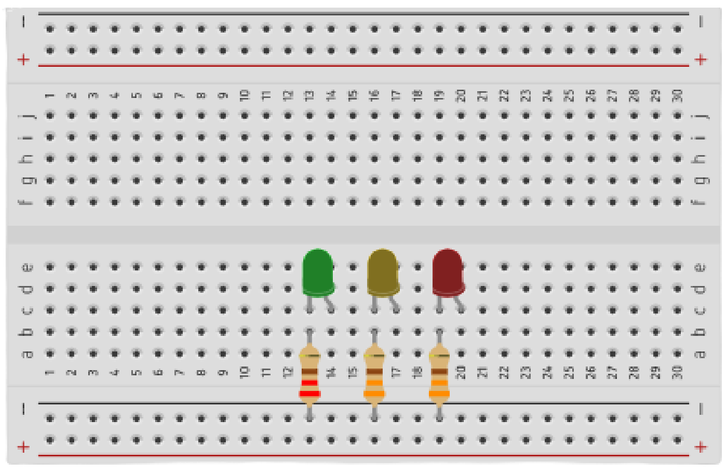
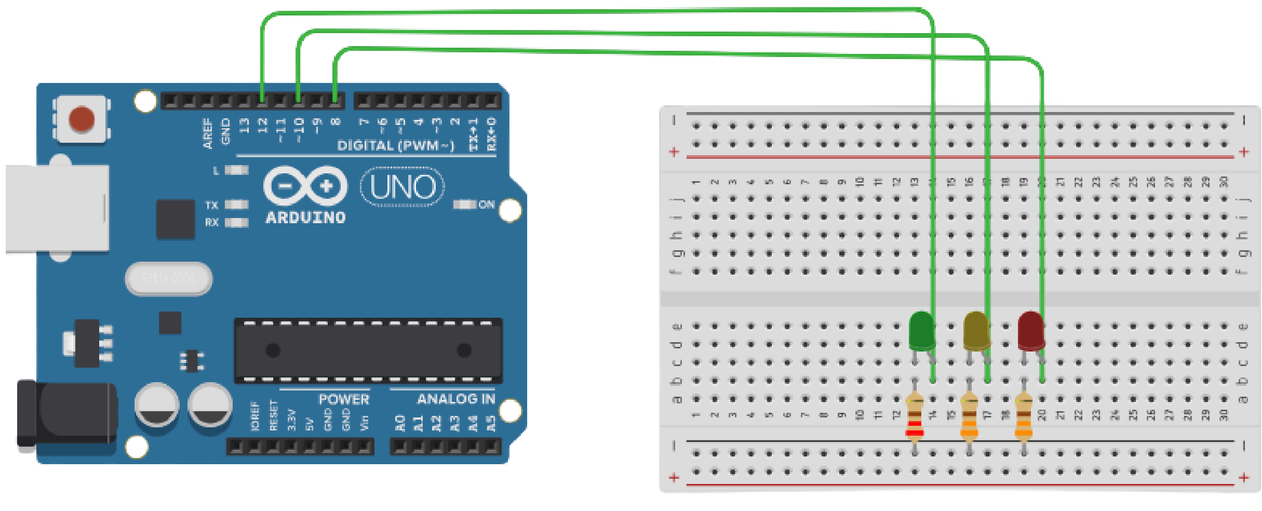
Instruction for Traffic Light Control

Step 1 Take all the parts Arduino UNO,3 LEDs(Red, Yellow, Green), 3 × 220Ω resistors, Breadboard, Jumper wires, USB cable.

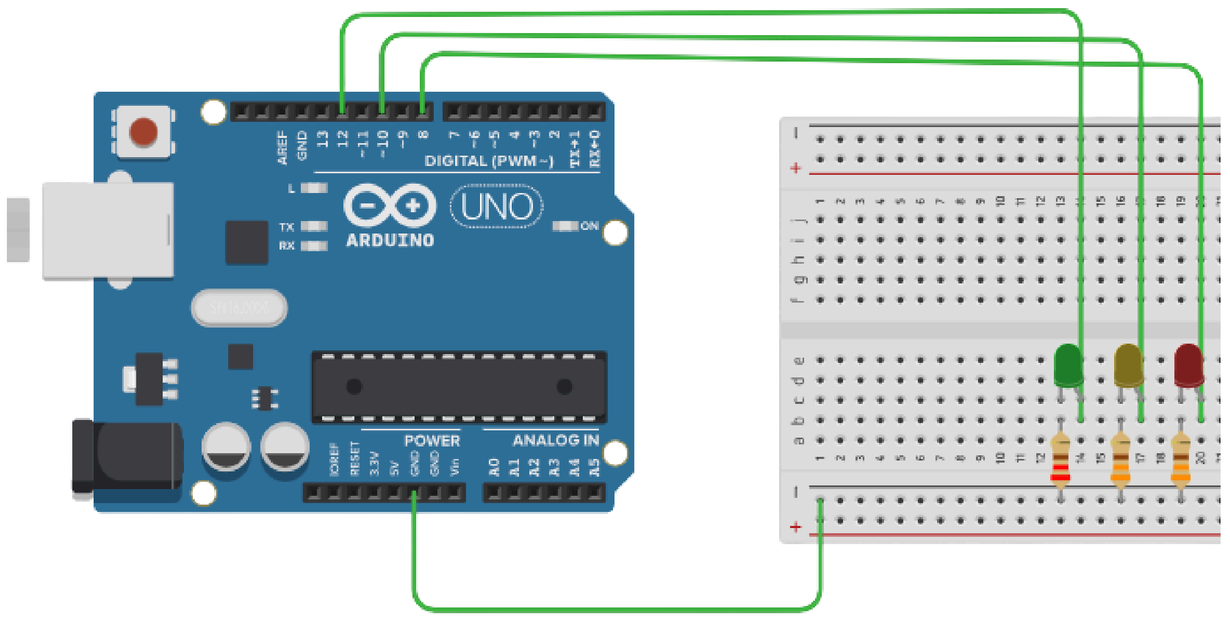
Step 2 Insert the Red, Yellow, and Green LEDs into the breadboard. Connect one 220Ω resistor to the short leg (negative) of each LED.



