

## Assignment -1

Smart home circuit connection in Tinkercad

Assignment Date	20 September 2022
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Maximum Marks	2 Marks

### Question-1:

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

### Solution:

```
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>=100)

{

    digitalWrite(8,HIGH);

    digitalWrite(7,HIGH);

}

//Buzzer For ultrasonic Sensor

if(dis>=100)

{

    for(int i=0; i<=30000; i=i+10)

    {

        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>=100)
```

```
{  
    digitalWrite(8,HIGH);  
    digitalWrite(7,HIGH);  
}  
  
//Buzzer for Temperature Sensor  
if(t>=100)  
{  
    for(int i=0; i<=30000; i=i+10)  
    {  
        tone(12,i);  
        delay(1000);  
        noTone(12);  
        delay(1000);  
    }  
}  
  
//LED OFF  
if(t<100)  
{  
    digitalWrite(8,LOW);  
    digitalWrite(7,LOW);  
}  
}
```

