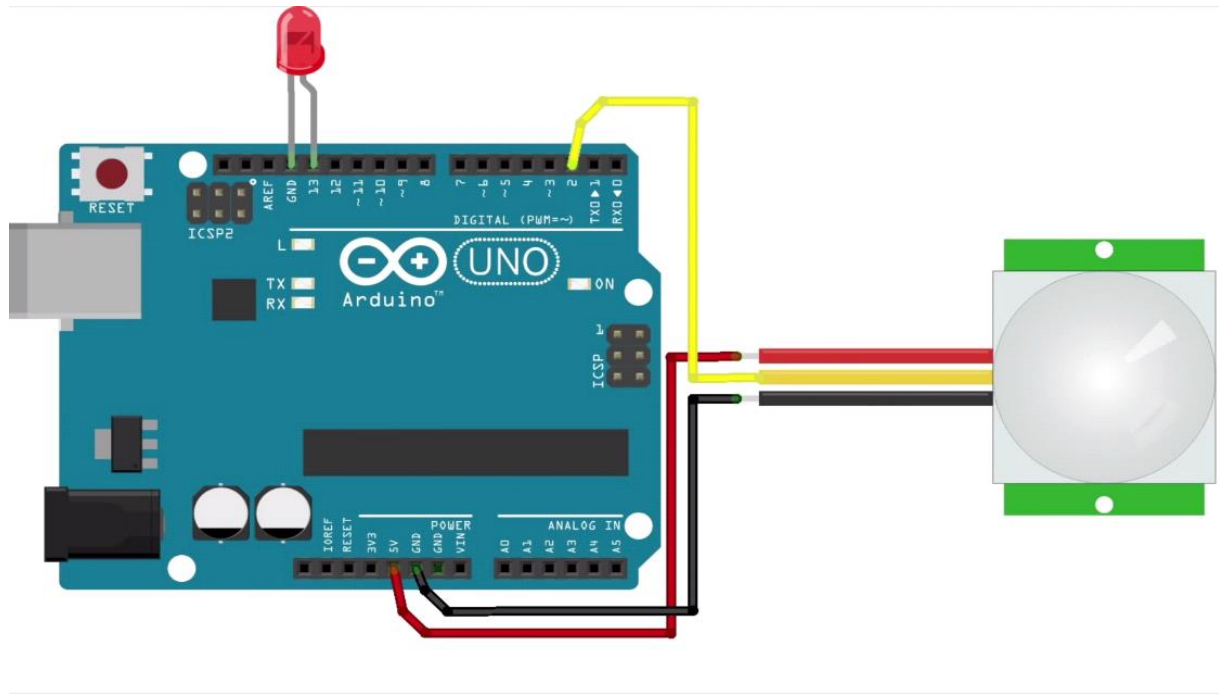
Introduction:

Our purpose is to make a motion sensing light which is activated by a motion sensor rather than by a conventional light switch.

Equipment:

- 1.Arduino UNO
- 2.PIR sensor module (SEN-00059)
- 3.Resistance
- 4.Battery
- 5.Jmper wires
- 6.LED

Circuit Diagram:



Working Procedure:

1ST of all we check the PIR module with 12 volt dc supply and LED. Then we connected the arduino UNO with the pc and set up the circuit as shown in circuit diagram. We set the code and completed our project. If any motion is created in front the PIR module the LED becomes lightened otherwise it remains off.

Code:

```
int led =13;
```

```
int sensor=2;
```

```
int state=LOW;
```

```
int val=0;
```

```
void setup() {
```

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

```
    pinMode(sensor,INPUT);
```

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

```
}
```

```
    // put your setup code here, to run once:
```

```
void loop()
```

```
val=digitalRead(sensor);
```

```
if (val==HIGH){
```

```
    digitalWrite(led,HIGH);
```

```
    delay(100);
```

```
    if (state==LOW) {
```

```
        Serial.println("Motion detected");
```

```
        state=HIGH;
```

```
    }
```

```
}
```

```
    else {
```

```
        digitalWrite(led,LOW);
```

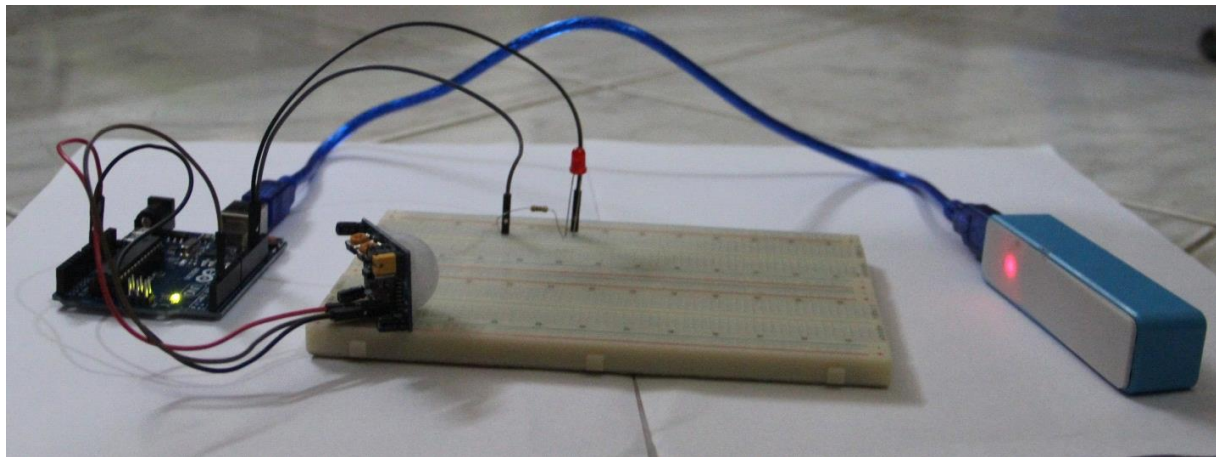
```
        delay(200);
```

```
        if (state==HIGH){
```

```
            Serial.println("Motion stopped");
```

```
state=LOW;  
}  
}  
}
```

Project Image:



Problem:When we did the experiment we faced a little bit problem.At first we couldn't find out the vcc,out and Gnd pin in the PIR sensor cause it was covered by the cap.But this problem was solved when we saw the video and ensured that we can open the front cap.First time we didn't find out the right process of testing the PIR sensor.Then main problem was happened when we didn't get the output at first time.We couldn't find out our fault but at last we noticed that there are some error in our code.But finally it was solved by us when we took advise from our teacher.

Discussion: As it is a group project, it has made a good understanding among us. This is our first time that's why we tried to know about the micro controller Arduino UNO that we used. We faced some problem and solved it together by the help of our honourable teacher. This project has started a new chapter in our life and has changed our views. In future we will try to update this project by the concepts that we gathered in this project.

Reference:

<https://learn.adafruit.com/pir-passive-infrared-proximity-motion-sensor/testing-a-pir>

<https://www.youtube.com/watch?v=vJgtckLzoKM>

https://www.youtube.com/watch?v=Cnf_9RP08oA

<https://www.arduino.cc/>