

ASSIGNMENT -1

Smart Home Automation Using Sensors

```
float x,y,z,temp;

void setup()

{

    pinMode(8, INPUT);

    pinMode(5, OUTPUT);

    pinMode(6, OUTPUT);

    pinMode(A5, INPUT);

    pinMode(A4, INPUT);

    Serial.begin(9600);

}

void loop()

{

    x= digitalRead(8);

    y= analogRead(A5);

    z= analogRead(A4);

    Serial.println(x);

    Serial.println(y);

    Serial.println(z);

    temp = (double)z / 1024;

    temp = temp * 5;

    temp = temp - 0.5;

    temp = temp * 100;

    if ( (x>0) )

    {
```

```
if ((y<550)&&(temp>30))
{
    digitalWrite(5, HIGH);
    digitalWrite(6, HIGH);
}
else if((y<550)&&(temp<30))
{
    digitalWrite(5, HIGH);
    digitalWrite(6, LOW);
}
else if((y>550)&&(temp>30))
{
    digitalWrite(5, LOW);
    digitalWrite(6, HIGH);
}
else if((y>550)&&(temp<30))
{
    digitalWrite(5, LOW);
    digitalWrite(6, LOW);
}
}
else
{
    digitalWrite(5, LOW);
    digitalWrite(6, LOW);
}
}
```

OUTPUT:

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tinkercad.com/things/3GkpVsOEaj-glorious-elzing-fyran/edit?tenant=circuits

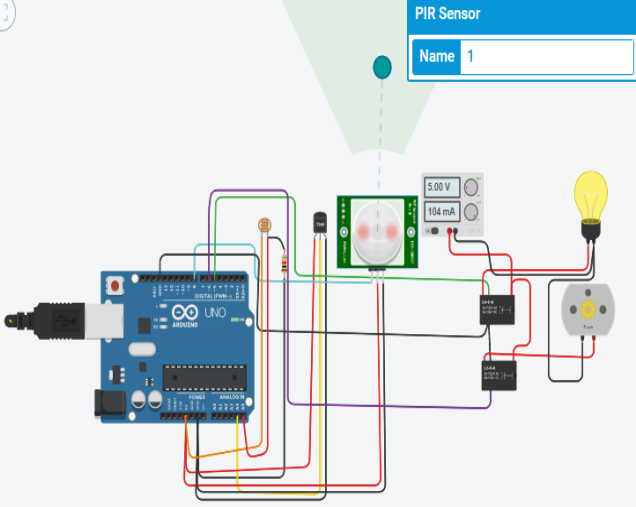
Glorious Elzing-Fyran

All changes saved

Simulator time: 00:00:16.099

Code Stop Simulation Send To

1 (Arduino Uno R3)



```
1 float x,y,z,temp;
2 void setup()
3 {
4   pinMode(8, INPUT);
5   pinMode(5, OUTPUT);
6   pinMode(6, OUTPUT);
7   pinMode(A5, INPUT);
8   pinMode(A4, INPUT);
9   Serial.begin(9600);
10 }
11 void loop()
12 {
13   x= digitalRead(8);
14   y= analogRead(A5);
15   z= analogRead(A4);
16   Serial.println(x);
17   Serial.println(y);
18   Serial.println(z);
19   temp = (double)z / 1024;
20   temp = temp * 5;
21   temp = temp - 0.5;
22   temp = temp * 100;
23   if ( (x>0) )
24   {
25     if ((y<550)&&(temp>30))
26     {
27       digitalWrite(5, HIGH);
28       digitalWrite(6, HIGH);
29     }
30     else if ((y<550)&&(temp<30))
31     {
32       digitalWrite(5, LOW);
33       digitalWrite(6, LOW);
34     }
35   }
36   else
37   {
38     digitalWrite(5, LOW);
39     digitalWrite(6, LOW);
40   }
41 }
```

Serial Monitor

Type here to search

36°C Light rain 12:48 25-09-2022

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tinkercad.com/things/3GkpVsOEaj-glorious-elzing-fyran/edit?tenant=circuits

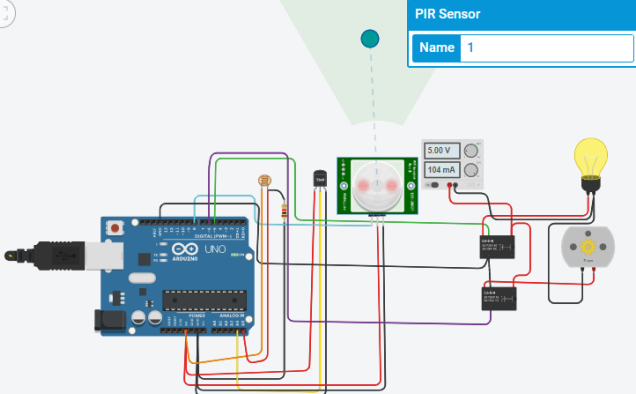
Glorious Elzing-Fyran

All changes saved

Simulator time: 00:00:21.040

Code Stop Simulation Send To

1 (Arduino Uno R3)



```
26 {
27   digitalWrite(5, HIGH);
28   digitalWrite(6, HIGH);
29 }
30 else if ((y<550)&&(temp<30))
31 {
32   digitalWrite(5, HIGH);
33   digitalWrite(6, LOW);
34 }
35 else if ((y>550)&&(temp>30))
36 {
37   digitalWrite(5, LOW);
38   digitalWrite(6, HIGH);
39 }
40 else if ((y>550)&&(temp>30))
41 {
42   digitalWrite(5, LOW);
43   digitalWrite(6, LOW);
44 }
45 }
46 else
47 {
48   digitalWrite(5, LOW);
49   digitalWrite(6, LOW);
50 }
51 }
```

Serial Monitor

Type here to search

Record high 12:48 25-09-2022

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Glorious Elzing-Fyyran

All changes saved

Simulator time: 00:00:07.956

Code Stop Simulation Send To

PIR Sensor

Name 1

Components

All

bulb

Output

Light bulb

Type here to search

36°C Light rain

ENG

12:47

25-09-2022