

ASSIGNMENT-1

Build a smart home in Thinkercad with 2 sensors, an Led, buzzer and submit it.

Assignment Date	September 2022
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Maximum Marks	2 marks

Question 1

Build a smart home in Thinkercad with 2 sensors, an Led, buzzer and submit it.

CODE:

```
int t=2;
int e=3;
void setup()
{
  Serial.begin(9600);
  pinMode(t,OUTPUT);
  pinMode(e,INPUT);
  pinMode(12,OUTPUT);
}

void loop()
{
  //ultrasonic sensor Code
  digitalWrite(t,LOW);
  digitalWrite(t,HIGH);
  delayMicroseconds(10);
  digitalWrite(t,LOW);
  float dur=pulseIn(e,HIGH);
  int dis = dur * 0.034 / 2;
  Serial.print("Distance is: ");
  Serial.print(dis);
```

```
//LED ON Code
if(dis<=10)
{
    digitalWrite(8,HIGH);

}
else{
    digitalWrite(7,HIGH);
}

//Buzzer For ultrasonic Sensor Code
if(dis<=30)
{
    for(int i=0; i<=40; i=i+10)
    {
        tone(12,i);
        delay(1000);
        noTone(12);
        delay(1000);
    }
}

//Temperate Sensor Code
double a= analogRead(A0);
double tem=(((a/1024)*5)-0.5)*100;
Serial.print("Temp Value: ");
Serial.println(tem);
delay(1000);

//LED ON Code
if(t>=38)
```

```
{  
    digitalWrite(8,HIGH);
```

```
}
```

```
else
```

```
{  
    digitalWrite(7,HIGH);  
}
```

```
//Buzzer for Temperature Sensor Code
```

```
if(tem>=38)
```

```
{  
    digitalWrite(7,LOW);  
    digitalWrite(8,HIGH);  
    for(int i=0; i<=30; i=i+10)  
    {  
        tone(12,i);  
        delay(1000);  
        noTone(12);  
        delay(1000);  
    }  
}
```

```
//LED OFF Code
```

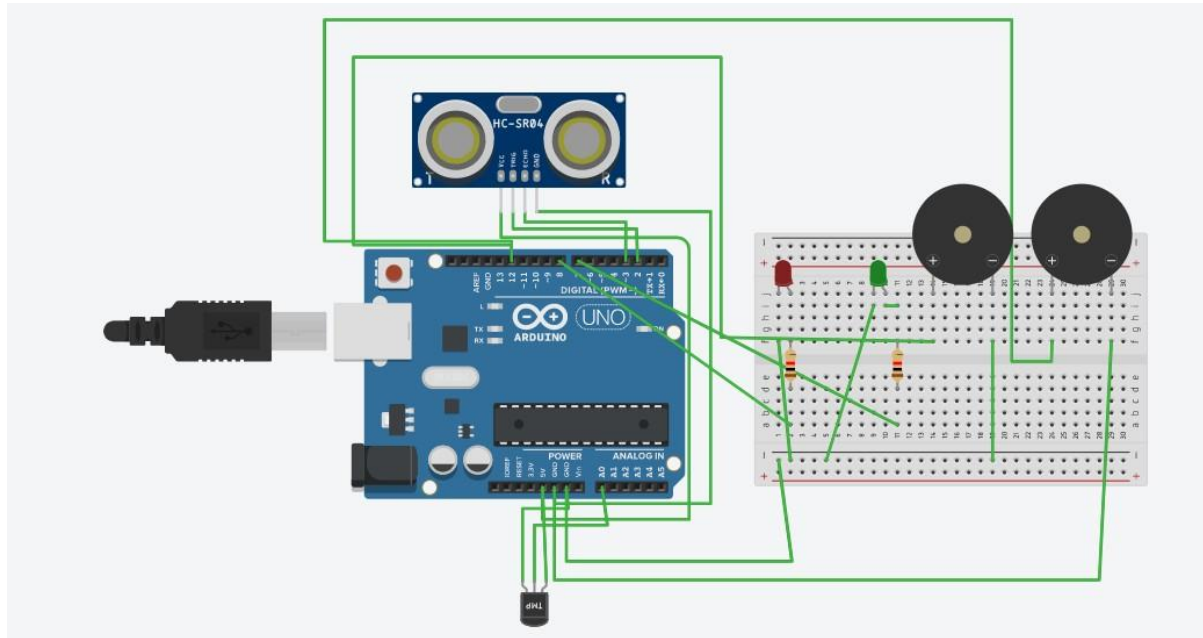
```
if(t<38)  
{  
    digitalWrite(8,LOW);  
    digitalWrite(7,HIGH);  
}  
else  
{  
    digitalWrite(8,HIGH);
```

```

digitalWrite(7,LOW);
}
}

```

CIRCUIT DIAGRAM WITH OUTPUT:



SCHEMATIC VIEW:

