SOURCE CODE:

```
// Pin definitions for the LEDs

const int redLED = 9;

const int yellowLED = 8;

const int greenLED = 7;


void setup() {
  // Set the LED pins as OUTPUT

  pinMode(redLED, OUTPUT);

  pinMode(yellowLED, OUTPUT);

  pinMode(greenLED, OUTPUT);

}


void loop () {

  // Green light ON for 5 seconds (simulating go signal)

  digitalWrite(greenLED, HIGH);   // Turn on green light

  digitalWrite(yellowLED, LOW);   // Ensure yellow is off

  digitalWrite(redLED, LOW);      // Ensure red is off

  delay(5000);                    // Wait for 5 seconds
```

```
    // Yellow light ON for 2 seconds (simulating caution signal)

    digitalWrite(greenLED, LOW);    // Turn off green light

    digitalWrite(yellowLED, HIGH);  // Turn on yellow light

    delay(5000);                    // Wait for 2 seconds


    // Red light ON for 5 seconds (simulating stop signal)

    digitalWrite(yellowLED, LOW);   // Turn off yellow light

    digitalWrite(redLED, HIGH);     // Turn on red light

    delay(5000);                    // Wait for 5 seconds


    // Repeat the cycle
}
```

OUTPUT: