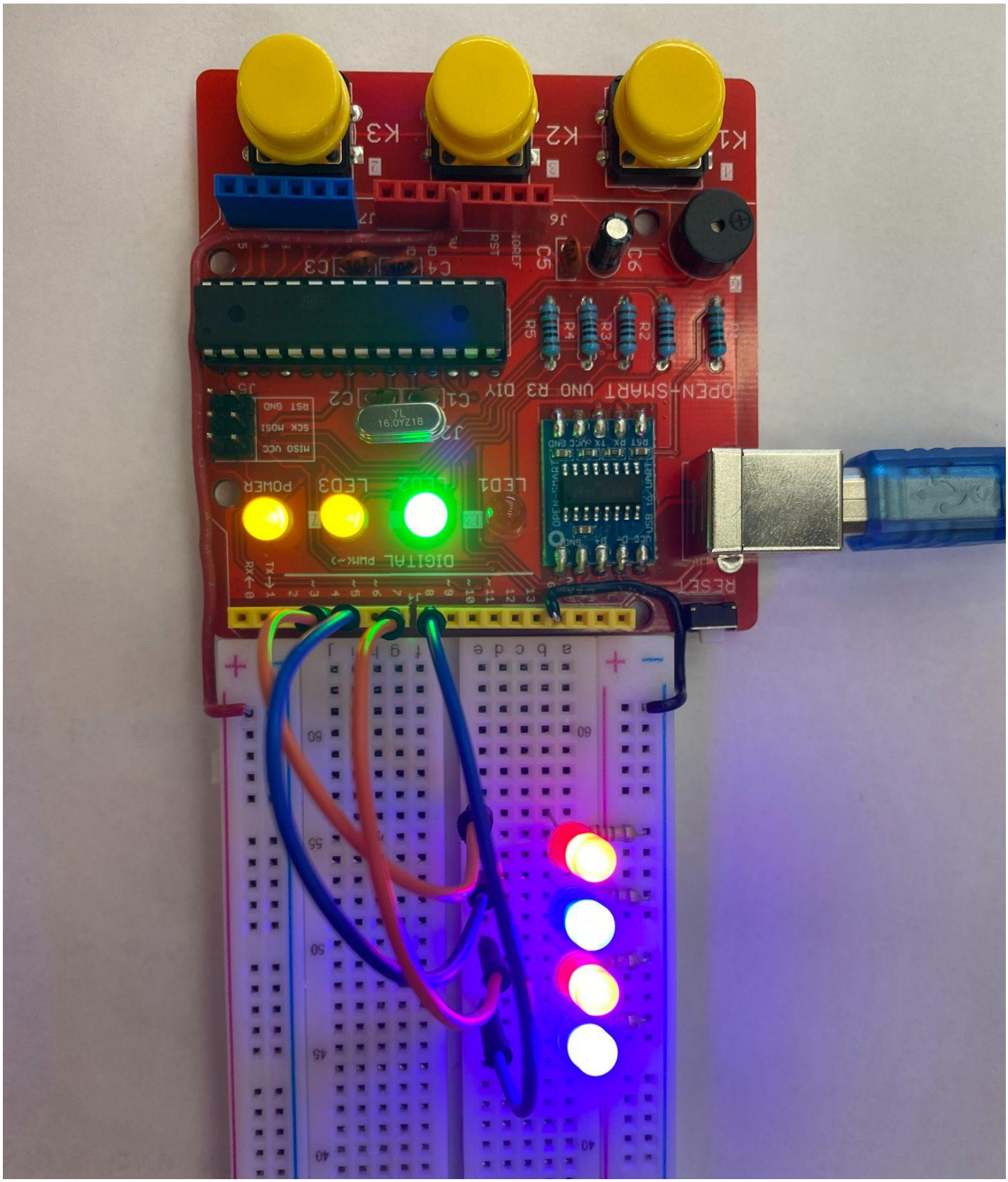
***Interfacing Lab 2*** ***/10*** ***names:*** ***Siddharth & Mostafa***

| LVL | Criteria |
|---|---|
| R | |
| 1 | |
| 2 | |
| 3 | |
| 4 | "build and wire"[3]<br>☐ circuit is correct, routed cleanly and easy to follow[1½]<br>☐ all full voltage wire red and all gnd wires black<br>☐ signal wire colours chosen to allow easier tracing of circuit[½]<br><br>tinkerCAD[2]<br>☐ all components mounted on breadboard and do not block view of other components[½]<br>☐ wires horizontal or vertical only with 90 degree bends[½]<br>☐ wires do not cross in front or behind other components or component terminals and do not run on top of one another[½]<br>☐ wires and component do not share the same hole on the breadboard and wires do not cross when possible[½]<br><br>in person[2]<br>☐ all wires are solid core, flat to breadboard, horizontal or vertical with 90 degree bends<br>☐ solid core wires stripped 6-8mm[½]<br>☐ no bare wire visible [½]<br><br>“programming”[3]<br>☐ final “test your understanding” complete and working correctly[1½]<br>☐ code commenting is accurate and complete (including title)[½]<br>☐ program structure and spacing is logical and demonstrates organization[½]<br>☐ code text submission is `courier new font` and is coloured to allow easier identification of comments[½]<br><br>“inspection questions”[1]<br>☐ demonstrates full understanding of circuit and interfacing concepts in conversation with teacher |
| 4+ | “enhancements”[1]<br>☐ minimized number and length of wires and wire crossings[½]<br>☐ circuit enhancement complete and working correctly[½] |

**Build image:**


K3
K2
K1
POWER
LED3
LED2
LED1
DIGITAL PWM~
OPEN-SMART UNO R3 DIY
YL
16.0YZ18

**code:**

```
/*
 Names: Siddarth & Mostafa
 Date: April 20, 2022
 Description: Code for Lab 2

 LEDs turn on one by one, and stay on (starting from the left). Once all four are
 ON, they turn OFF, one by one (starting from the left) until they
 are all off; and keeps repeating in a loop
*/

void setup() //Setup Code (runs once)
{
    //Sets pins 4, 5, 7, 8 as an OUTPUT pins
    pinMode(4, OUTPUT);
    pinMode(5, OUTPUT);
    pinMode(7, OUTPUT);
    pinMode(8, OUTPUT);
}

void loop() //Loop Code (runs repeatedly)
{
    digitalWrite(4, HIGH); // Sets pin 4 on
    delay(500); // Delays program for 500 milliseconds

    digitalWrite(5, HIGH); // Sets pin 5 on
    delay(500); // Delays program for 500 milliseconds

    digitalWrite(7, HIGH); // Sets pin 7 on
    delay(500); // Delays program for 500 milliseconds

    digitalWrite(8, HIGH); // Sets pin 8 on
    delay(500); // Delays program for 500 milliseconds

    digitalWrite(4, LOW); // Sets pin 4 off
    delay(500); // Delays program for 500 milliseconds

    digitalWrite(5, LOW); // Sets pin 5 off
```

```
    delay(500); // Delays program for 500 milliseconds

    digitalWrite(7, LOW); // Sets pin 7 off
    delay(500); // Delays program for 500 milliseconds

    digitalWrite(8, LOW); // Sets pin 8 off
    delay(500); // Delays program for 500 milliseconds
}
```