

## ASSIGNMENT – I

DOMAIN: IOT

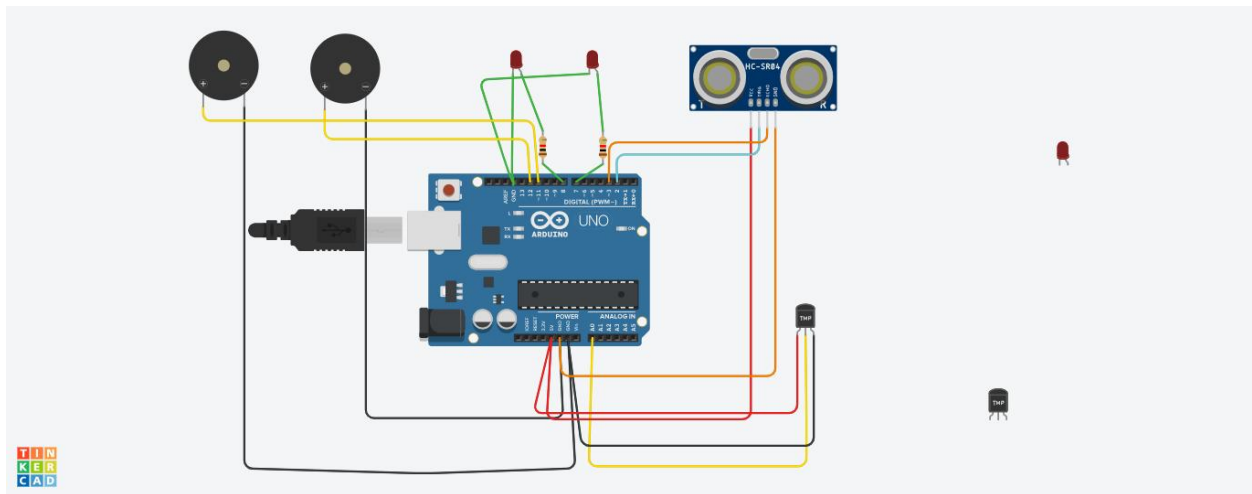
TITLE: SMART HOME

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Schematic (Circuit Diagram)

SMART Home Circuit Connection:



Components Used:

- i) 2 Piezo Buzzer
- ii) Temperature Sensor
- iii) Ultrasonic Sensor
- iv) LED -2
- v) Resistor-2

**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>=100)//(in terms of centimeter)  
{  
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)//(in terms of celsius)  
{
```

```
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);
}
}
```

**TINKERCAD LINK:**

<https://www.tinkercad.com/things/04FPijtpzQx-sizzling-wluff/editel?sharecode=crzWiaOKQ60gifycKs5plLr2No2f9OiiS32dXeYGf74>