

```
#include <Servo.h>

Servo servo1;

int red = 7;

int green = 5;

int yellow = 6;

int servoPin = 3;

int buttonPin = 2;

int buttonPin2 = 8;

int pos = 90;

int run = 0;

int i = 0;

void setup() {

// put your setup code here, to run once:

pinMode(yellow, OUTPUT);

pinMode(green, OUTPUT);

pinMode(red, OUTPUT);

pinMode(buttonPin, INPUT);

servo1.attach(servoPin);

pinMode(buttonPin2, INPUT);

Serial.begin(9600);

}

void runOnce(){

digitalWrite(red, HIGH);

Serial.println("Red Light On");
```

```
delay(1000);

digitalWrite(red, LOW);

Serial.println("Red Light Off");

digitalWrite(yellow, HIGH);

Serial.println("Yellow Light On");

delay(1000);

digitalWrite(yellow, LOW);

Serial.println("Yellow Light Off");

digitalWrite(green, HIGH);

Serial.println("Green Light On");

delay(1000);

gateMovement();

Serial.println("Gate Moving");

digitalWrite(green,LOW);

Serial.println("Green Light Off");

run++;

Serial.println("Run + " + String(run));

}

void loop() {

// put your main code here, to run repeatedly:

runZero();

if((digitalRead(buttonPin) == HIGH) && run < 1) {

runOnce();

} else if (run >= 1){
```

```
digitalWrite(red,LOW);  
digitalWrite(green,LOW);  
digitalWrite(yellow,LOW);  
if (i == 0){  
    delay(1000);  
    servo1.write(0);  
    Serial.println("position is " + String(pos));  
    delay(185);  
    servo1.write(90);  
    i++;  
} else if (i >= 1){  
    servo1.write(90);  
    Serial.println("Servo is halted");  
}  
}  
else {  
    digitalWrite(red,LOW);  
    digitalWrite(green,LOW);  
    digitalWrite(yellow,LOW);  
}  
}  
void gateMovement(){  
    if (run < 1){  
        servo1.write(180);
```

```
Serial.println("position is " + String(pos));  
  
delay(200);  
  
servo1.write(90);  
  
// 0: full speed clockwise  
  
// 90: stopped  
  
//180: full speed counter-clockwise  
  
}  
  
}  
  
void runZero(){  
  
if (digitalRead(buttonPin2) == HIGH){  
  
run = 0;  
  
i = 0;  
  
}  
  
}
```