

```

#include <CPutil.h>
// By Comal Virdi
// Define your pins

const int redLedPin = 4;
const int greenLedPin = 5;
const int yellowLedPin = 6;
const int redLedPin2 = 7;
const int greenLedPin2 = 8;
const int yellowLedPin2 = 9;
const int buttonPin = 10;

// Create your hardware

Led rLedBig(redLedPin);
Led gLedBig(greenLedPin);
Led yLedBig(yellowLedPin);
Led rLedSm(redLedPin2);
Led gLedSm(greenLedPin2);
Led yLedSm(yellowLedPin2);

Button button(buttonPin);

void setup()
{
    // Set up serial monitor and print out program info
    Serial.begin(9600);
    delay(500);

    // Initialize your hardware
    rLedBig.off();
    gLedBig.on();
    yLedBig.off();
    rLedSm.on();
    gLedSm.off();
    yLedSm.off();
}

void loop()
{
    // put your main code here, to run repeatedly:

    bigSt();

```

```
}
```

```
void bigSt()
```

```
{
```

```
enum{START, GREEN, YELLOW, RED};
```

```
static int state = 0;
```

```
static MTimer timer;
```

```
switch (state)
```

```
{
```

```
case START:
```

```
    timer.set(4000);
```

```
    gLedBig.on();
```

```
    rLedBig.off();
```

```
    yLedBig.off();
```

```
    state = GREEN;
```

```
break;
```

```
case GREEN:
```

```
if (button.wasPushed() && timer.done())
```

```
{
```

```
    timer.set(1000);
```

```
    gLedBig.off();
```

```
    yLedBig.on();
```

```
    state = YELLOW;
```

```
}
```

```
break;
```

```
case YELLOW:
```

```
if(timer.done())
```

```
{
```

```
    timer.set(1000);
```

```
    yLedBig.off();
```

```
    rLedBig.on();
```

```
    state = RED;
```

```
}
```

```
break;
```

```
case RED:
```

```
if(smallSt())
```

```
{
```

```
    state = START;
```

```
}
```

```
        break;
    }
}
```

```
int smallSt()
{
    enum {RED, YELLOW, GREEN};
    static int state = 0;
    static MSTimer timer;
    int returnVal = false;
    switch (state)
    {
```

```
    case RED:
        timer.set(2000);
        rLedSm.off();
        gLedSm.on();
        state = GREEN;
        returnVal = false;
    break;
```

```
    case YELLOW:
        if (timer.done())
        {
            yLedSm.off();
            rLedSm.on();
            timer.set(1000);
            returnVal = true;
            state = RED;
        }
        else
        {
            returnVal = false;
        }
    break;
```

```
    case GREEN:
        if (timer.done())
        {
            gLedSm.off();
            yLedSm.on();
            timer.set(1000);
            returnVal = false;
            state = YELLOW;
```

```
    }  
    else  
    {  
        returnVal = false;  
    }  
    break;  
}  
return returnVal;  
}
```