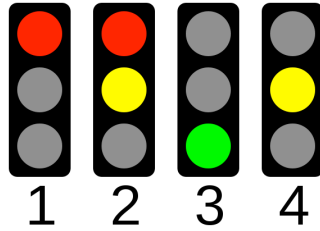


# Project 3

## Traffic Lights

# Project 3 – Traffic Lights

We are now going to create a set of UK traffic lights that will change from green to red, via amber, and back again, after a set length of time using the 4-state system. This project could be used on a model railway to make a set of working traffic lights or for a child's toy town.



This time we have connected 3 LED's with the Anode of each one going to Digital Pins 8, 9 and 10, via a 220Ω resistor each.

We have taken a jumper wire from Ground to the Ground rail at the top of the breadboard and a ground wire goes from the Cathode leg of each LED to the common ground rail.

## Enter the code

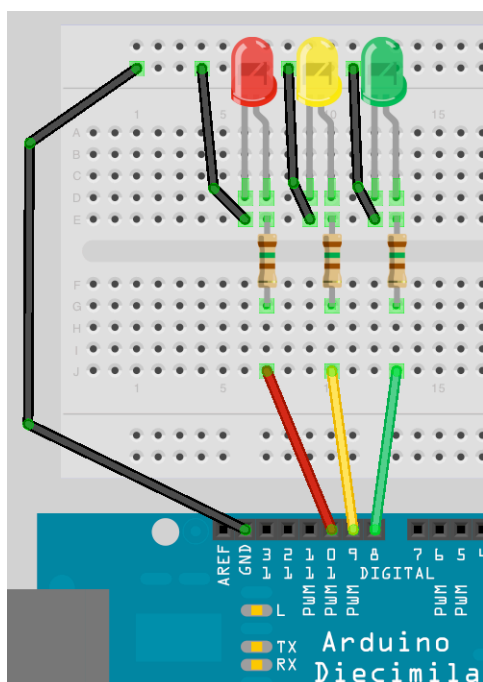
Enter the following code, check it and upload.

## What you will need

Breadboard	
Red Diffused LED	
Yellow Diffused LED	
Green Diffused LED	
3 x 220Ω Resistors	
Jumper Wires	

If you've read up on Projects 1 & 2 then this code will be self explanatory as will the hardware.

## Connect it up



```
// Project 3 - Traffic Lights

int ledDelay = 10000; // delay in between changes
int redPin = 10;
int yellowPin = 9;
int greenPin = 8;

void setup() {
  pinMode(redPin, OUTPUT);
  pinMode(yellowPin, OUTPUT);
  pinMode(greenPin, OUTPUT);
}

void loop() {

  // turn the red light on
  digitalWrite(redPin, HIGH);
  delay(ledDelay); // wait 5 seconds

  digitalWrite(yellowPin, HIGH); // turn on yellow
  delay(2000); // wait 2 seconds

  digitalWrite(greenPin, HIGH); // turn green on
  digitalWrite(redPin, LOW); // turn red off
  digitalWrite(yellowPin, LOW); // turn yellow off
  delay(ledDelay); // wait ledDelay milliseconds

  digitalWrite(yellowPin, HIGH); // turn yellow on
  digitalWrite(greenPin, LOW); // turn green off
  delay(2000); // wait 2 seconds

  digitalWrite(yellowPin, LOW); // turn yellow off
  // now our loop repeats
}
```

In the next project, we are going add to this project by including a set of pedestrian lights and adding a push button to make the lights interactive.