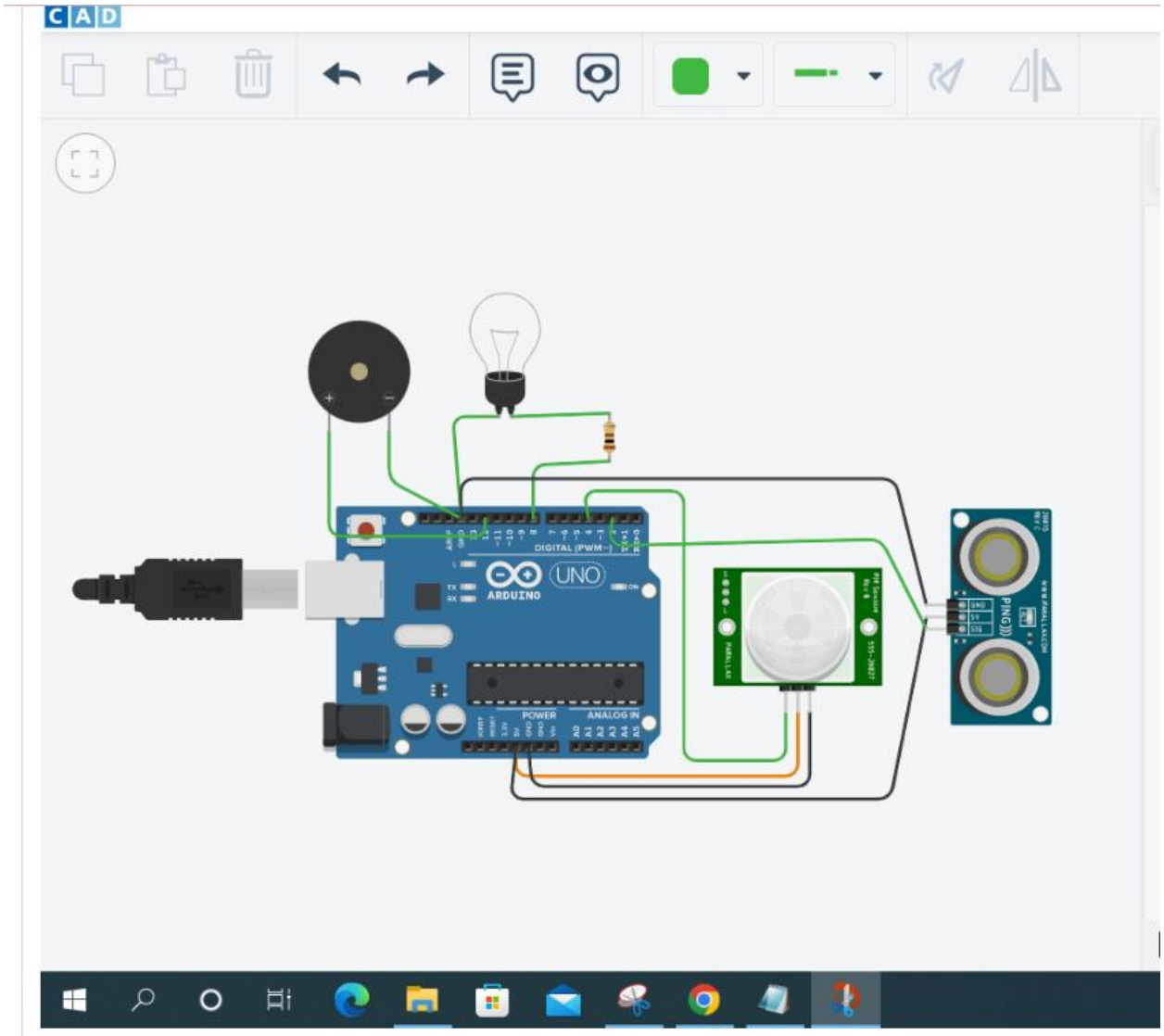
ASSIGNMENT-1

QUESTION : Home automation using Led and Sensors

Circuit:



Components List:

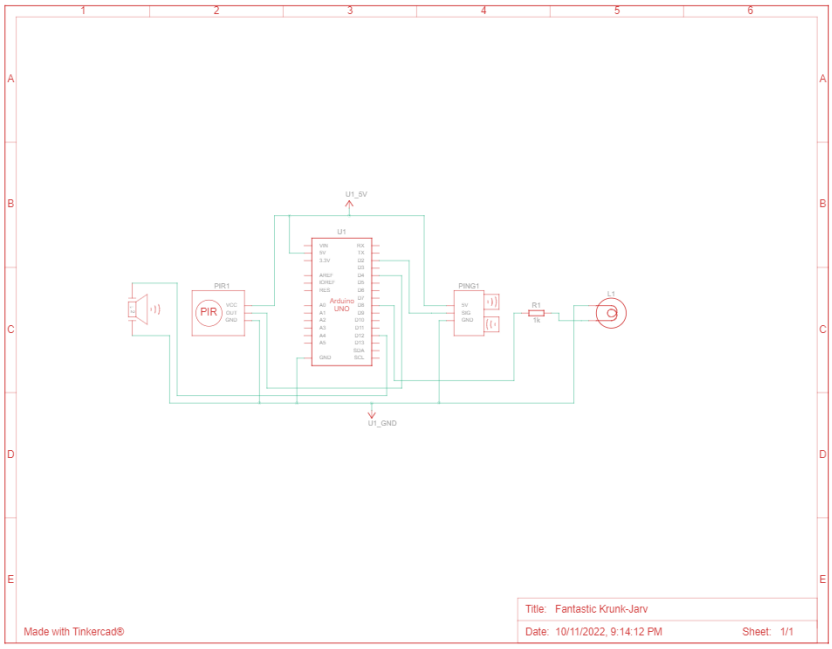
Fantastic Krunk-Jarv — Saving...

Component List — Download CSV

Name	Quantity	Component
U1	1	Arduino Uno R3
PIR1	1	PIR Sensor
PIEZO1	1	Piezo
PING1	1	Ultrasonic Distance Sensor
L1	1	Light bulb
R1	1	1 kΩ Resistor

Schematic Diagram:

Krunk-Jarv — All changes saved



Code:

```
int
sensor=4,
trig=2,
echo=2,
```

```
light=8,
buzz=12;
           int dist = 0;
           long objectDistance(int a, int b)
           {
             pinMode(a, OUTPUT);  // Clear the trigger
             digitalWrite(a, LOW);
             delayMicroseconds(2);
             digitalWrite(a, HIGH);
             delayMicroseconds(10);
             digitalWrite(a, LOW);

             pinMode(b, INPUT);

             return pulseIn(b, HIGH);
           }
           void setup()
           {
             Serial.begin(9600);
             pinMode(sensor, INPUT);
             pinMode(light, OUTPUT);
             pinMode(buzz, OUTPUT);
             digitalWrite(light, LOW);
           }
           void loop()
           {
             //readUltrasonicDistance(7, 7)
             dist = 0.01723 * objectDistance(trig, echo);
             Serial.print("Distance is ");
             Serial.print(dist);
             Serial.println("cm");
             if(dist>50 && dist<100)
             {
               tone(buzz, 50);
               delay(2000);
               noTone(buzz);
               //delay(1000);
               if(digitalRead(sensor))
               {
                 digitalWrite(light, HIGH);
                 delay(2000);
               }
             }
           }
```