Step 3 Connect Red to Pin 8, Yellow to Pin 10, and Green to Pin 12

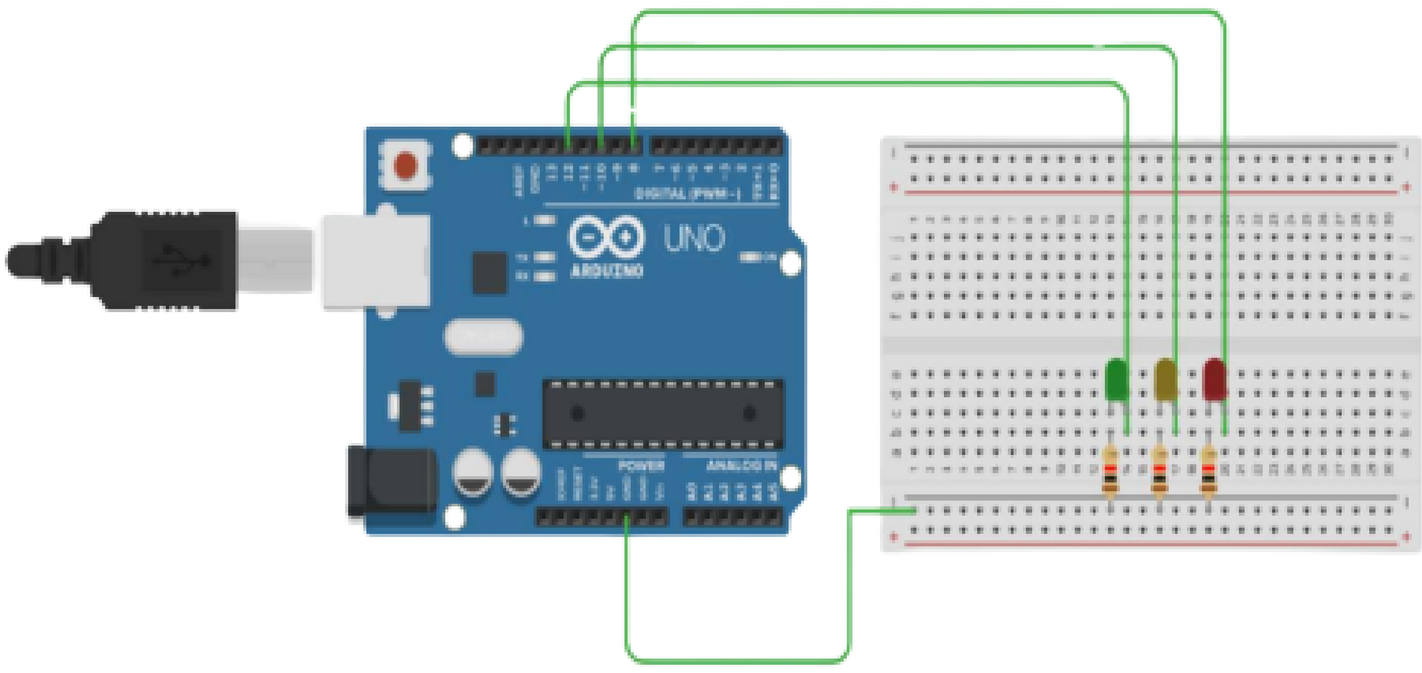


Step 4 Connect breadboard GND to Arduino GND.



Step 5 Upload the program

Step 6 After uploading, the LEDs will operate in sequence: Red → Yellow → Green (with blinking) and repeat continuously.



Code

```
void setup() {
  // Initialize the LED pins as outputs
  pinMode(8, OUTPUT);   // red
  pinMode(10, OUTPUT);  // yellow
  pinMode(12, OUTPUT);  // green
}

void loop() {

  digitalWrite(8, HIGH);   // turn on red for 3 sec
  delay(3000);
  digitalWrite(10, HIGH);  // turn on yellow for 1 sec
  delay(1000);

  digitalWrite(8, LOW);    // turn off red
  digitalWrite(10, LOW);   // turn off yellow

  digitalWrite(12, HIGH);  // turn on green for 3 sec
  delay(3000);
  digitalWrite(12, LOW);   // turn off green
  delay(500);

  // Blink
  digitalWrite(12, HIGH);  // turn on green for .5 sec
  delay(500);
  digitalWrite(12, LOW);
  delay(500);

  digitalWrite(12, HIGH);  // turn on green for .5 sec
  delay(500);
  digitalWrite(12, LOW);
  delay(500);

  digitalWrite(12, HIGH);  // turn on green for .5 sec
  delay(500);
  digitalWrite(12, LOW);
  delay(1000);
}
```