Assignment - 1

Python Programming

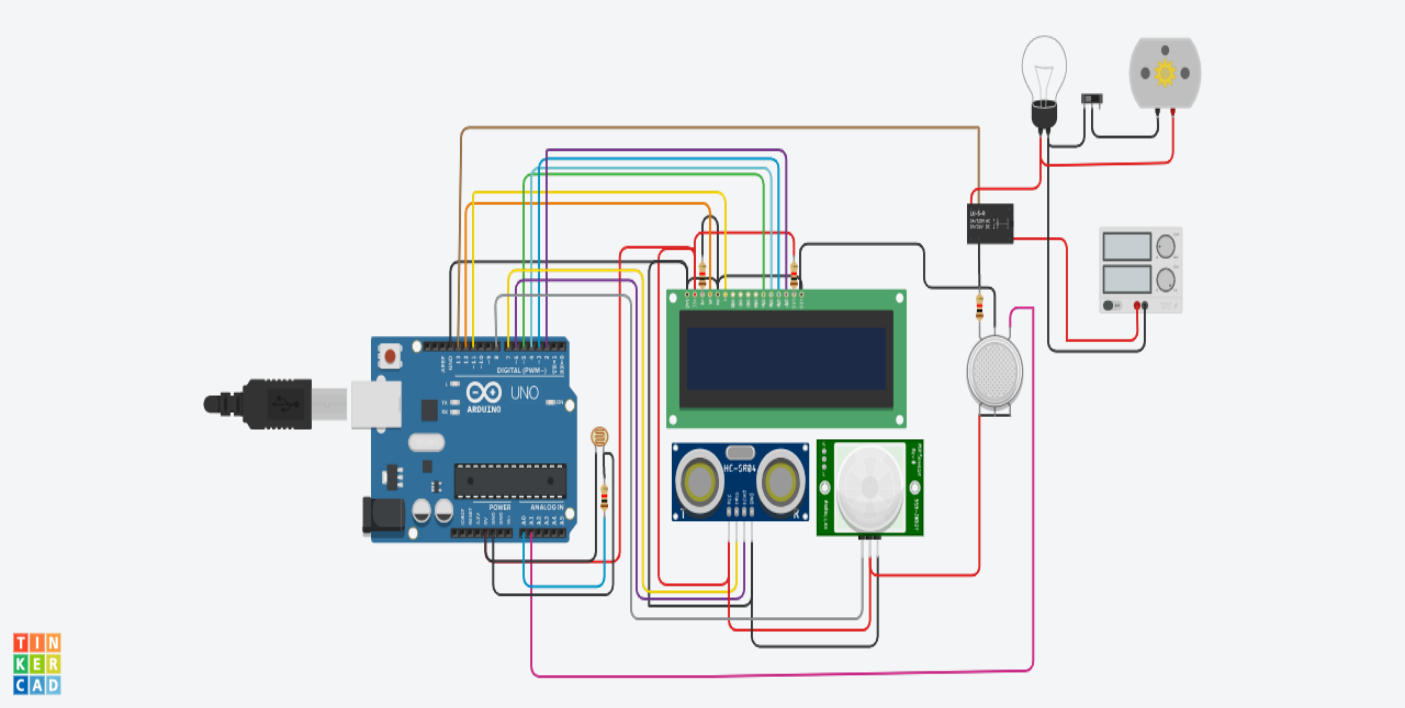
Assignment Date	19 September 2022
Student Name	Ms.D.Priyadharshini
Student Roll Number	821919104018
Maximum Marks	2 Marks

Question-1:

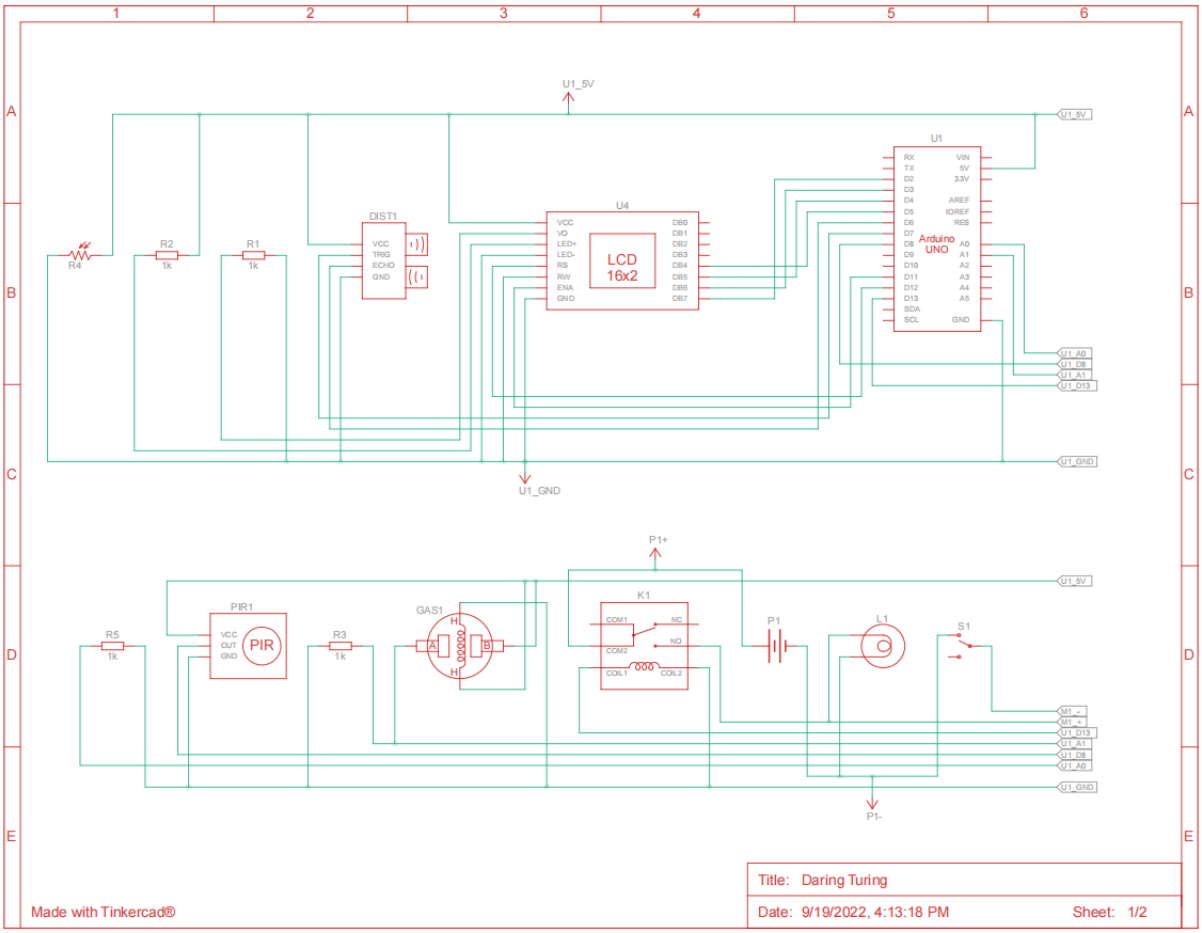
Make a Smart Home in Tinkercad using 2+sensors , Led , Buzzer in single code and circuit.

Solution:

Circuit Diagram:



Schematic View:



Made with Tinkercad®

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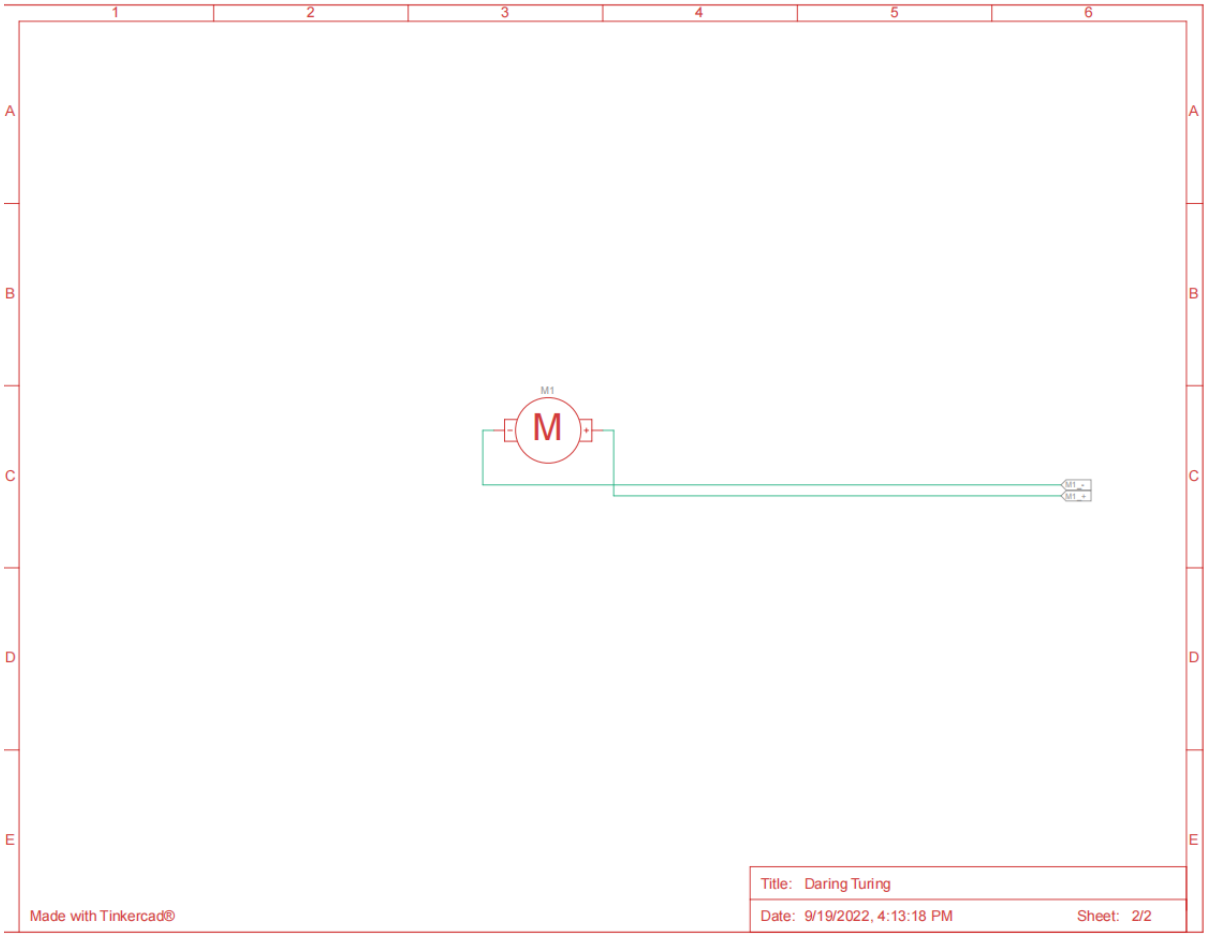

Source Code:

```
#include <LiquidCrystal.h>

LiquidCrystal lcd(12,11,5,4,3,2);

int distanceThreshold = 0;

int cm = 0;

int inches = 0;

int relNO = 13;

int inputPir = 0;

int val = 0;

int resuldoSensorLDR;
```

```
int sensorLDR = A0;
int const PINO_SGAS = A1;
long readultrasonicDistance(int triggerFin,int echoPin)
{
  pinMode(triggerPin,OUTPUT);
  digitalWrite(triggerPin,LOW);
  delayMicroseconds(2);
  digitalWrite(triggerPin,HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin,LOW);
  pinMode(echoPin, INPUT);
  return pulseIn(echoPin,HIGH);
}
void setup(){
  icd.begin(16,21)
    pinMode(relNO, OUTPUT);
    pinMode(inputPir, INPUT);
    pinMode(sensorLDR, INPUT);
    Serial.begin(9600);
}
void loop(){
  distanceThreshold = 350;
  cm = 0.01723*readUltrasonicDistance(7,6);
  inches = (cm/2.54);
```

```
  lcd.setCursor(0,0);
 lcd.print("D:");
 lcd.print(cm);
 lcd.print("cm");
 delay(10);


  val = digitalRead(inputPir);
 resuldoSensorLDR = analogRead(sensorLDR);
 if(resuldoSensorLDR <600);
 {
  if(val == HIGH)
  {
    digitalWrite(relNO,HIGH);
    lcd.setCursor(0,1);
 lcd.print("L: On");
    delay(5000);
  }
  else(
    digitalWrite (relNo, LOW);lcd.setCursor(0,1);
  lcd.print("L: Off");
    delay(300);
  }
}
```

```
    else{ digitalWrite
    Serial.printl(relNO, LOW);
    delay(500);
    }

    int color=analoRead(PINO_SGAS);

    lcd.setCursor(8,0);
    if(color <= 85){
      lcd.print("G:Low ");
    } else if(color <=120){
      lcd.print("G:Med ");
    } else if (color <= 200){
      lcd.print{"G:High");
    } else if (color <= 300){
      lcd.print{"G:Ext ");
    }
    delay(250);
}
```