IBM Assignment-1 : Smart Home Automation

Team ID- PNT2022TMID51059

Code :

```
float x,y,z,temp;        //initializing the variables

const int ledPin = 13;      // led connected to 13

const int buzzerPin = 12;   //piezo buzzer connected to 12

void setup()

{

  pinMode(8, INPUT);        //set pir values as input

  pinMode(12, OUTPUT);      //set d12 as ooutput for buzzer

  pinMode(13, OUTPUT);      //set d13 as output for led

  pinMode(A5, INPUT);       //set a5 for input from photodiode

  pinMode(A4, INPUT);       //set a4 for input from temperature
sensor

  Serial.begin(9600);

}

void loop()              // run the proogram continuously

{

  x= digitalRead(8);        //get the digital input from pir

  y= analogRead(A5);        //get the analog input from photodiode
```

```
  z= analogRead(A4);         //get analog input from temperature
sensor

  Serial.println(x);

  Serial.println(y);

  Serial.println(z);

  temp = (double)z / 1024;     //calculating the temperature

  temp = temp * 5;

  temp = temp - 0.5;

  temp = temp * 100;

  if ( (x==HIGH) )

  {

   if(y<600 && temp>30)       //checking for both the temperature
and brightness value

   {

     tone(12,1000,250);       //turn on buzzer with 1000Hz for 250ms

     digitalWrite(13, HIGH);   //turn on led

   }

  }


  else

  {

   digitalWrite(13, LOW);      //turn off led
```

```
    }

}
```

Output :