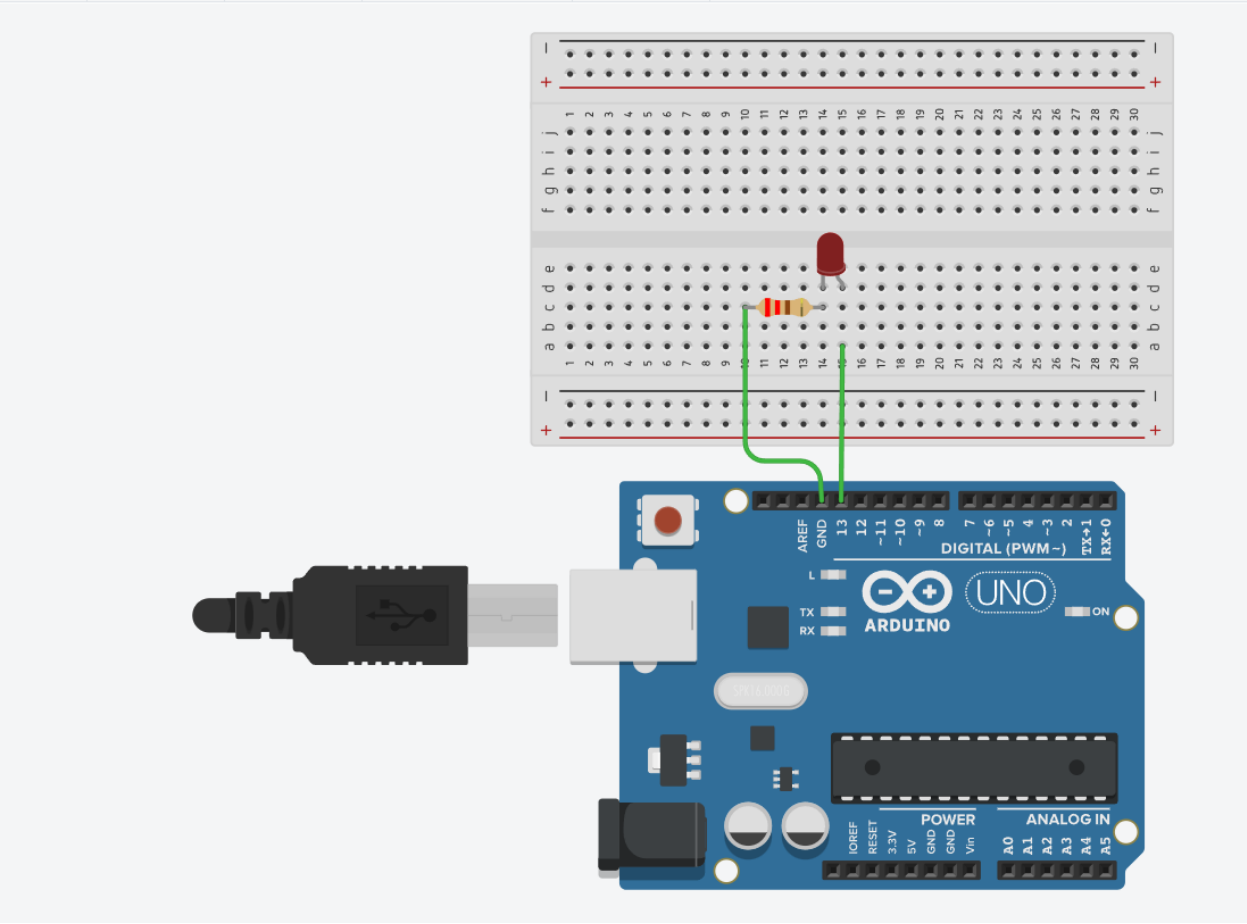
Practical - 1

Aim : To implement following applications on Arduino board:
a) Create (any) delay routine for buzzing LED(s). (Simulator Tinker cad)

Hardware Required:

1. Arduino UNO
2. USB 2.0 cable type A/B
3. LED
4. Resistor
5. Breadboard
6. Jumper Wires

Circuit Design:

