

ASSIGNMENT – 1

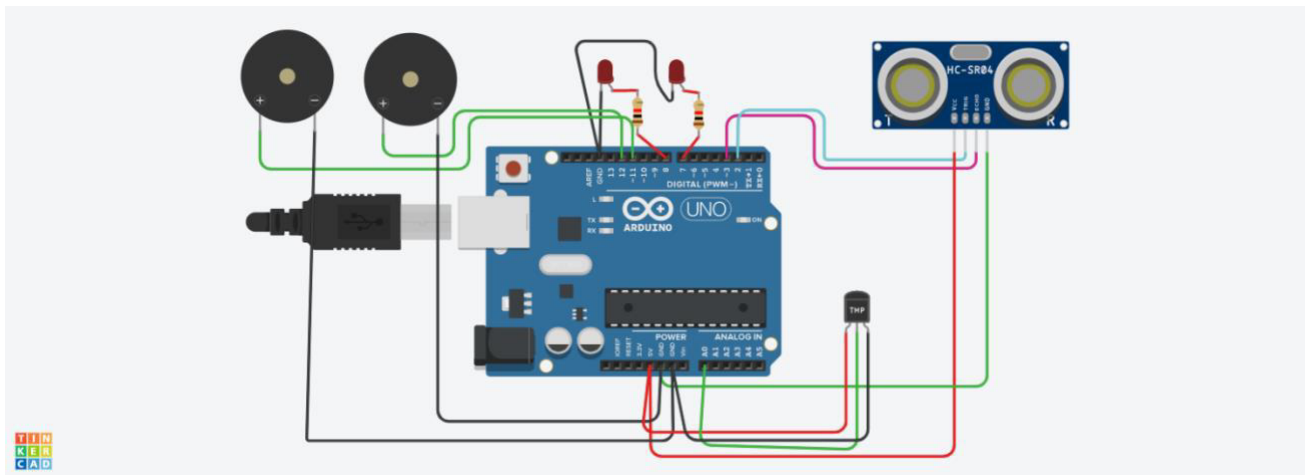
DOMAIN: IOT

TITLE: SMART HOME

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



SMART Home Circuit Connection:



Components Used:

- i) 2 Piezo Buzzers
- 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);
]
]

```

