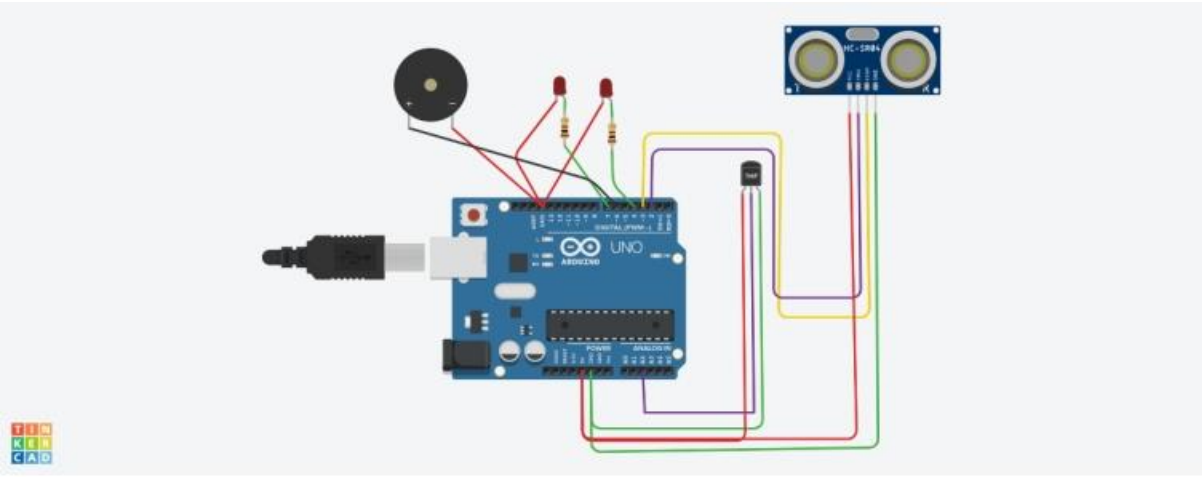
Assignment -1

Python Programming

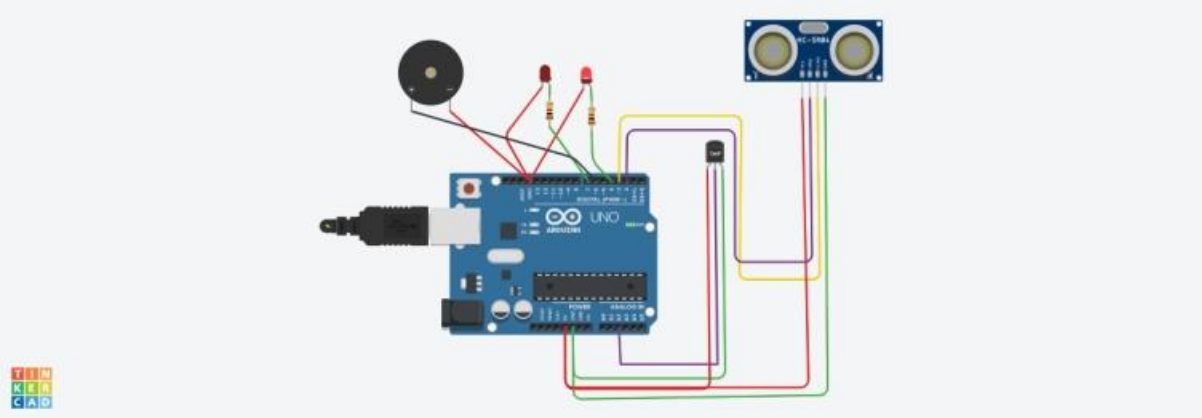
Assignment Date	**09 September 2022**
Student Name	**Deepalakshmi M**
Student Roll Number	**211419106061**
Maximum Marks	**2 Marks**

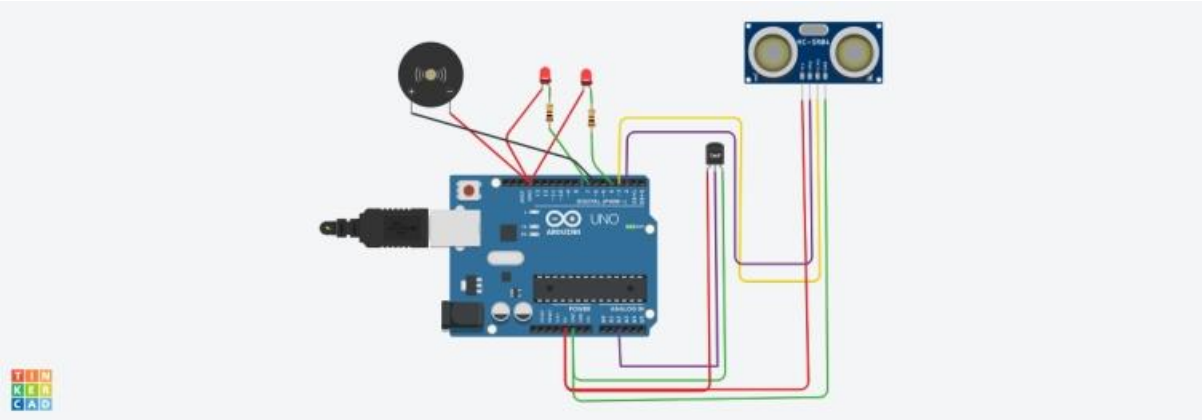
SMART HOME USING TINKERCAD

CIRCUIT:



SIMULATION:





CODE:

```
// C++ code

int trig = 2;

int echo = 3;

int led=4;

int buz=6;

int led1=7;

void setup()

{

  Serial.begin(9600);

  pinMode(trig,OUTPUT);
```

```
 pinMode(echo,INPUT);
 pinMode(led,OUTPUT);
 pinMode(led1,OUTPUT);
 pinMode(buz,OUTPUT);
}

void loop()
{
 // temperature sensor
 double t = analogRead(A2);
 Serial.print("Analog data: ");
 Serial.println(t);
 double n= t/1024;
 double v=n*5;
 Serial.print("Voltage data: ");
 Serial.println(v);

 double c=v-0.5;
 double k=v*100;
 Serial.print("Temperature value:");
 Serial.println(k);
 delay(1000);
 //ultasonic sensor
 digitalWrite(trig,LOW);
```

```
 digitalWrite(trig,HIGH);
 delayMicroseconds(10);
 digitalWrite(trig,LOW);
 float dur=pulseIn(echo,HIGH);
 float dist=(dur*0.0343)/2;
 Serial.print("Distance in cm : ");
 Serial.println(dist);
 //led
 if(dist>=100)
 {
  digitalWrite(led,HIGH);
 }
 else
 {
  digitalWrite(led,LOW);
 }
 //buzzer
 digitalWrite(buz,LOW);
 digitalWrite(led1,LOW);
 delay(1000);
 digitalWrite(buz,HIGH);
 digitalWrite(led1,HIGH);
 delay(1000);
}
```