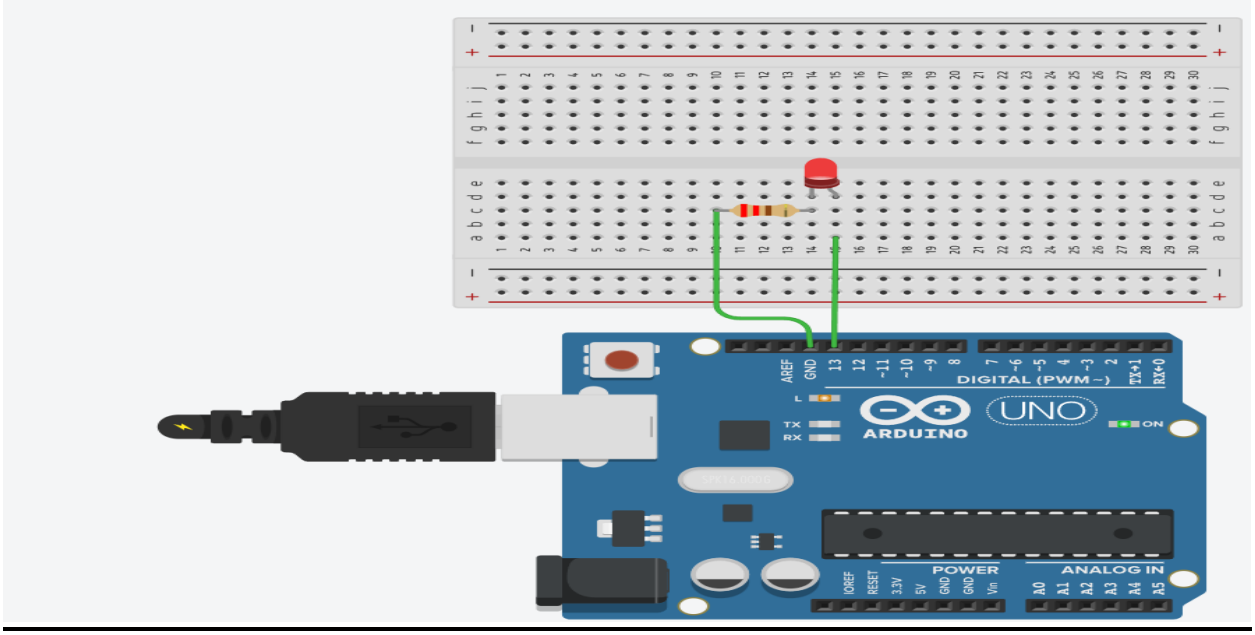


Code:

```
// C++ code
//
void setup()
{
  pinMode(LED_BUILTIN, OUTPUT);
}

void loop()
{
  digitalWrite(LED_BUILTIN, HIGH);
  delay(2000); // Wait for 1000 millisecond(s)
  digitalWrite(LED_BUILTIN, LOW);
  delay(1000); // Wait for 1000 millisecond(s)
}
```

Output:

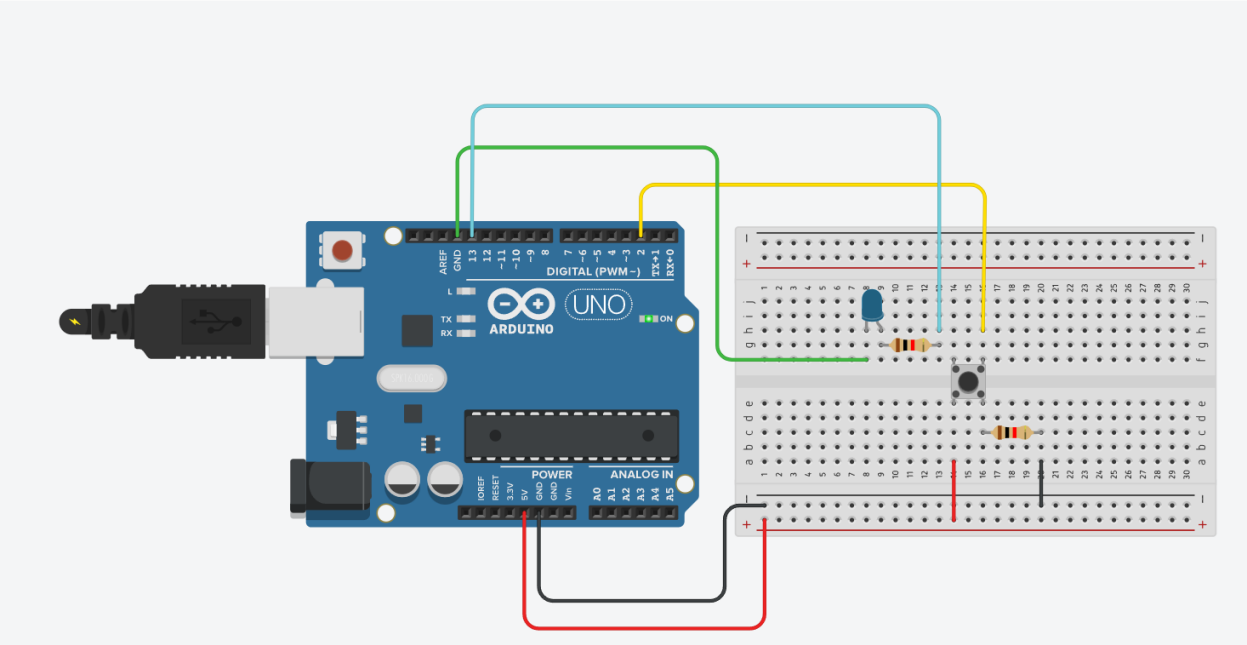


Aim: To implement following applications on Arduino board:
b) Toggle LED(s) by switching. . (Simulator Tinker cad)

Hardware Required:

1. Arduino UNO
2. USB 2.0 cable type A/B
3. LED
4. Resistor
5. Breadboard
6. Jumper Wires
7. Push button

Circuit Design:



Code:

```
// C++ code
//
void setup()
{
  pinMode(2, INPUT);
  pinMode(13, OUTPUT);
```

```
}
void loop()
{
  if (digitalRead(2) == HIGH)
  {
    digitalWrite(13, HIGH); // Turn the LED on
    delay(1000); // Wait for 1000 milliseconds (1 second)
  }
  else
  {
    digitalWrite(13, LOW); // Turn the LED off
  }
}
```

Output: