

**Name - Yash Lakhtariya & Kirtan Patel**

**Enrollment number - 21162101012 & 21162101017**

**Branch - CBA      Batch - 71**

**IOT Practical 1**

**AIM :**

**1. Interfacing of LED with Arduino and write a code for LED blinking.**

Materials used :

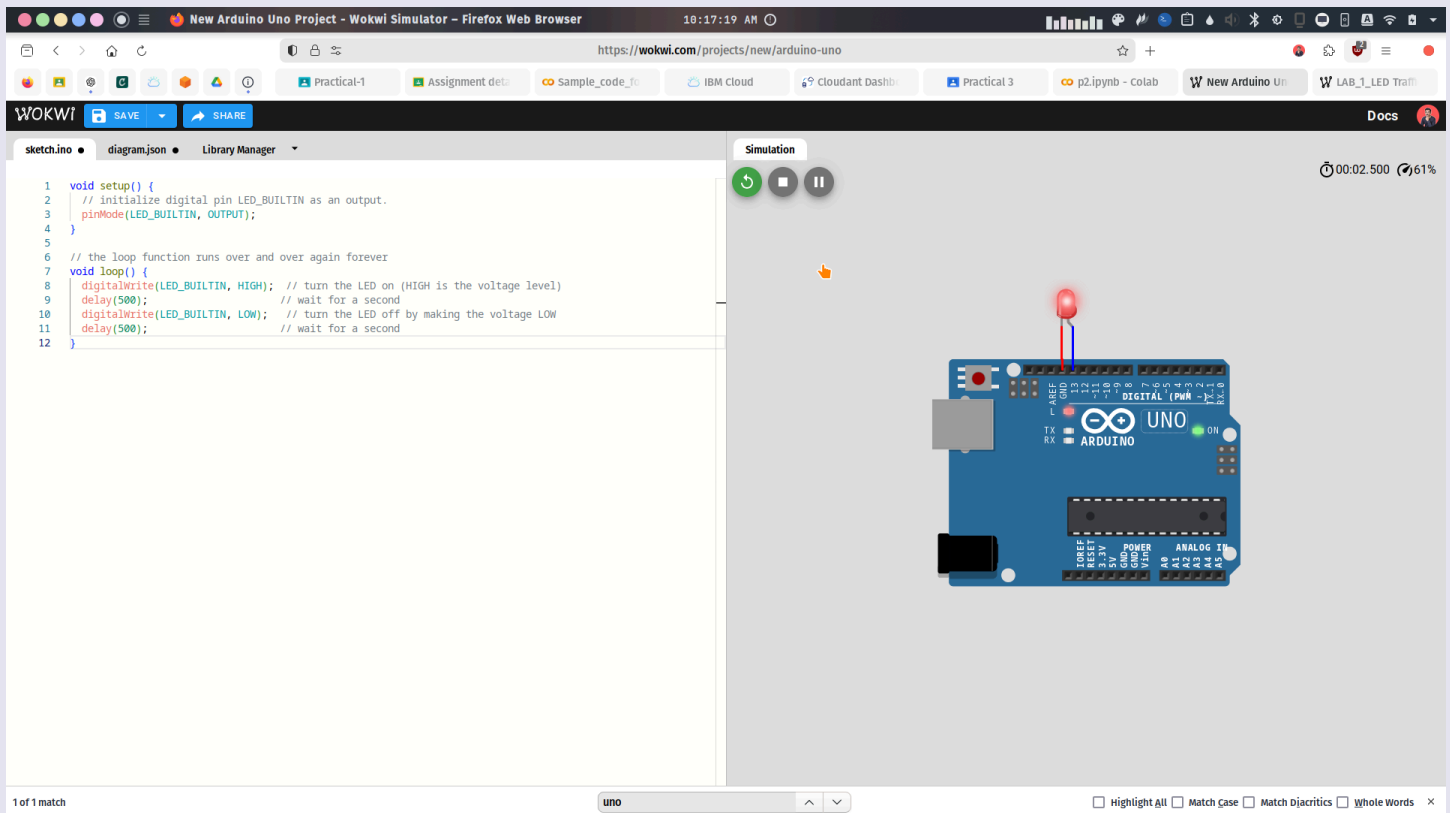
- Arduino Uno
- 1 LED

Code :

```
void setup() {  
    // initialize digital pin LED_BUILTIN as an output.  
    pinMode(LED_BUILTIN, OUTPUT);  
}  
  
// the loop function runs over and over again forever  
void loop() {  
    digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage  
level)  
    delay(500);                      // wait for a second  
    digitalWrite(LED_BUILTIN, LOW);  // turn the LED off by making the  
voltage LOW  
    delay(500);                      // wait for a second  
}
```

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Virtual Output :



