

(2)

Aim:- This simple little circuit uses an arduino and some LEDs to replicate a traffic light. It uses code as an internal timer and continues to run until you cut the arduino's power supply.

Hardware required:-

- ① arduino UNO
- ② Breadboard
- ③ Jumper wires
- ④ LED:- green, red, orange
- ⑤ Resistor 100 ohm
- ⑥ arduino USB 2.0 data cable

Code :-

```
int GREEN = 2;
int Yellow = 3;
int RED = 4;
int DELAY_GREEN = 5000;
int DELAY_YELLOW = 2000;
int DELAY_RED = 5000;

void setup()
{
  pinMode(GREEN, OUTPUT);
  pinMode(YELLOW, OUTPUT);
  pinMode(RED, OUTPUT);
}
```

void loop()

```
{  
  green_light();  
  delay(DELAY_GREEN);  
  yellow_light();  
  delay(DELAY_YELLOW);  
  red_light();  
  delay(DELAY_RED);  
}
```

void green_light()

```
{  
  digitalWrite(GREEN, HIGH);  
  digitalWrite(YELLOW, LOW);  
  digitalWrite(RED, LOW);  
}
```

void yellow_light()

```
{  
  digitalWrite(GREEN, LOW);  
  digitalWrite(YELLOW, HIGH);  
  digitalWrite(RED, LOW);  
}
```

void red_light()

```
{  
  digitalWrite(GREEN, LOW);  
  digitalWrite(YELLOW, LOW);  
  digitalWrite(RED, HIGH);  
}
```

Circuit diagram:-

