

Assignment -1

Tinkercard Circuit

Assignment Date	15 September 2022
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Maximum Marks	2 Marks

Question:

Build a smart home in tinkercard.

Solution:

Source 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
  digitalWrite(t,LOW);
  digitalWrite(t,HIGH);
  delayMicroseconds(10);
  digitalWrite(t,LOW);
  float dur=pulseIn(e,HIGH);
  float dis=(dur*0.0343)/2;
  Serial.print("Distance is: ");
  Serial.println(dis);

  //LED ON
  if(dis>=60)//(in terms of centimeter)
  {
```

```
digitalWrite(8,HIGH);  
digitalWrite(7,HIGH);  
}
```

```
//Buzzer For ultrasonic Sensor  
if(dis>=60)  
{  
for(int i=0; i<=5; i=i+1)  
{  
tone(12,i);  
delay(1000);  
noTone(12);  
delay(1000);  
}  
}
```

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

```
//LED ON  
if(t>=20)//(in terms of celsius)  
{  
digitalWrite(8,HIGH);  
digitalWrite(7,HIGH);  
}
```

```
//Buzzer for Temperature Sensor  
if(t>=20)  
{  
for(int i=0; i<=5; i=i+1)  
{  
tone(12,i);  
delay(1000);  
noTone(12);  
delay(1000);  
}  
}
```

```
//LED OFF
if(t<20)
{
  digitalWrite(8,LOW);
  digitalWrite(7,LOW);
}
}
```

Tinkercad Link:

<https://www.tinkercad.com/things/fZqAiSqgoUr-neat-waasa/editel?sharecode=Orf9dNG-ZKJmzrGCsmKvaGNbuouDQ8e4cR0MtBEBiYk>

Output (Serial Monitor):



Circuit Diagram:

