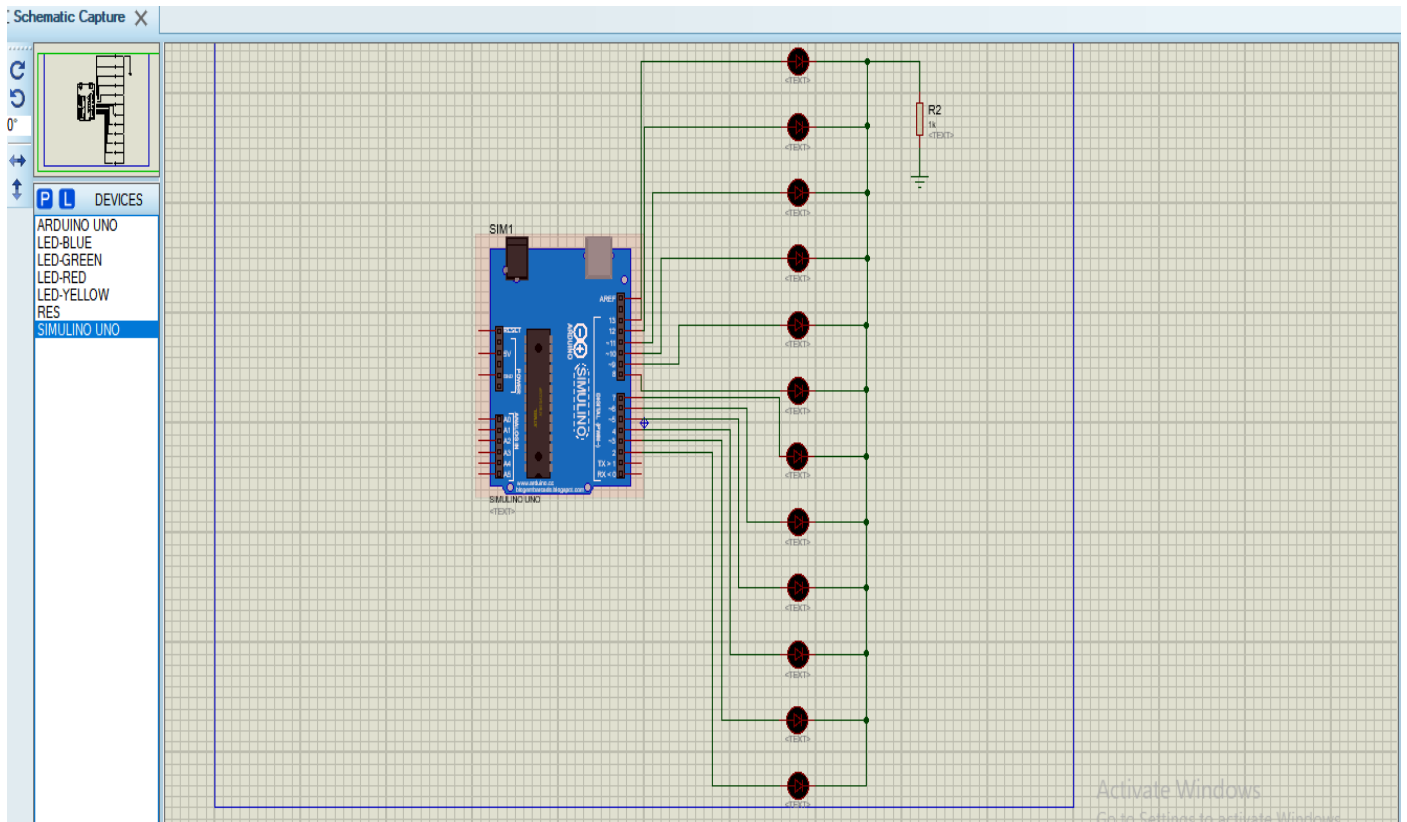




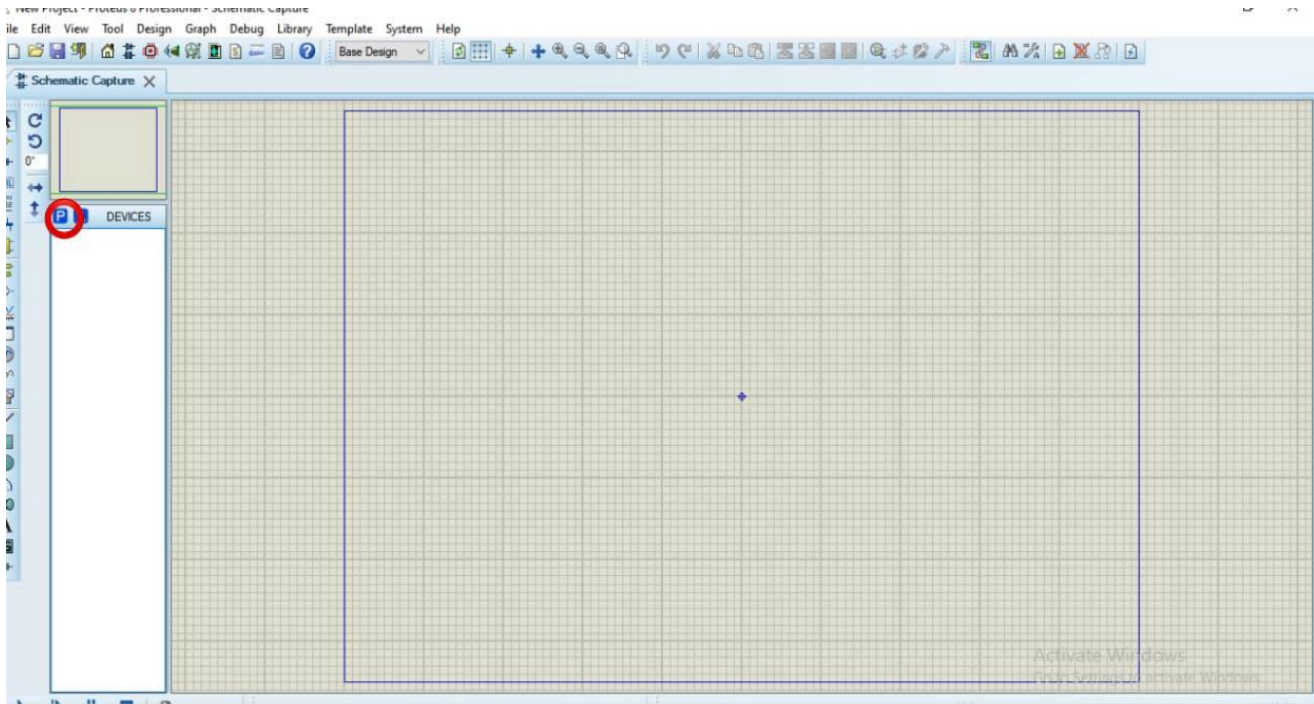
Multiple LED Simulation

by
Sannar Aamer
Adyan Hussein

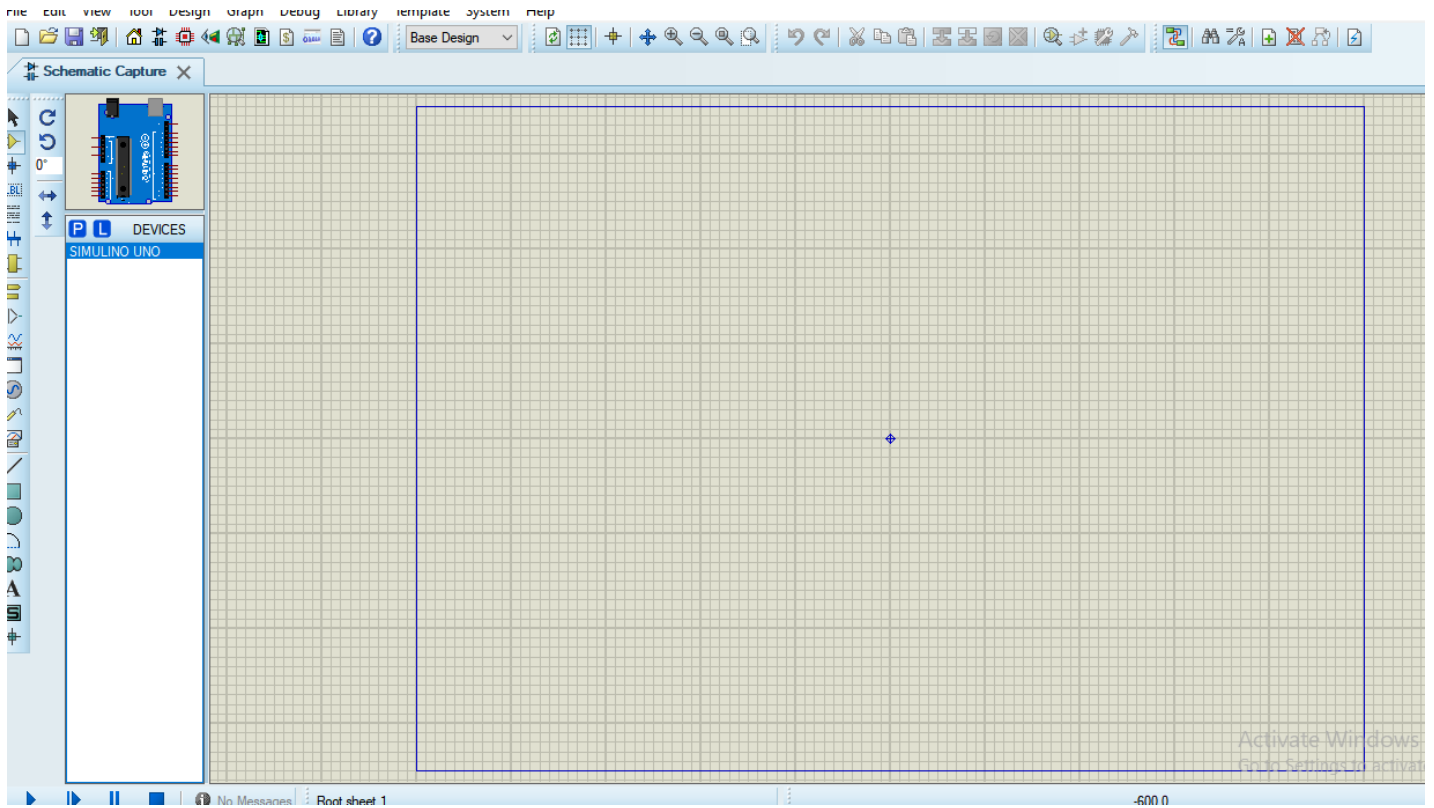
1. Multiple LED simulation circuit:

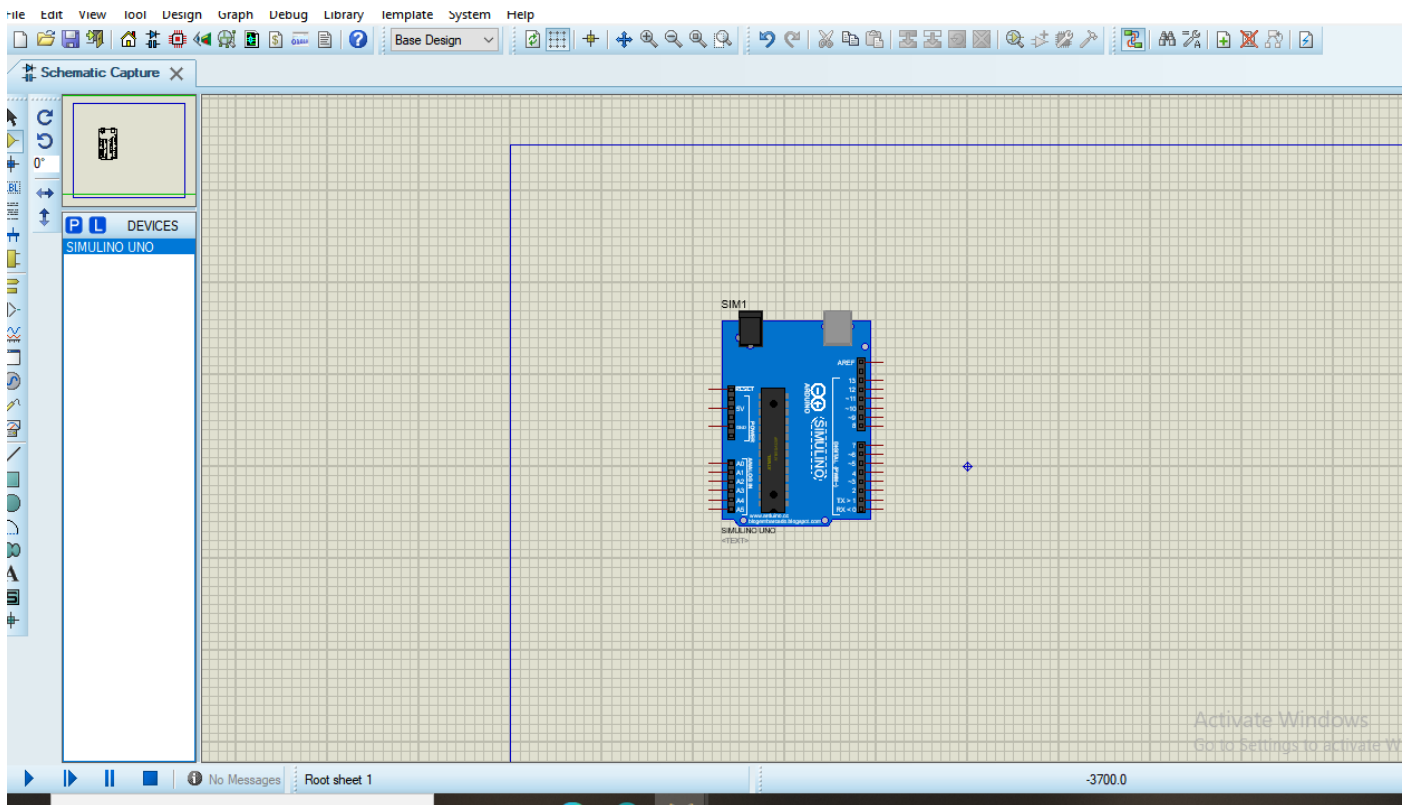


2. Open Proteus and open new project from file. choose option P under the window to look for objects.

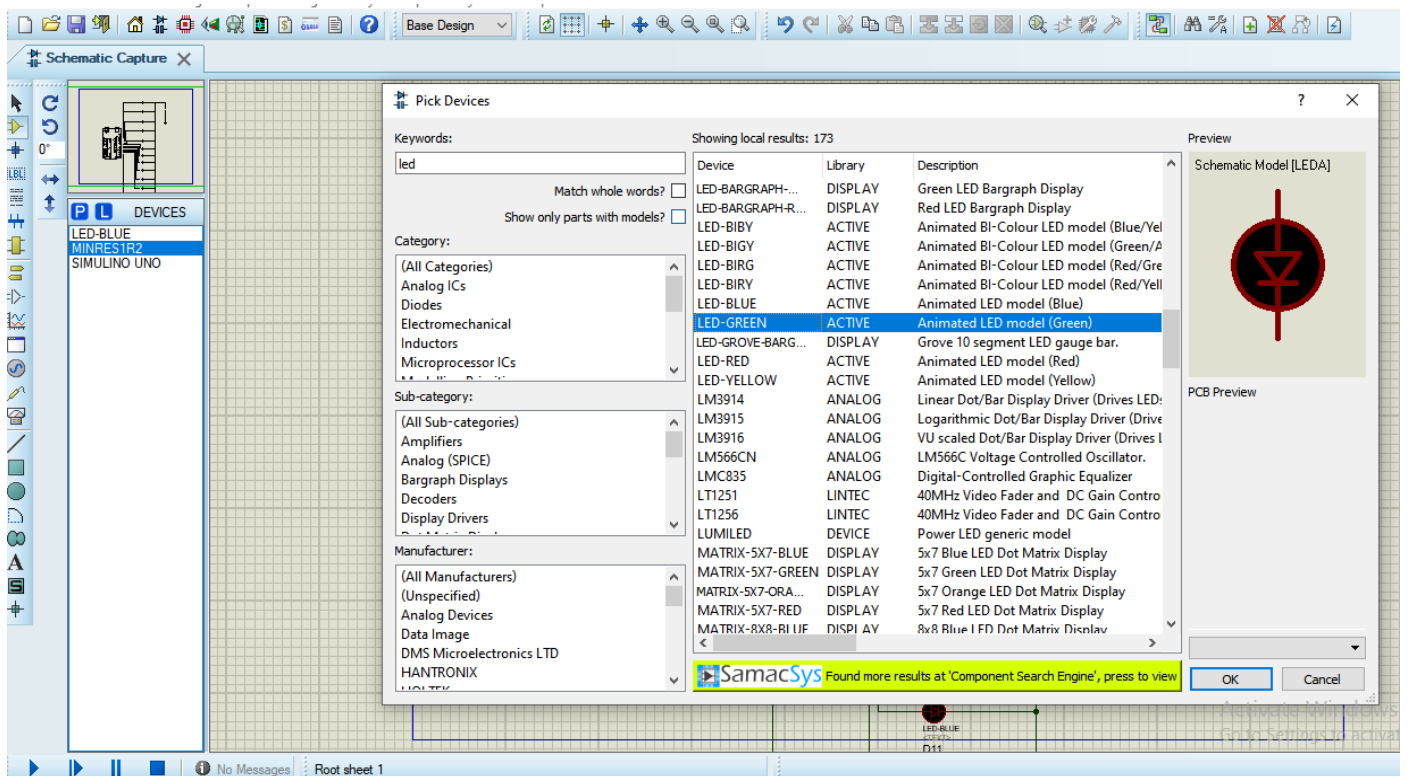


3. Choose Arduino UNO .

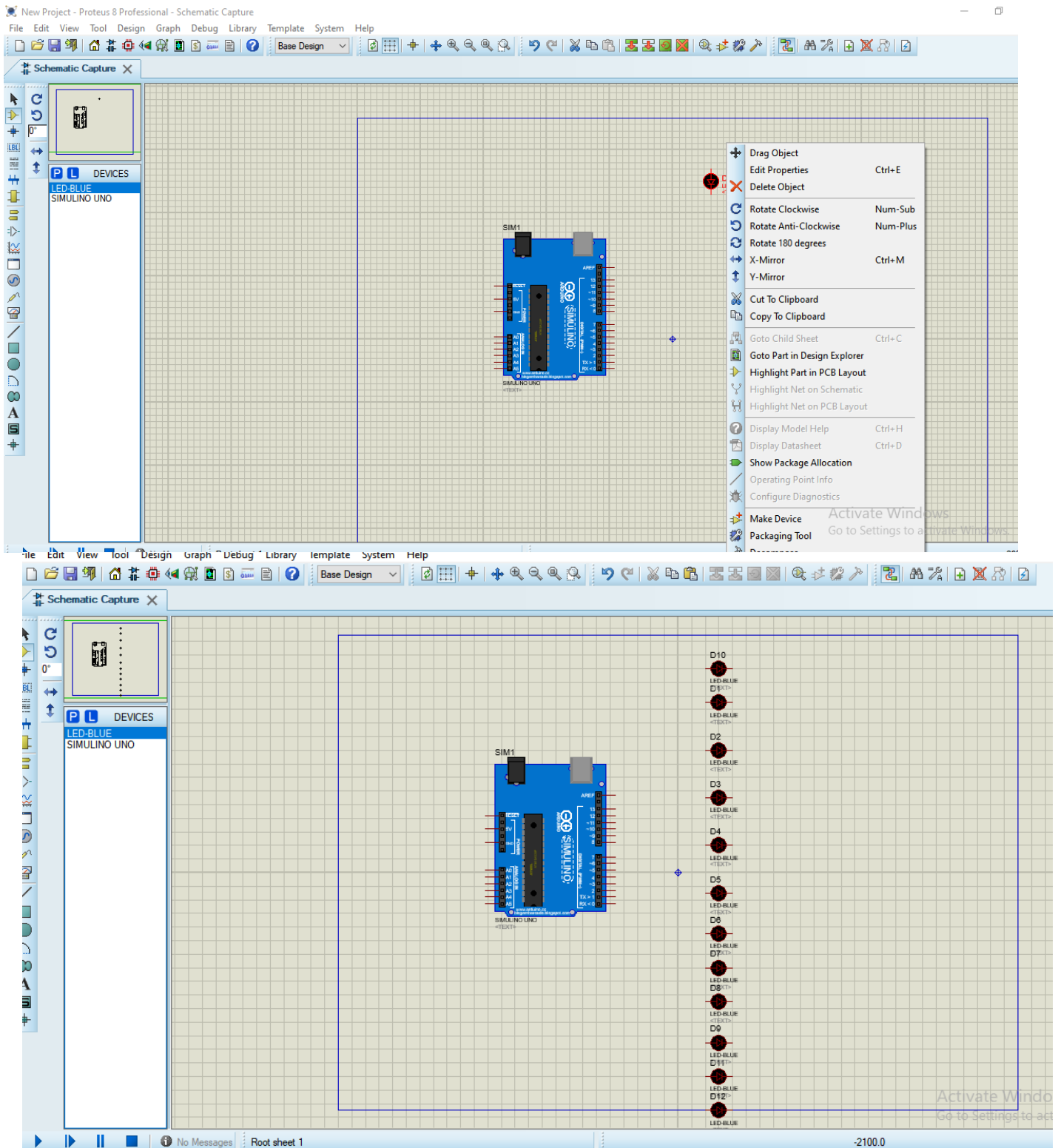




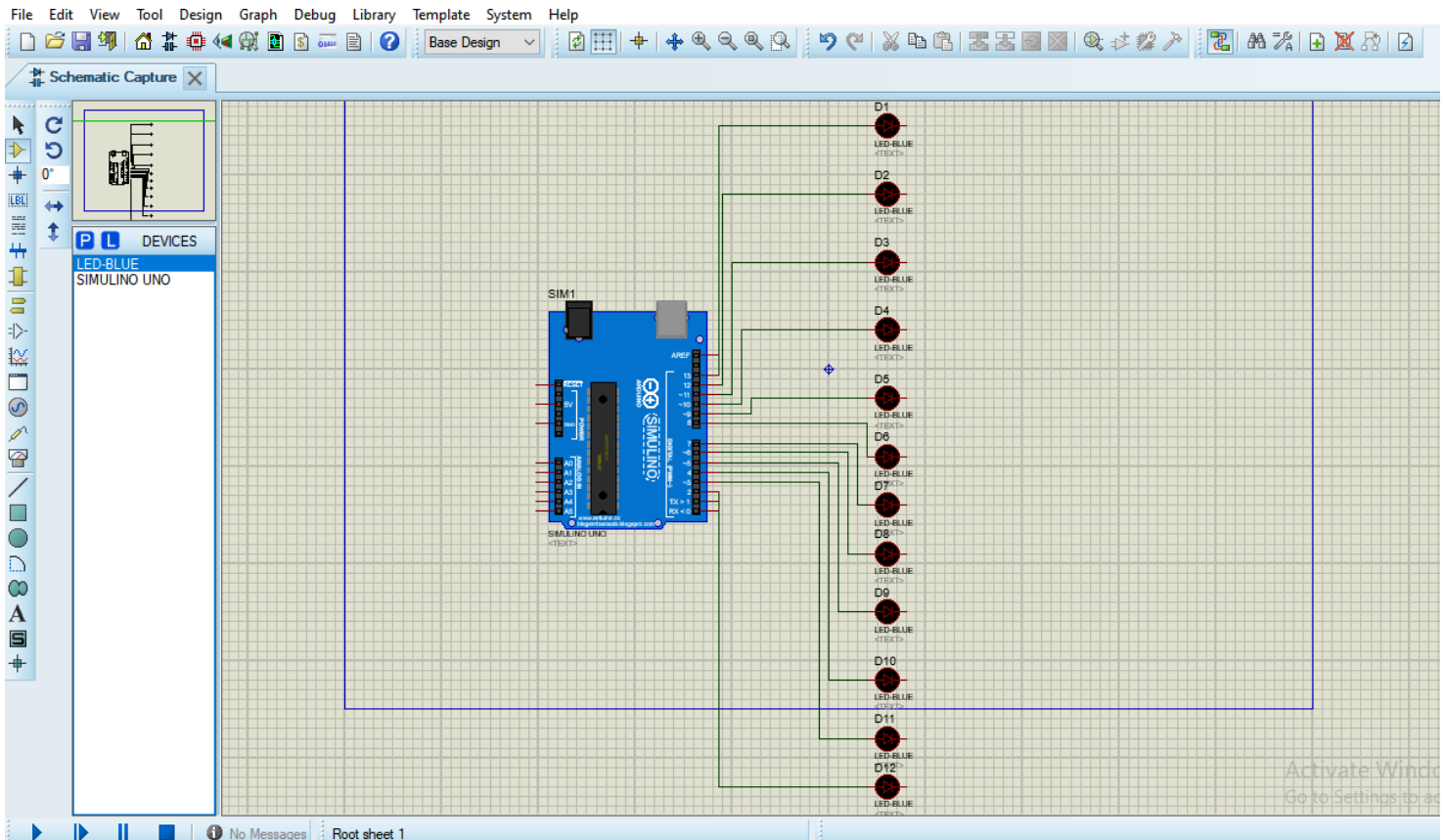
4. Bring twelve LEDs from library and choose colors as we need.



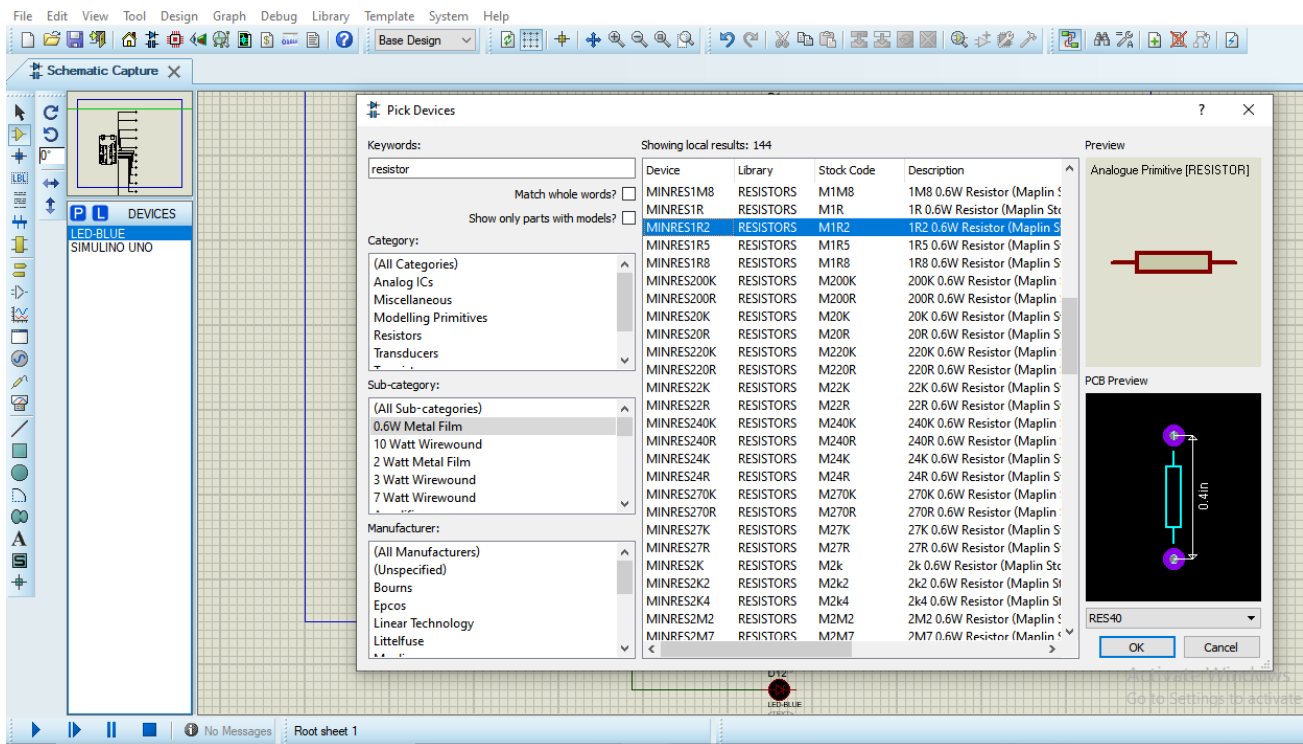
5. Right click on every led and choose(Rotate clockwise) to rotate leds we choose .



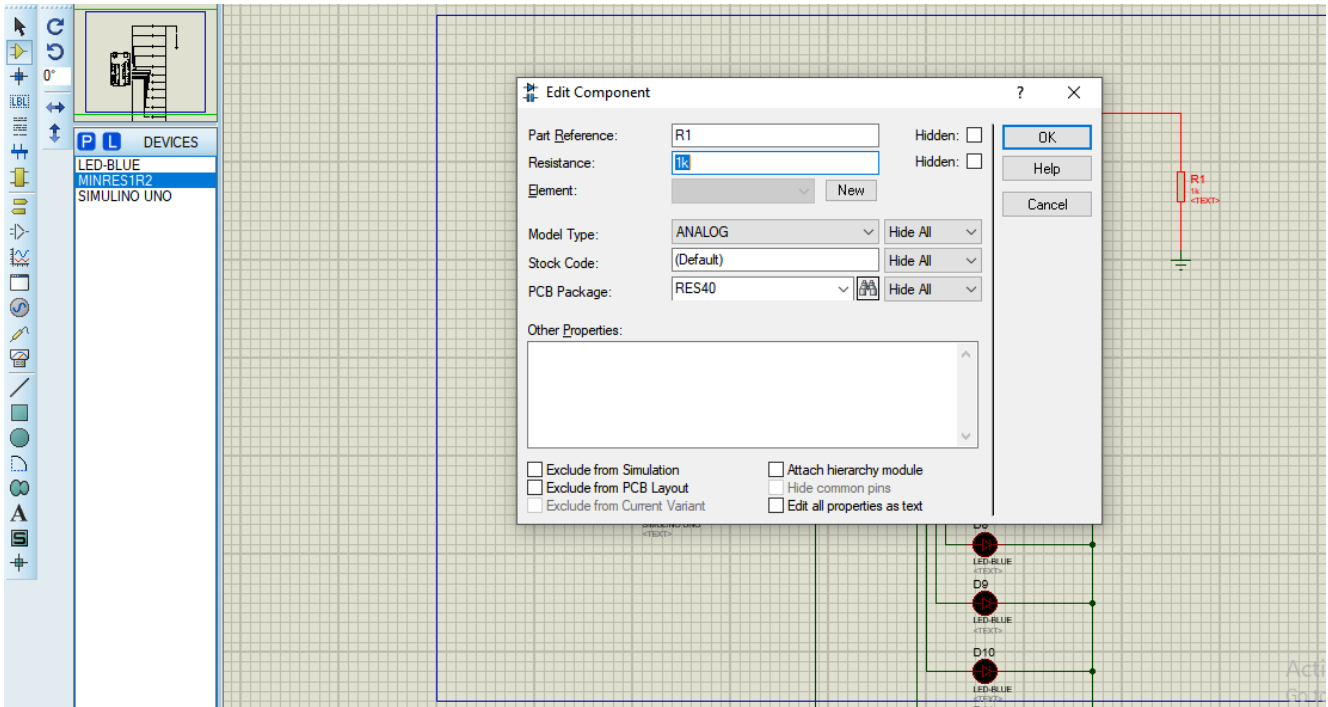
6. Connect LEDs to pins of arduino .



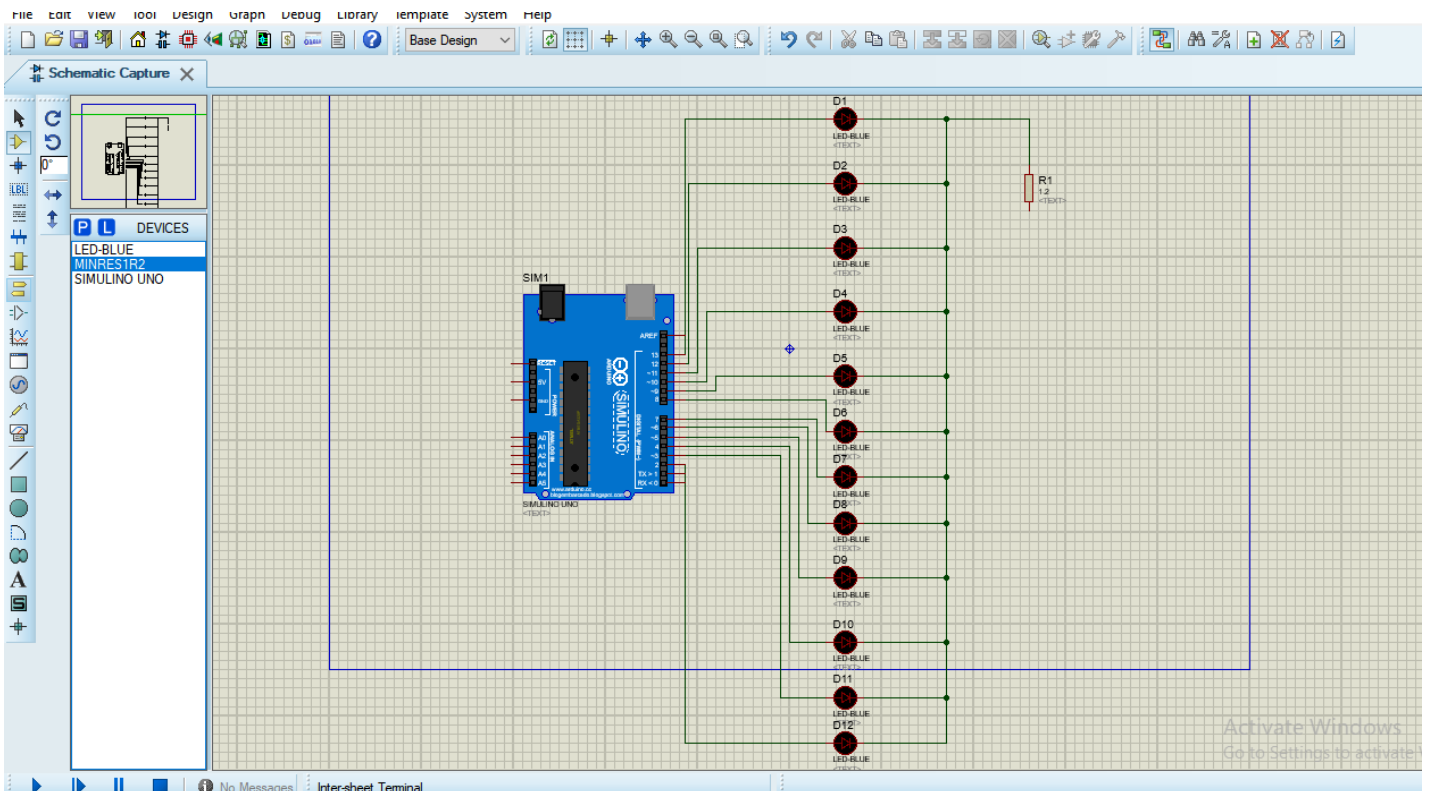
7. Choose resistor from library .



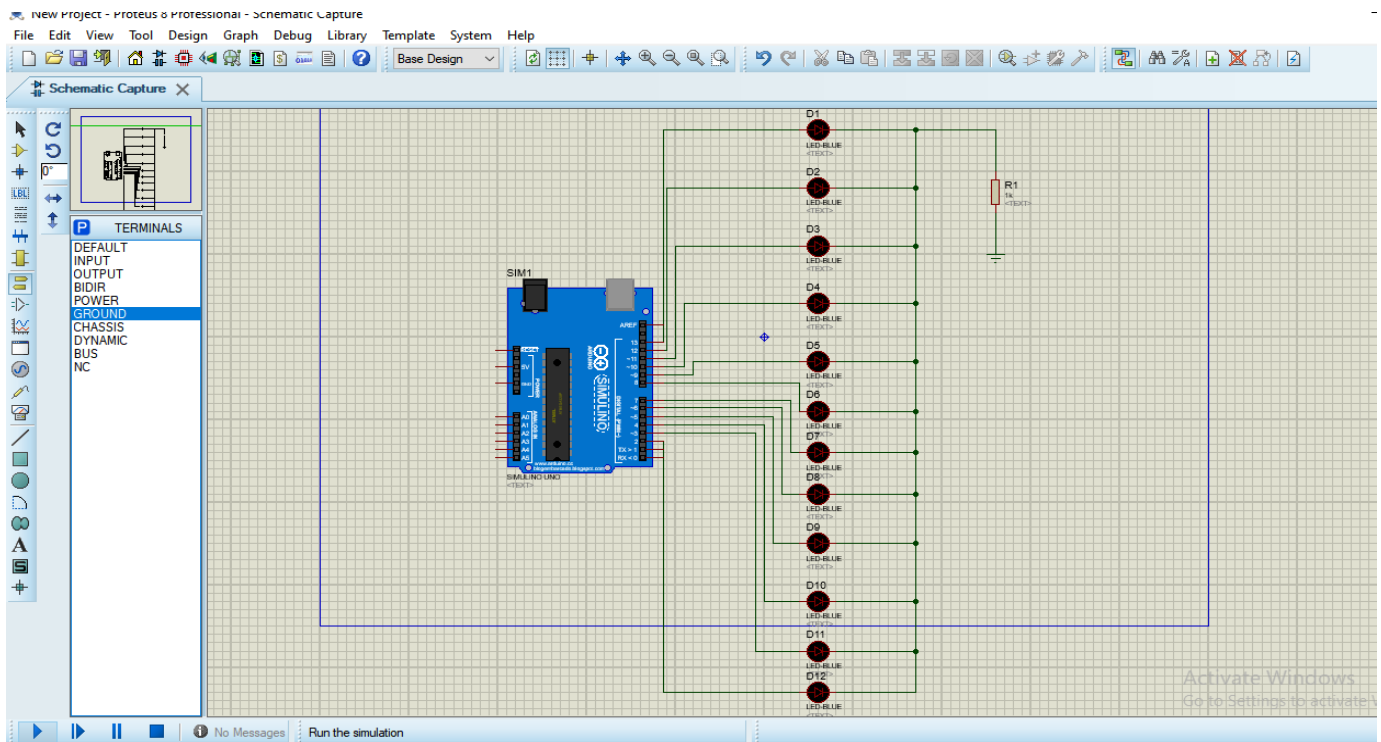
8. Change properties of resistor by right click and choose edit properties ,then change the value of resistor.



9. Connect resistor in straight with LEDs & connect LEDs in parallel with each other .



10. Choose ground object and connect it in switch with resistor.



Sketch

```
int Led1 = 13;
int Led2 = 12;
int Led3 = 11;
int Led4 = 10;
int Led5 = 9;
int Led6 = 8;
int Led7 = 7;
int Led8 = 6;
int Led9 = 5;
int Leda = 4;
int Ledb = 3;
int Ledc = 2;

void setup()
{
  pinMode(Led1, OUTPUT);
  pinMode(Led2, OUTPUT);
  pinMode(Led3, OUTPUT);
  pinMode(Led4, OUTPUT);
  pinMode(Led5, OUTPUT);
  pinMode(Led6, OUTPUT);
  pinMode(Led7, OUTPUT);
  pinMode(Led8, OUTPUT);
  pinMode(Led9, OUTPUT);
  pinMode(Leda, OUTPUT);
  pinMode(Ledb, OUTPUT);
  pinMode(Ledc, OUTPUT);
}
```



```

void loop()
{
    digitalWrite (Led1, HIGH);
    digitalWrite (Led2, LOW);
    digitalWrite (Led3, LOW);
    digitalWrite (Led4, LOW);
    digitalWrite (Led5, LOW);
    digitalWrite (Led6, LOW);
    digitalWrite (Led7, LOW);
    digitalWrite (Led8, LOW);
    digitalWrite (Led9, LOW);
    digitalWrite (Leda, LOW);
    digitalWrite (Ledb, LOW);
    digitalWrite (Ledc, LOW);
    delay (1000);

    digitalWrite (Led1, LOW);
    digitalWrite (Led2, HIGH);
    digitalWrite (Led3, LOW);
    digitalWrite (Led4, LOW);
    digitalWrite (Led5, LOW);
    digitalWrite (Led6, LOW);
    digitalWrite (Led7, LOW);
    digitalWrite (Led8, LOW);
    digitalWrite (Led9, LOW);
    digitalWrite (Leda, LOW);
    digitalWrite (Ledb, LOW);
    digitalWrite (Ledc, LOW);
    delay (1000);

    digitalWrite (Led1, LOW);
    digitalWrite (Led2, LOW);
    digitalWrite (Led3, HIGH);
    digitalWrite (Led4, LOW);
    digitalWrite (Led5, LOW);
    digitalWrite (Led6, LOW);
    digitalWrite (Led7, LOW);
    digitalWrite (Led8, LOW);
    digitalWrite (Led9, LOW);
    digitalWrite (Leda, LOW);
    digitalWrite (Ledb, LOW);
    digitalWrite (Ledc, LOW);
    delay (1000);

    digitalWrite (Led1, LOW);
    digitalWrite (Led2, LOW);
    digitalWrite (Led3, LOW);
    digitalWrite (Led4, HIGH);
    digitalWrite (Led5, LOW);
    digitalWrite (Led6, LOW);
    digitalWrite (Led7, LOW);
    digitalWrite (Led8, LOW);
    digitalWrite (Led9, LOW);
    digitalWrite (Leda, LOW);
    digitalWrite (Ledb, LOW);
    digitalWrite (Ledc, LOW);
    delay (1000);

    digitalWrite (Led1, LOW);
    digitalWrite (Led2, LOW);
    digitalWrite (Led3, LOW);
    digitalWrite (Led4, LOW);
}

```

```
digitalWrite (Led5, HIGH);
digitalWrite (Led6, LOW);
digitalWrite (Led7, LOW);
digitalWrite (Led8, LOW);
digitalWrite (Led9, LOW);
digitalWrite (Leda, LOW);
digitalWrite (Ledb, LOW);
digitalWrite (Ledc, LOW);
delay (1000);
```

```
digitalWrite (Led1, LOW);
digitalWrite (Led2, LOW);
digitalWrite (Led3, LOW);
digitalWrite (Led4, LOW);
digitalWrite (Led5, LOW);
digitalWrite (Led6, HIGH);
digitalWrite (Led7, LOW);
digitalWrite (Led8, LOW);
digitalWrite (Led9, LOW);
digitalWrite (Leda, LOW);
digitalWrite (Ledb, LOW);
digitalWrite (Ledc, LOW);
delay (1000);
```

```
digitalWrite (Led1, LOW);
digitalWrite (Led2, LOW);
digitalWrite (Led3, LOW);
digitalWrite (Led4, LOW);
digitalWrite (Led5, LOW);
digitalWrite (Led6, LOW);
digitalWrite (Led7, HIGH);
digitalWrite (Led8, LOW);
digitalWrite (Led9, LOW);
digitalWrite (Leda, LOW);
digitalWrite (Ledb, LOW);
digitalWrite (Ledc, LOW);
delay (1000);
```

```
digitalWrite (Led1, LOW);
digitalWrite (Led2, LOW);
digitalWrite (Led3, LOW);
digitalWrite (Led4, LOW);
digitalWrite (Led5, LOW);
digitalWrite (Led6, LOW);
digitalWrite (Led7, LOW);
digitalWrite (Led8, HIGH);
digitalWrite (Led9, LOW);
digitalWrite (Leda, LOW);
digitalWrite (Ledb, LOW);
digitalWrite (Ledc, LOW);
delay (1000);
```

```
digitalWrite (Led1, LOW);
digitalWrite (Led2, LOW);
digitalWrite (Led3, LOW);
digitalWrite (Led4, LOW);
digitalWrite (Led5, LOW);
digitalWrite (Led6, LOW);
digitalWrite (Led7, LOW);
digitalWrite (Led8, LOW);
digitalWrite (Led9, HIGH);
digitalWrite (Leda, LOW);
digitalWrite (Ledb, LOW);
```

```

digitalWrite (Ledc, LOW);
delay(1000);

digitalWrite (Led1, LOW);
digitalWrite (Led2, LOW);
digitalWrite (Led3, LOW);
digitalWrite (Led4, LOW);
digitalWrite (Led5, LOW);
digitalWrite (Led6, LOW);
digitalWrite (Led7, LOW);
digitalWrite (Led8, LOW);
digitalWrite (Led9, LOW);
digitalWrite (Leda, HIGH);
digitalWrite (Ledb, LOW);
digitalWrite (Ledc, LOW);
delay(1000);

digitalWrite (Led1, LOW);
digitalWrite (Led2, LOW);
digitalWrite (Led3, LOW);
digitalWrite (Led4, LOW);
digitalWrite (Led5, LOW);
digitalWrite (Led6, LOW);
digitalWrite (Led7, LOW);
digitalWrite (Led8, LOW);
digitalWrite (Led9, LOW);
digitalWrite (Leda, LOW);
digitalWrite (Ledb, HIGH);
digitalWrite (Ledc, LOW);
delay(1000);

digitalWrite (Led1, LOW);
digitalWrite (Led2, LOW);
digitalWrite (Led3, LOW);
digitalWrite (Led4, LOW);
digitalWrite (Led5, LOW);
digitalWrite (Led6, LOW);
digitalWrite (Led7, LOW);
digitalWrite (Led8, LOW);
digitalWrite (Led9, LOW);
digitalWrite (Leda, LOW);
digitalWrite (Ledb, LOW);
digitalWrite (Ledc, HIGH);
delay(1000);
}

```

NOTE:

To run the code export the hex file to Proteus.