

ASSIGNMENT 1

OBJECTIVE:

Make a Smart Home in Tinkercad, using 2+ sensors, Led, Buzzer in single code and circuit.

CODE:

```
int trig=3;
int echo=5;
void setup()
{
  pinMode(trig,OUTPUT);
  pinMode(echo,INPUT);
  pinMode(7,INPUT);
  Serial.begin(9600);
  pinMode(10,OUTPUT);
  pinMode(4,OUTPUT);
  pinMode(12,OUTPUT);
}

void loop()
{
  double a=analogRead(A2);
  Serial.print("adc value:");
  Serial.println(a);
  double v=a/1024;
  double tvolt=v*5;
  Serial.print("temp volt:");
  Serial.println(tvolt);
```

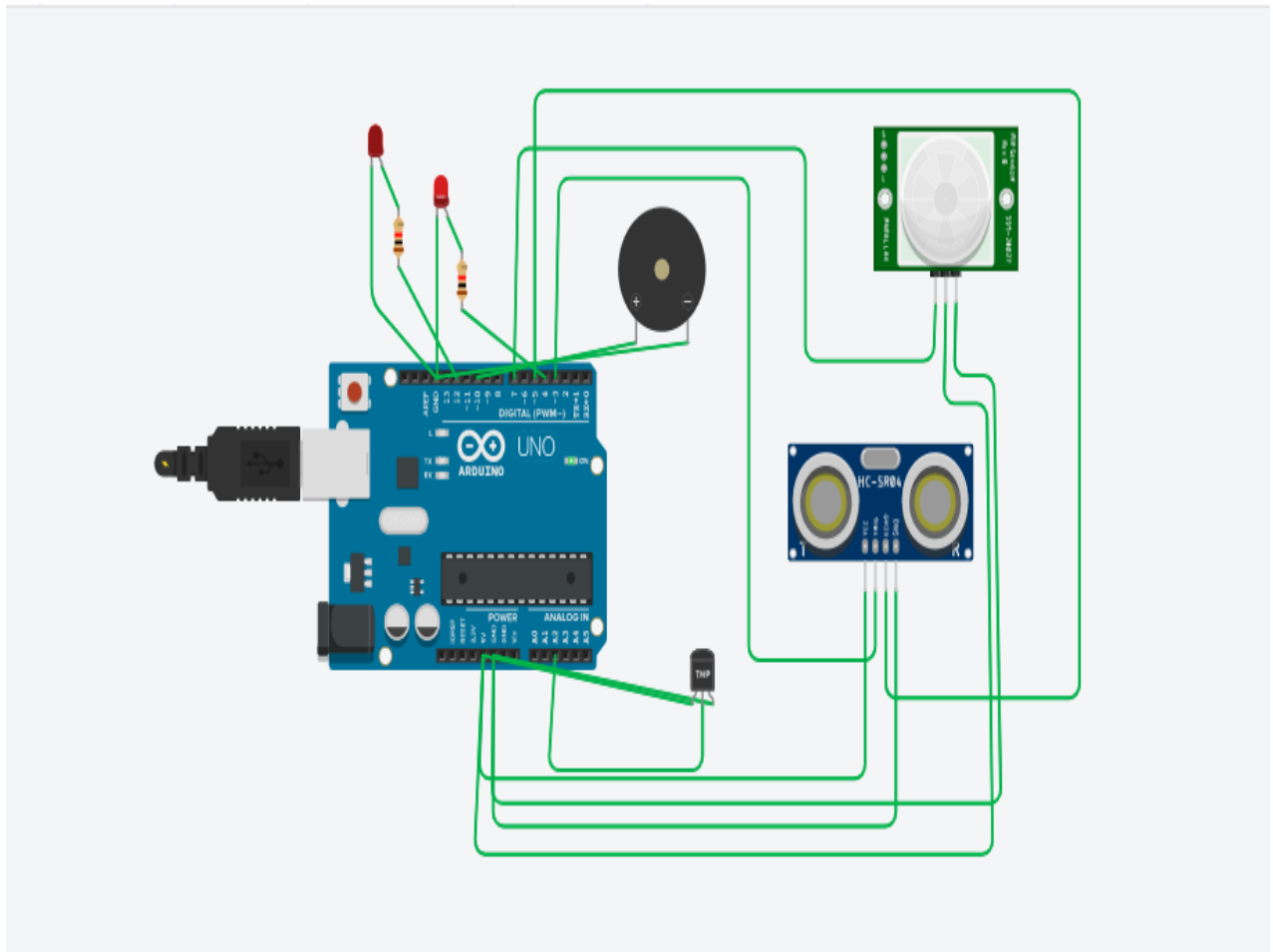
```
double o=tvolt-0.5;
double t=o*100;
Serial.print("temp is:");
Serial.println(t);
digitalWrite(trig,LOW);
digitalWrite(trig,HIGH);
delayMicroseconds(10);
digitalWrite(trig,LOW);
float dur=pulseIn(echo,HIGH);
float dist=(dur*0.0343)/5;
Serial.println("distance:");
Serial.println(dist);
int m=digitalRead(7);
Serial.print("motion detected : ");
Serial.println(m);
if(t>=60)
{
  Serial.println("high temperature");
  digitalWrite(10,HIGH);
}
else
{
  Serial.println("low temperature");
  digitalWrite(10,LOW);
}

if(dist<=20)
{
  Serial.println("door open");
  digitalWrite(4,HIGH);
}
else
{
```

```
Serial.println("door close");  
digitalWrite(4,LOW);  
}
```

```
if(m==1)  
{  
Serial.println("on the light");  
digitalWrite(12,HIGH);  
delay(50);  
}  
else  
{  
Serial.println("off the light");  
digitalWrite(12,LOW);  
}  
delay(50);  
}
```

Output:



SIMULATION LINK:

<https://www.tinkercad.com/things/3VhxxwkXL5M-assignment-1/editel>