SMART HOME AUTOMATION

REQUIREMENTS:

Arduino UNO R3, Ultrasonic distance sensor, PIR sensor, Temperature sensor, DC motor, Photoresistor, breadboard small, Micro-servo, Piezo, Resistor, Slide switch, Light bulb, Power supply.

SOFTWARE REQUIRED:

Tinkercad Software

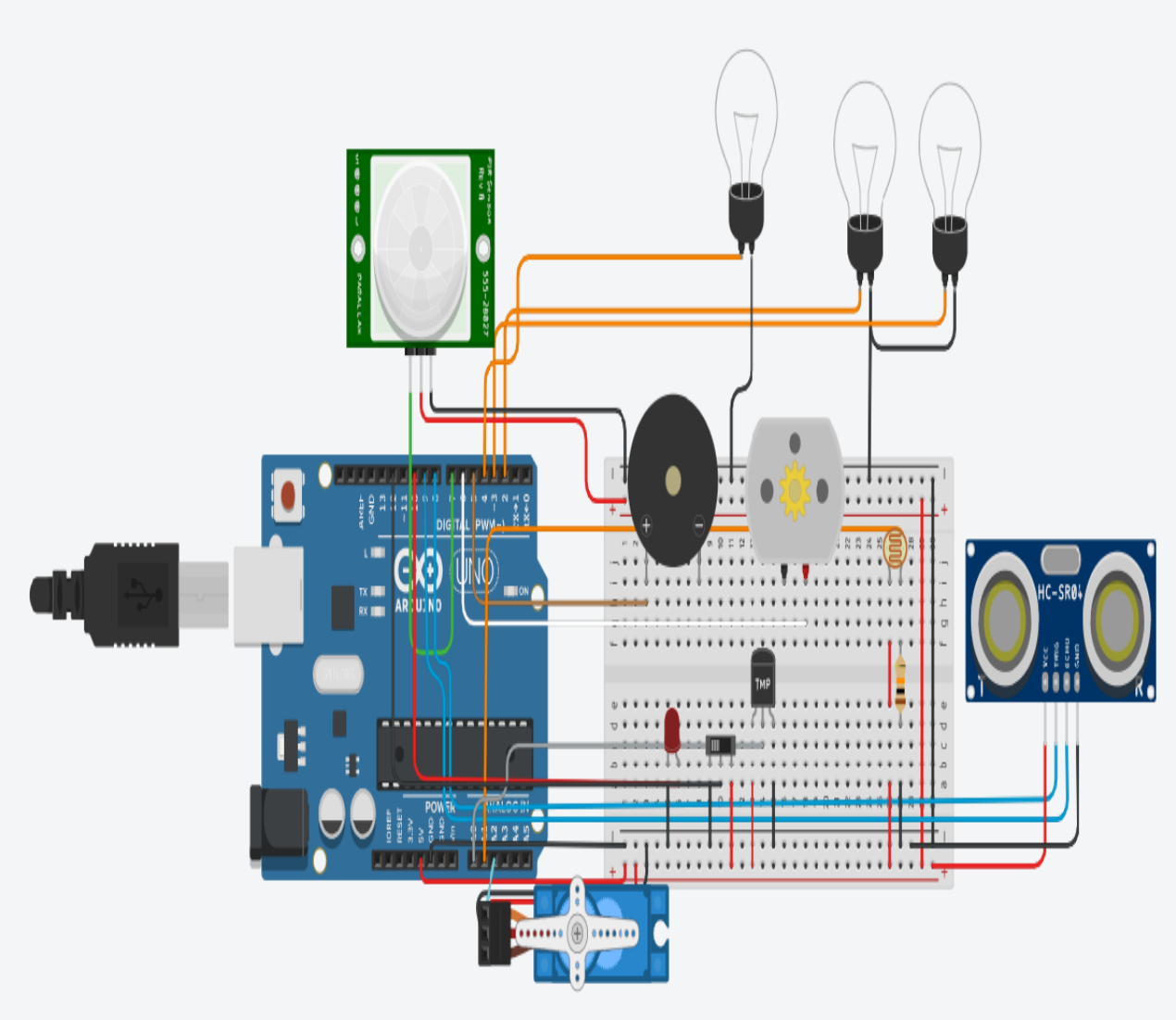
CODE:

```
#include<Servo.h>
int PIR = 8;
int LDR = A1;
int LED = 10;
int TMP = A0;
int MTR = 6;
int D;
int TRIG = 8;
int ECHO = 9;
int BUZZER = 5;
Servo door;
void setup()
{
  door.attach(A2);
  pinMode(LDR,INPUT);
  pinMode(LED,OUTPUT);
```

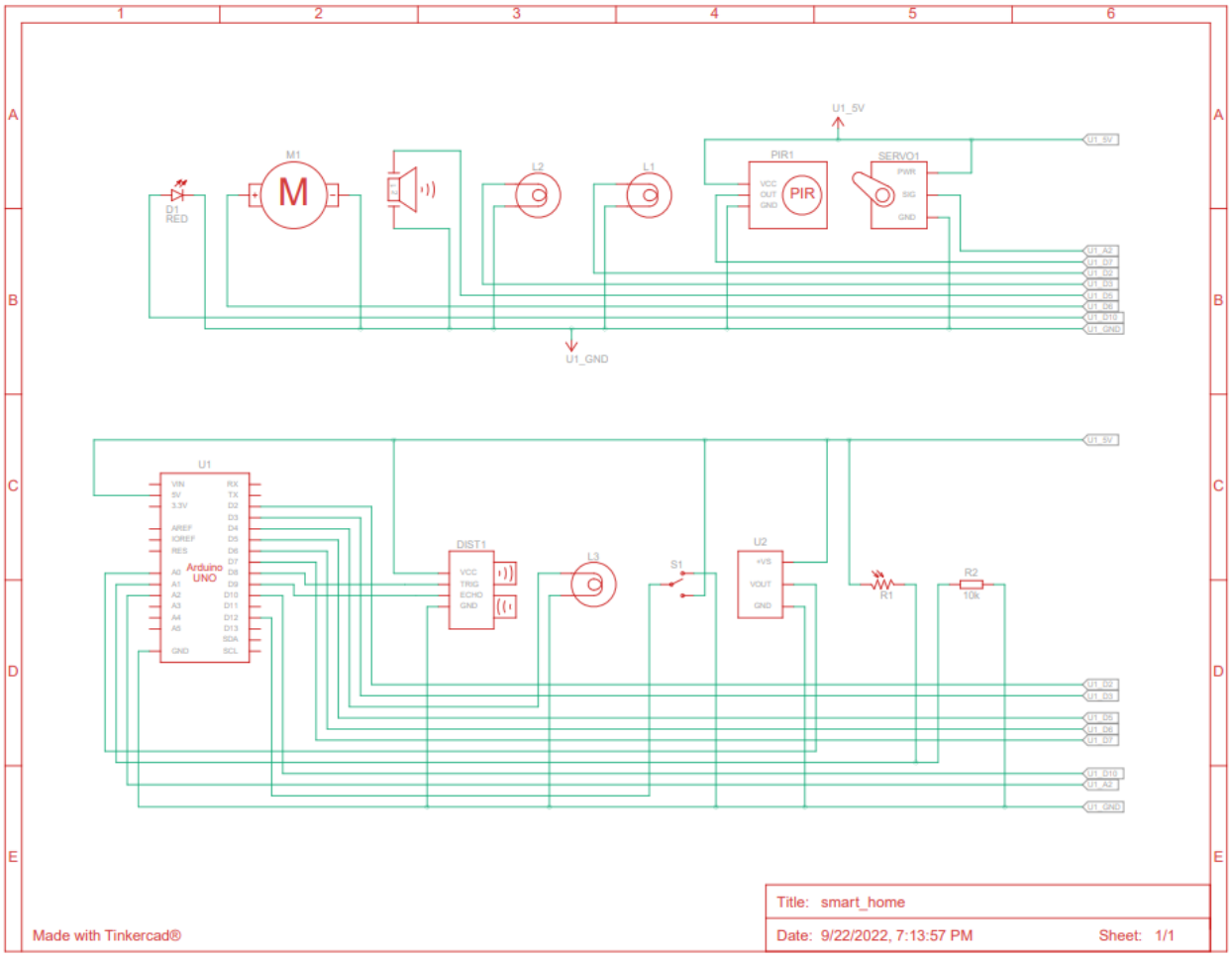
```
  pinMode(TMP,INPUT);
  pinMode(MTR,OUTPUT);
  pinMode(TRIG,OUTPUT);
  pinMode(ECHO,INPUT);
  pinMode(BUZZER,OUTPUT);
  pinMode(2,OUTPUT);
  pinMode(3,OUTPUT);
  pinMode(4,OUTPUT);
  pinMode(A1,OUTPUT);
  Serial.begin(9600);
}

void loop()
{
 int LDR2 = analogRead(LDR);
  Serial.println(LDR2);
  if(LDR2 <= 50)
  {
  digitalWrite(LED,HIGH);
  digitalWrite(2,HIGH);
  digitalWrite(3,HIGH);
  digitalWrite(4,HIGH);
  }
  else
  {
  digitalWrite(LED,LOW);
  digitalWrite(2,LOW);
  digitalWrite(3,LOW);
  digitalWrite(4,LOW);
  }
  int TEMP = analogRead(TMP);
  float VOLT = TEMP*5.0;
  VOLT /= 1024.0;
  float TempC = (VOLT - 0.5)*100;
  if(TempC >= 30)
  {
   digitalWrite(MTR,HIGH);
```

```
}
else
{
digitalWrite(MTR,LOW);
}
D = digitalRead(12);
if(D == 1)
{
door.write(100);
}
else
{
door.write(0);
}
long duration,distance;
digitalWrite(TRIG,HIGH);
delayMicroseconds(10);
digitalWrite(TRIG,LOW);
duration = pulseIn(ECHO,HIGH);
distance = duration/58.2;
if(distance <= 50 && distance >= 0)
{
digitalWrite(BUZZER,HIGH);
}
else
{
digitalWrite(BUZZER,LOW);
}
delay(60);
if(digitalRead(PIR) == HIGH)
{
digitalWrite(BUZZER,HIGH);
}
else
{
digitalWrite(BUZZER,LOW);
}}
```

CIRCUIT DIAGRAM:



SCHEMATIC DIAGRAM:



DEMO LINK:

https://www.tinkercad.com/things/cqQbalqCoT7-smarthome/editel