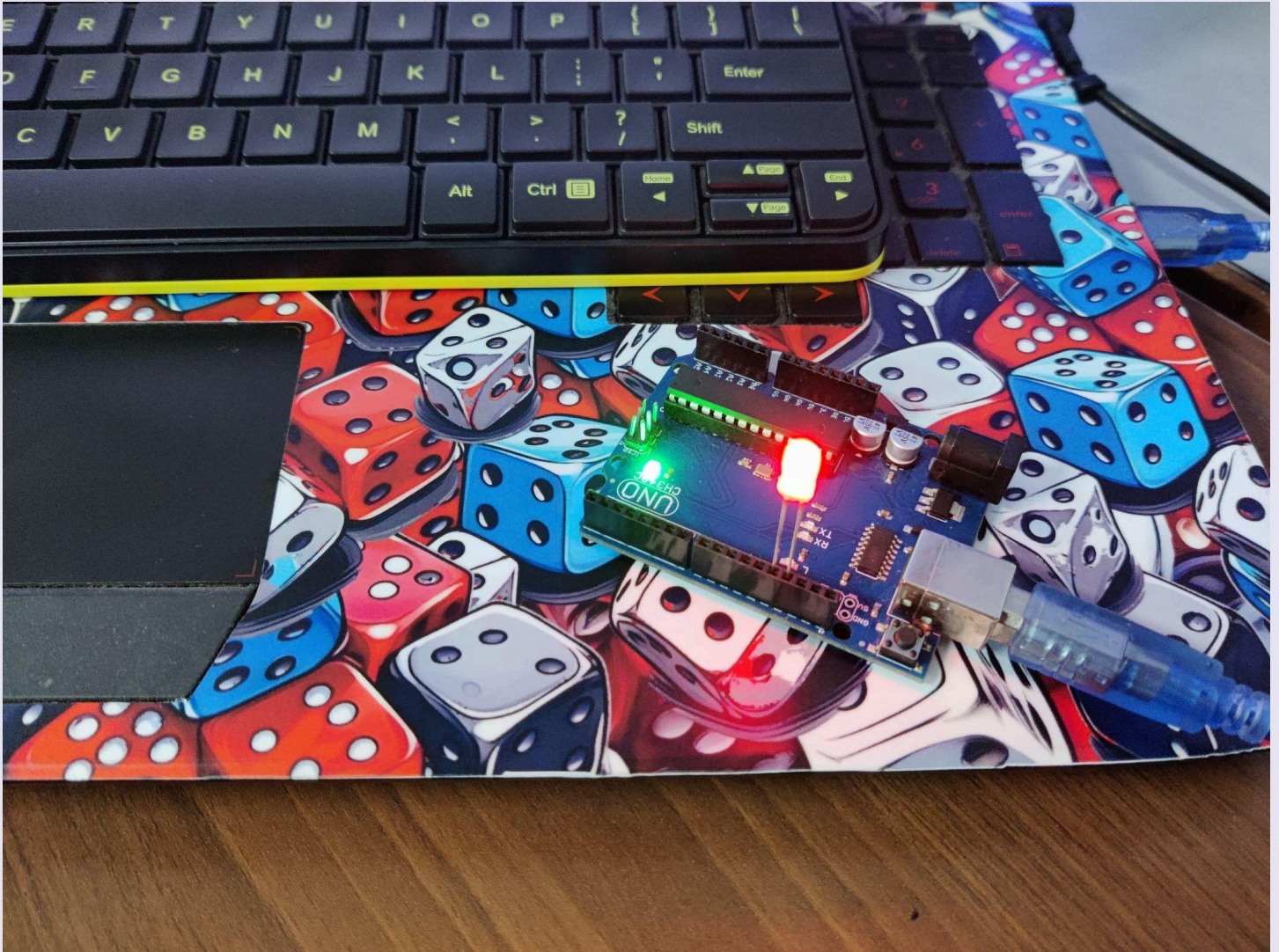
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**Physical Output :**



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## 2. Also Interface 3 or 8 LED's with Arduino and write a code to generate different patterns.

Materials used :

- Arduino Uno
- 3 LEDs
- 3 Jumper Wires

Code :

```
void setup() {  
  // put your setup code here, to run once:  
  pinMode(13, OUTPUT);  
  pinMode(10, OUTPUT);  
  pinMode(7, OUTPUT);  
}  
  
void loop() {  
  
  //yellow  
  digitalWrite(13, LOW);  
  digitalWrite(10, HIGH);  
  digitalWrite(7, LOW);  
  delay(1000);  
  
  //red  
  digitalWrite(13, LOW);  
  digitalWrite(10, LOW);  
  digitalWrite(7, HIGH);S
```

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```
    delay(500);

//yellow
    digitalWrite(13, LOW);
    digitalWrite(10, HIGH);
    digitalWrite(7, LOW);
    delay(500);

