IBM-Nallaiya Thiran Project
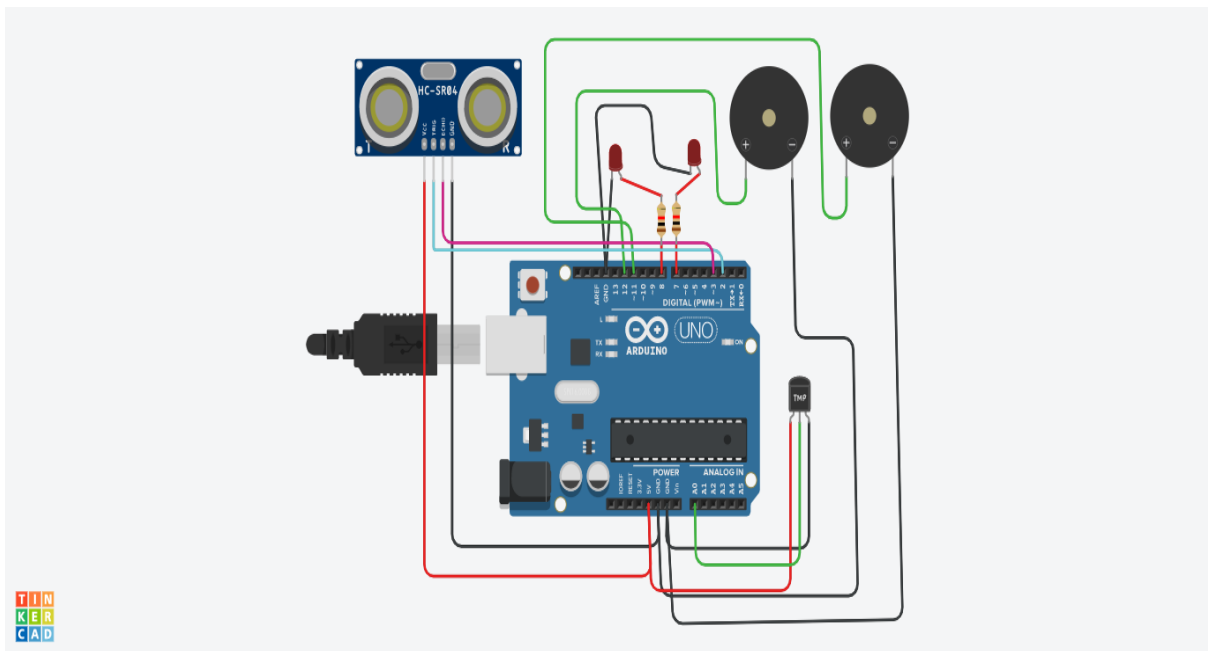
Assignment 1-Smart Home

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CIRCUIT DIAGRAM:

SOURCE CODE:

```
int t=2;

int e=3;

void setup()

{

  Serial.begin(9600);

  pinMode(t,OUTPUT);

  pinMode(e,INPUT);

  pinMode(12,OUTPUT);

}
```

```cpp
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 Temperatue 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)
{
```
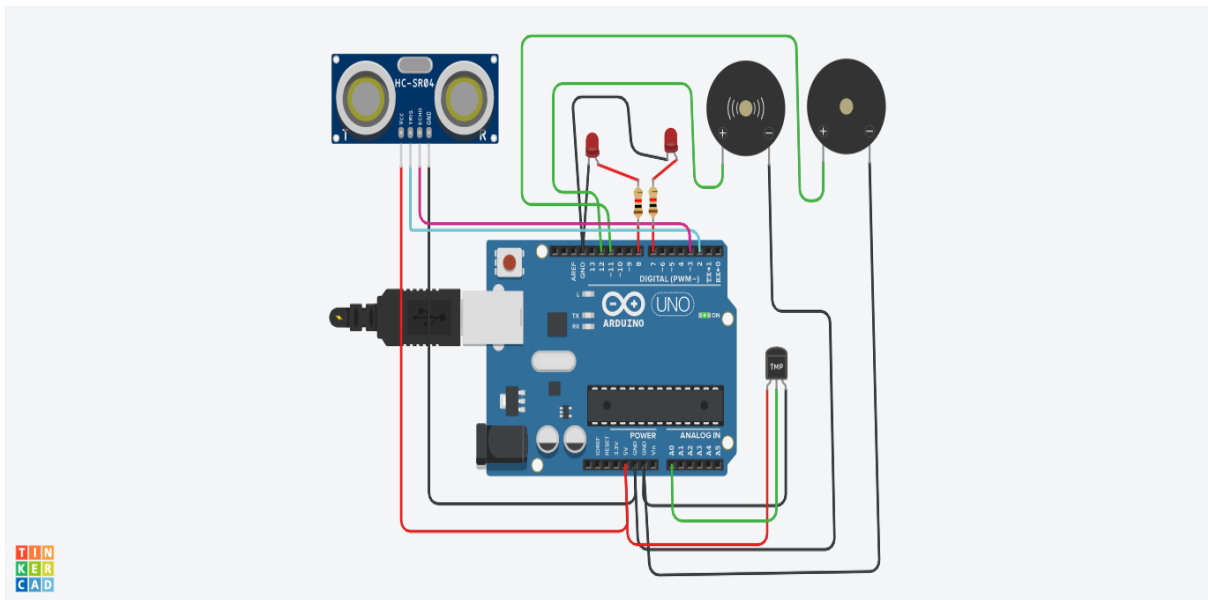
```
    digitalWrite(8,LOW);

    digitalWrite(7,LOW);

  }

}
```

OUTPUT:

Serial Monitor:

```
Distance is:112.88
Distance is:112.88
```


TINKERCAD LINK:

https://www.tinkercad.com/things/htujVJnygjk-sizzling-trug-elzing/editel?tenant=circuits