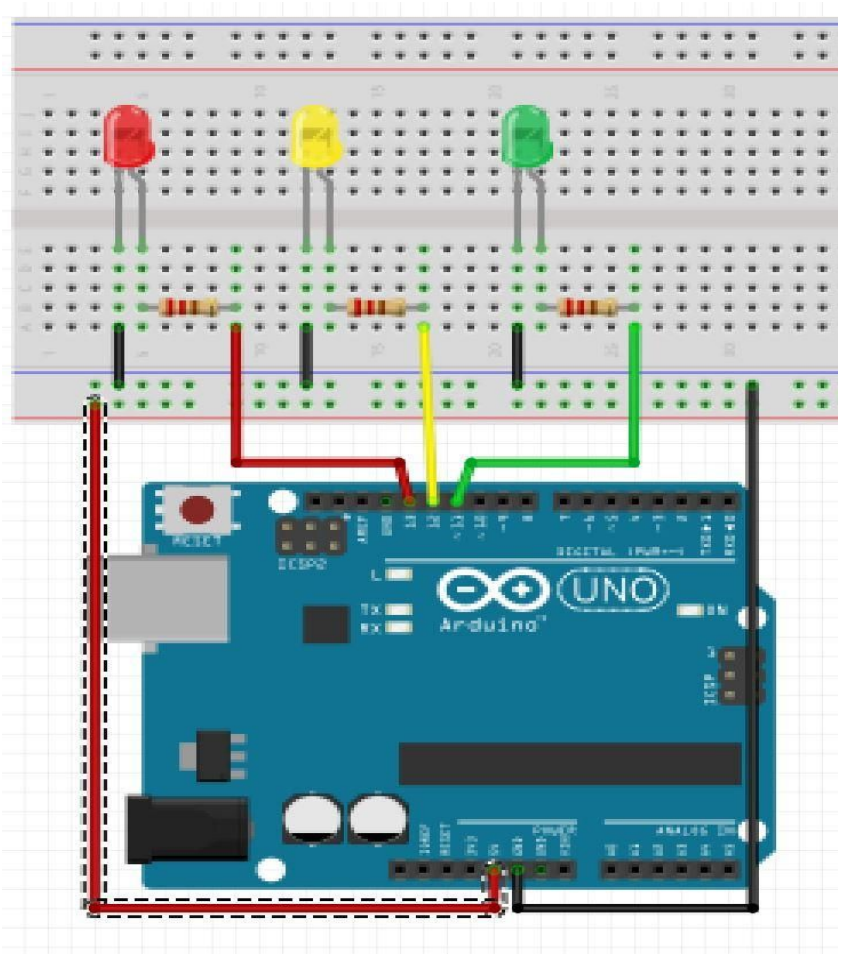
Exercise 2: LED Traffic Light

In this exercise, you'll build an LED traffic light with three lights that cycle through green (go), yellow (slow down), and red (stop). Once you've successfully built the traffic light, try changing the delay parameters and the order of the lights to come up with new patterns.

Step 1: Assemble the Arduino and breadboard.



Parts needed:

Arduino board

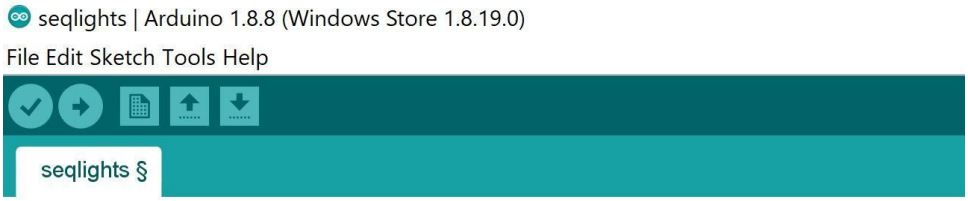
Bread board

3 LED bulbs

3 220k ohm resistors

8 jumper wires

Step 2: Program the Arduino.




```
 int LED1 = 13;                  // Declares pin 13 to be LED1
 int LED2 = 12;                  // Declares pin 12 to be LED2
 int LED3 = 11;                  // Declares pin 11 to be LED3

void setup() {
  pinMode(LED1, OUTPUT);         // sets LED1 as an output
  pinMode(LED2, OUTPUT);         // sets LED2 as an output
  pinMode(LED3, OUTPUT);         // sets LED3 as an output
}

void loop() {
  digitalWrite(LED1, HIGH);      //sends signal to LED1
  delay(10000);                  // delay of 10,000 milliseconds(10 seconds)
  digitalWrite(LED2, HIGH);      //sends signal to LED2
  delay(10000);                  // delay of 10,000 milliseconds(10 second)
  digitalWrite(LED3, HIGH);      //sends signal to LED3
  delay(10000);                  // delay of 10,000 milliseconds(10 seconds)
  digitalWrite(LED1, LOW);       //cuts signal to LED1
  delay(10000);                  // delay of 10,000 milliseconds(10 seconds)
  digitalWrite(LED2, LOW);       //cuts signal to LED2
  delay(10000);                  // delay of 10,000 milliseconds(10 seconds)
  digitalWrite(LED3, LOW);       //cuts signal to LED3
  delay(10000);                  // delay of 10,000 milliseconds(10 seconds)
}
```