ASSIGNMENT 1

SMART HOME

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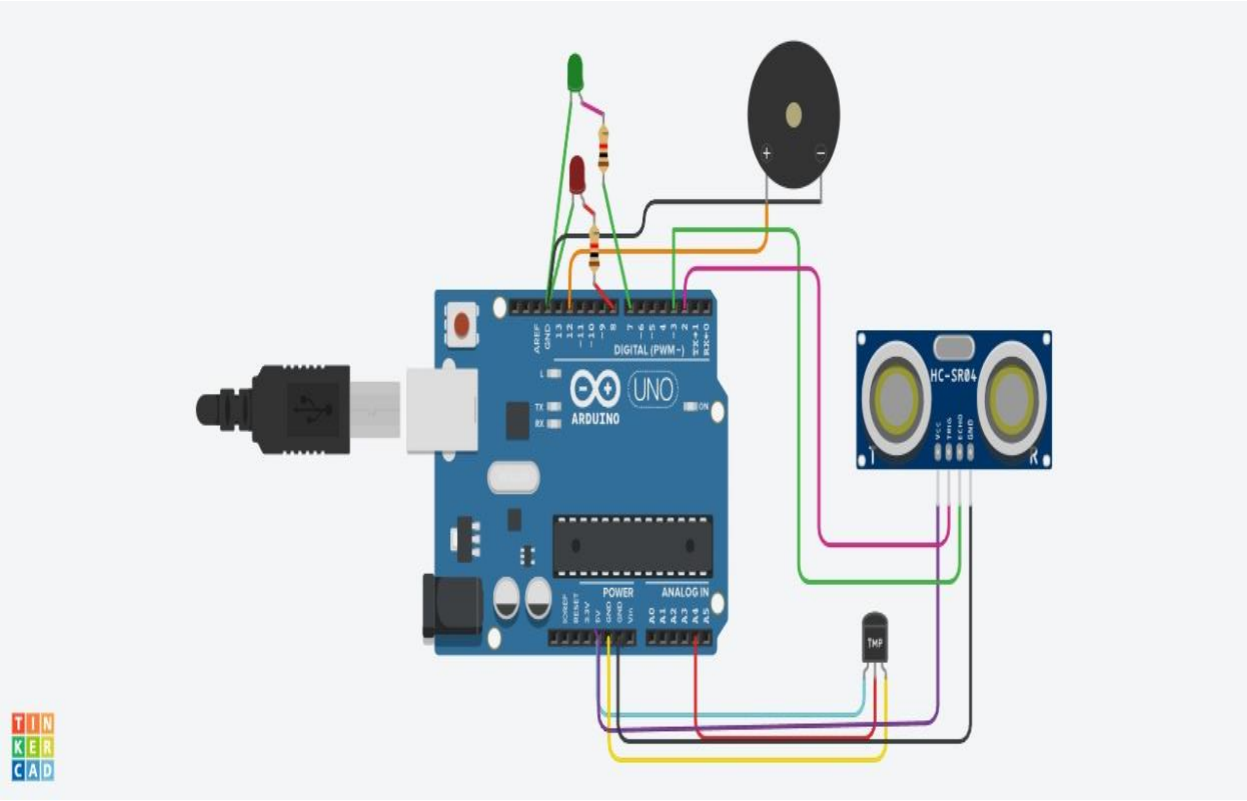

Components:

Name	Quantity	Component
U1	1	Arduino Uno R3

D1	**1**	**Red LED**
D2	**1**	**Green LED**
R1 **R2**	**2**	**100kΩ**
PIEZO1	**1**	**Piezo**
DIST1	**1**	**Ultrasonic Distance Sensor**
U2	**1**	**Temperature Sensor [TMP36]**

Code for Smart home using Tinkercad

```
// C++ code
//
int a=2;int b=3;
void setup()
{
  Serial.begin(9600);
  pinMode(a,OUTPUT);
  pinMode(b,INPUT);
```

```
  pinMode(12,OUTPUT);
}
void loop()
{
  //ultrasonic sensor
  digitalWrite(a,LOW);
  digitalWrite(a,HIGH);
  delayMicroseconds(10);
  digitalWrite(a,LOW);
  float dur=pulseIn(b,HIGH);
  float dis=(dur*0.0343)/2;
  Serial.print("Distance is: ");
  Serial.println(dis);
  //LED ON
  if(dis>=100)
  {
    digitalWrite(8,HIGH);
  }
  else
  {
```

```
  digitalWrite(8,LOW);
}
//Buzzer For ultrasonic Sensor
if(dis>=100)
{
  digitalWrite(12,HIGH);
  delay(500);
}
else
{
  digitalWrite(12,LOW);
  delay(500);
}
//Temperate Sensor
double a= analogRead(A4);
double t=(((a/1024)*5)-0.5)*100;
Serial.print("Temp Value: ");
Serial.println(a);
//LED ON
if(t>=100)
```

```
  {
    digitalWrite(7,HIGH);
  }
  else
  {
    digitalWrite(7,LOW);
  }
  //Buzzer for Temperature Sensor
  if(t>=100)
  {
    digitalWrite(12,HIGH);
    delay(500);
  }
  else{
    digitalWrite(12,LOW);
    delay(500);
  }
}
```

TINKERCAD AUTOMATION LINK

https://www.tinkercad.com/things/4x2mhlSBHrL-dazzling-inari/editel?sharecode=83eapLRNM6UzOwjs75HsNImLvSouTVcOrKdgO9F4Ctw