DATE	10/10/2022
TEAM ID	PNT2022TMID43222
STUDENT NAME	ARAVIND A
STUDENT REGISTER NUMBER	714519106002
MAXIMUM MARKS	2 MARKS

ASSIGNMENT 1

OBJECTIVE:

Make a smart Home in, using 2+ sensors, led, buzzer in single code and circuit.

CODE:

```cpp
// C++ code
int trig=13;
int echo=12;
void setup()
{
  pinMode(trig,OUTPUT);
  pinMode(echo,INPUT);
  pinMode(11,INPUT);
  Serial.begin(9600);
  pinMode(10,OUTPUT); // buzzer for temp
  pinMode(8,OUTPUT); //led of ultrasonic
  pinMode(9,OUTPUT); //led of pir
}
void loop()
{
  double a=analogRead(A5);
  Serial.print("adc value:");
```

```
Serial.println(a);
```

```cpp
double v=a/1024;

double tvolt=v*5; // here 5 is in volt and thhiseqe for elect to temp volt

Serial.print("temp volt:");

Serial.println(tvolt);

double o=tvolt-0.5; //for octol and 0.5 for min volt for octal

double t=o*100;// this two eqe for volt to temp

Serial.print("temp is:");

Serial.println(t);

//delay(2000);

digitalWrite(trig,LOW); //off

digitalWrite(trig,HIGH);

delayMicroseconds(10);

digitalWrite(trig,LOW); // till this for trigger

float dur=pulseIn(echo,HIGH); // echo on

float dist=(dur*0.0343)/4; //cm to m

Serial.println("distance:");

Serial.println(dist); //ultra sonic

int m=digitalRead(11);

Serial.print("motion detected : ");

Serial.println(m);

if(t>=40)

{

  Serial.println("********house on fire*****");

  digitalWrite(10,HIGH);//to get

}

else

{

  digitalWrite(10,LOW);

}

//delay(2000)
```
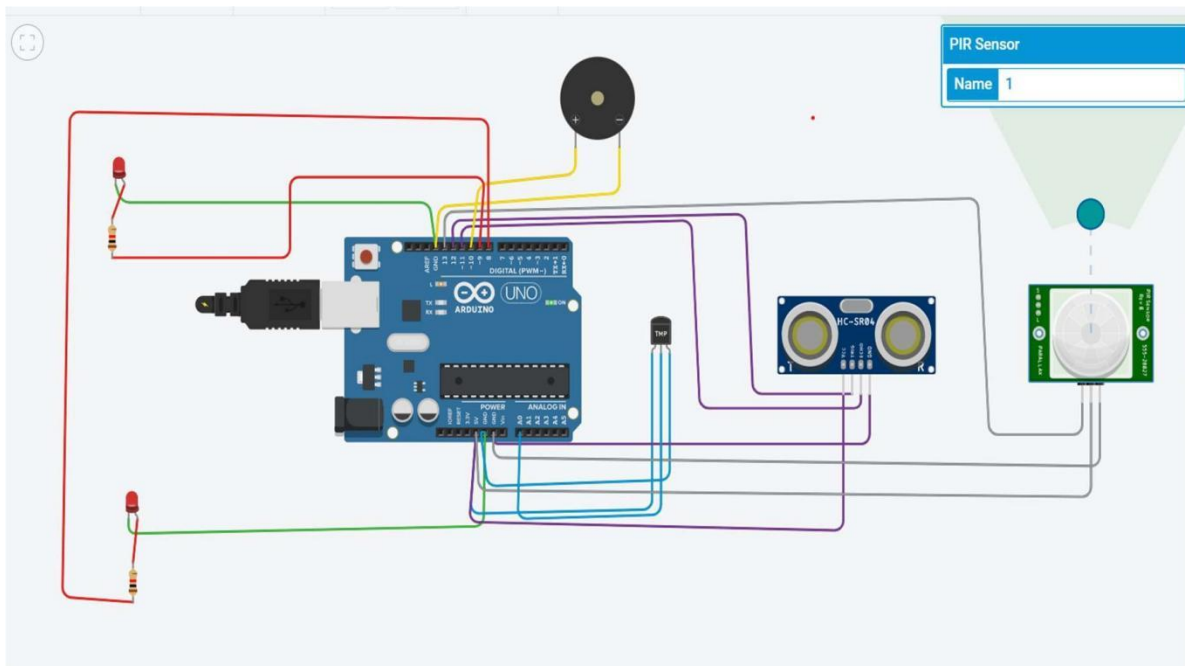
```arduino
if(dist<=18)

{

 Serial.println("**please kindly turn on light and fan**");

  digitalWrite(8,HIGH); //

}

else

{

 Serial.println("*****turn off light and fan****");

  digitalWrite(2,LOW);

}

if(m==1)

{

 Serial.println("*******open the cupboard******");

  digitalWrite(9,HIGH);

  delay(50);

}

else

{

 Serial.println("********close the cupboard*****");

  digitalWrite(9,LOW);

}

 delay(50);

}
```

OUTPUT:

```
1  CODE:
2  // C++ code
3  //
4  int trig=13;
5  int echo=12;
6  void setup()
7  {
8    pinMode(trig,OUTPUT);
9    pinMode(echo,INPUT);
10   pinMode(11,INPUT);
11   Serial.begin(9600);
12   pinMode(10,OUTPUT);  // buzzer for temp
13   pinMode(8,OUTPUT);   //led of ultrasonic
14   pinMode(9,OUTPUT);    //led of pir
15 }
16
17 void loop()
18 {
19   double a=analogRead(A5);
20   Serial.print("adc value:");
21   Serial.println(a);
```


STIMULATION LINK:

https://www.tinkercad.com/things/4P62geulvcp-terrific-bruticus-jaagub/editel