//green
    digitalWrite(13, HIGH);
    digitalWrite(10, LOW);
    digitalWrite(7, LOW);
    delay(500);
}
```

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Virtual Output :

YsL\_p1.2 - Wokwi ESP...2, Arduino Simulator - Firefox Web Browser 10:28:13 AM

https://wokwi.com/projects/406711976401344513

Practical-1 Assignment details Sample\_code\_for\_I IBM Cloud Cloudant Dashboard Practical 3 p2.ipynb - Colab YsL\_p1.2 - Wokwi ES

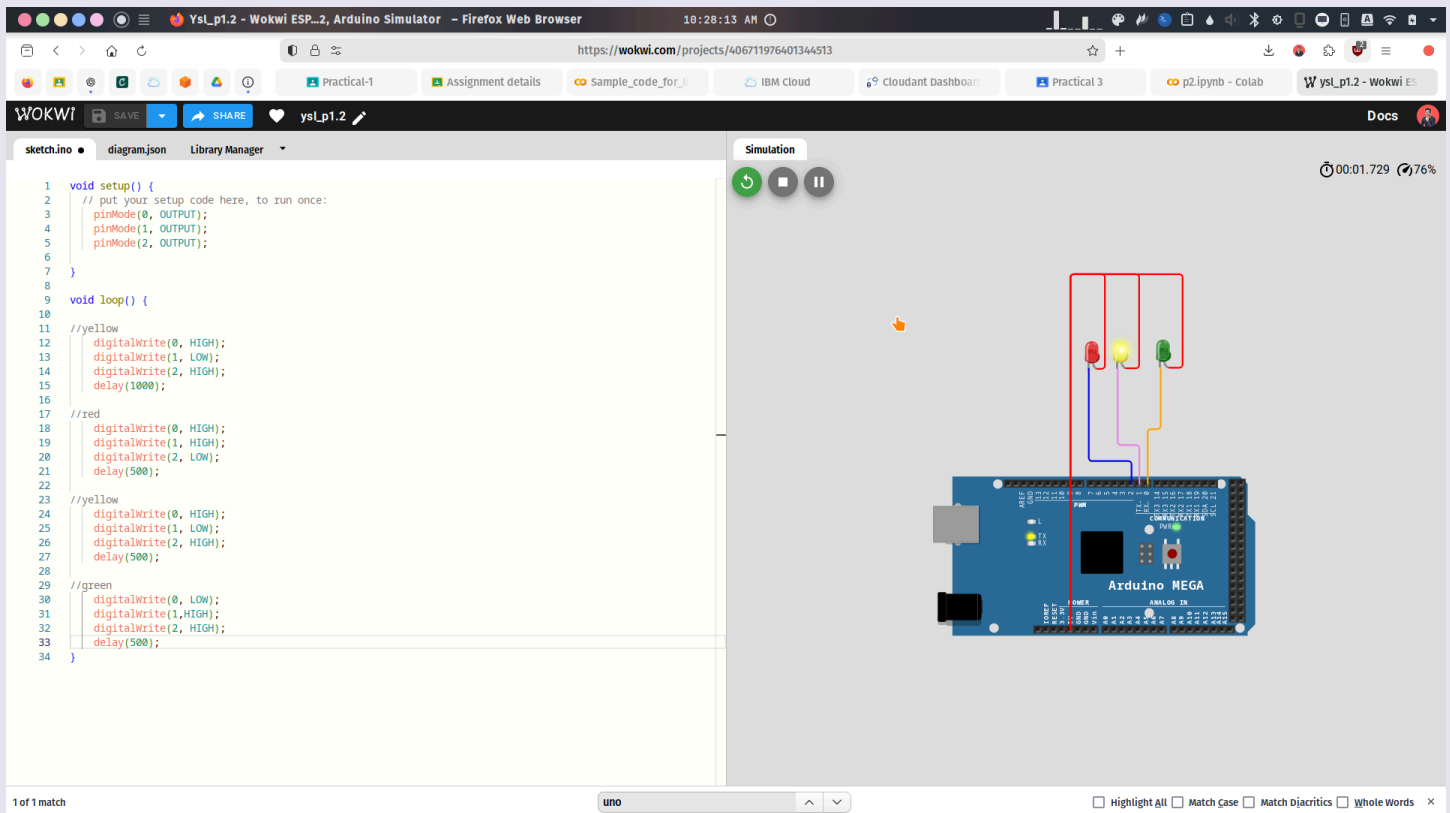
WOKWI SAVE SHARE ysl\_p1.2 Docs

sketch.ino diagram.json Library Manager

```
1 void setup() {  
2   // put your setup code here, to run once:  
3   pinMode(0, OUTPUT);  
4   pinMode(1, OUTPUT);  
5   pinMode(2, OUTPUT);  
6 }  
7  
8  
9  
10 void loop() {  
11  
12   //yellow  
13   digitalWrite(0, HIGH);  
14   digitalWrite(1, LOW);  
15   digitalWrite(2, HIGH);  
16   delay(1000);  
17  
18   //red  
19   digitalWrite(0, HIGH);  
20   digitalWrite(1, HIGH);  
21   digitalWrite(2, LOW);  
22   delay(500);  
23  
24   //yellow  
25   digitalWrite(0, HIGH);  
26   digitalWrite(1, LOW);  
27   digitalWrite(2, HIGH);  
28   delay(500);  
29  
30   //green  
31   digitalWrite(0, LOW);  
32   digitalWrite(1, HIGH);  
33   digitalWrite(2, HIGH);  
34   delay(500);  
35 }
```

Simulation

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**Physical Output :**

