TANSAM

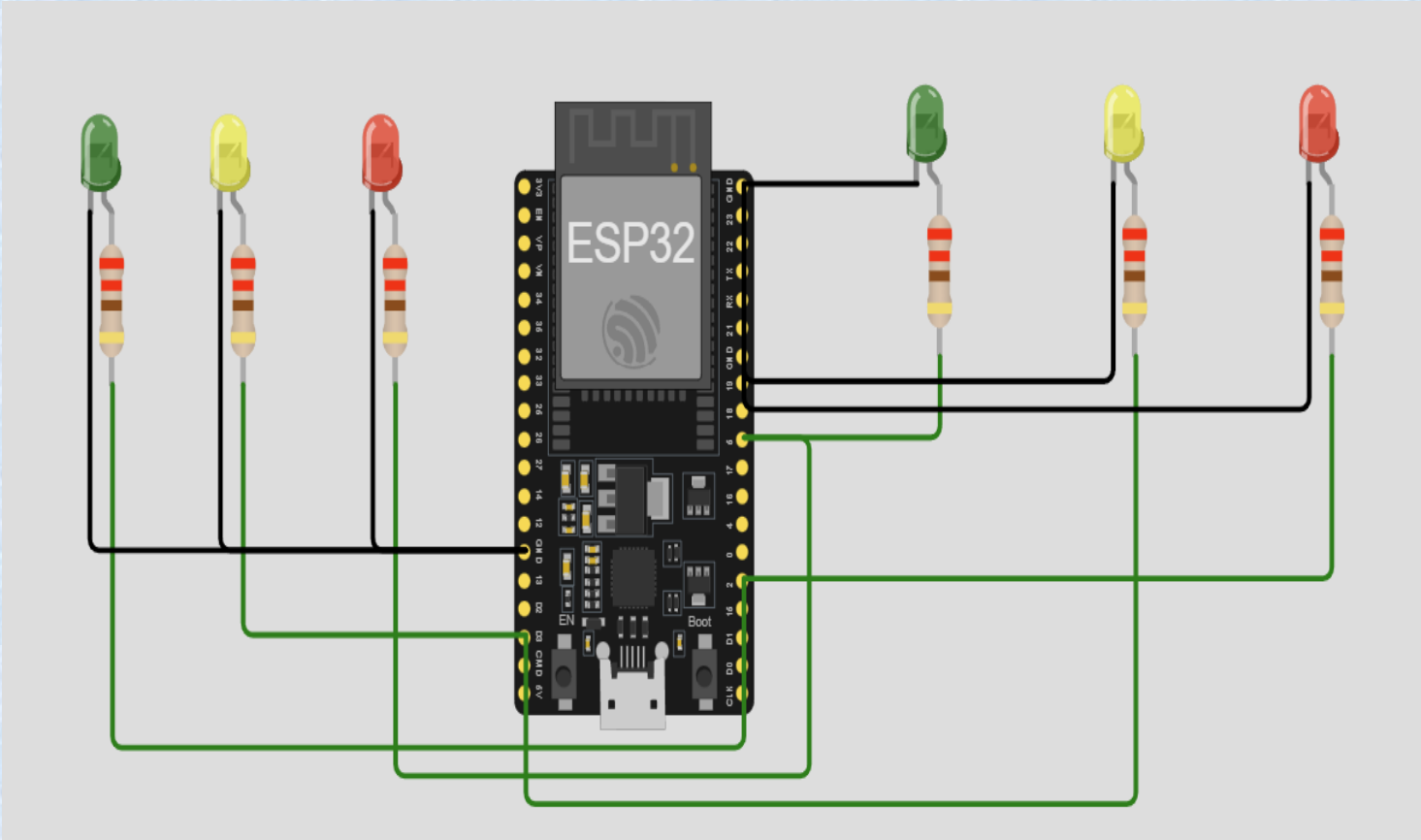
Powered by SIEMENS

Crafting a Traffic Light System

LIST OF COMPONENTS:

1. ESP32 MICROCONTROLLER
2. LED’S(TWO WAY TRAFFIC SYSTEM)
3. BREAD BOARD
4. JUMPER WIRES

CIRCUIT DIAGRAM



CONNECT GREEN1&RED2-D2
CONNECT YELLOW1&YELLOW2-D3
CONNECT RED1&GREEN2-D5

CODE:

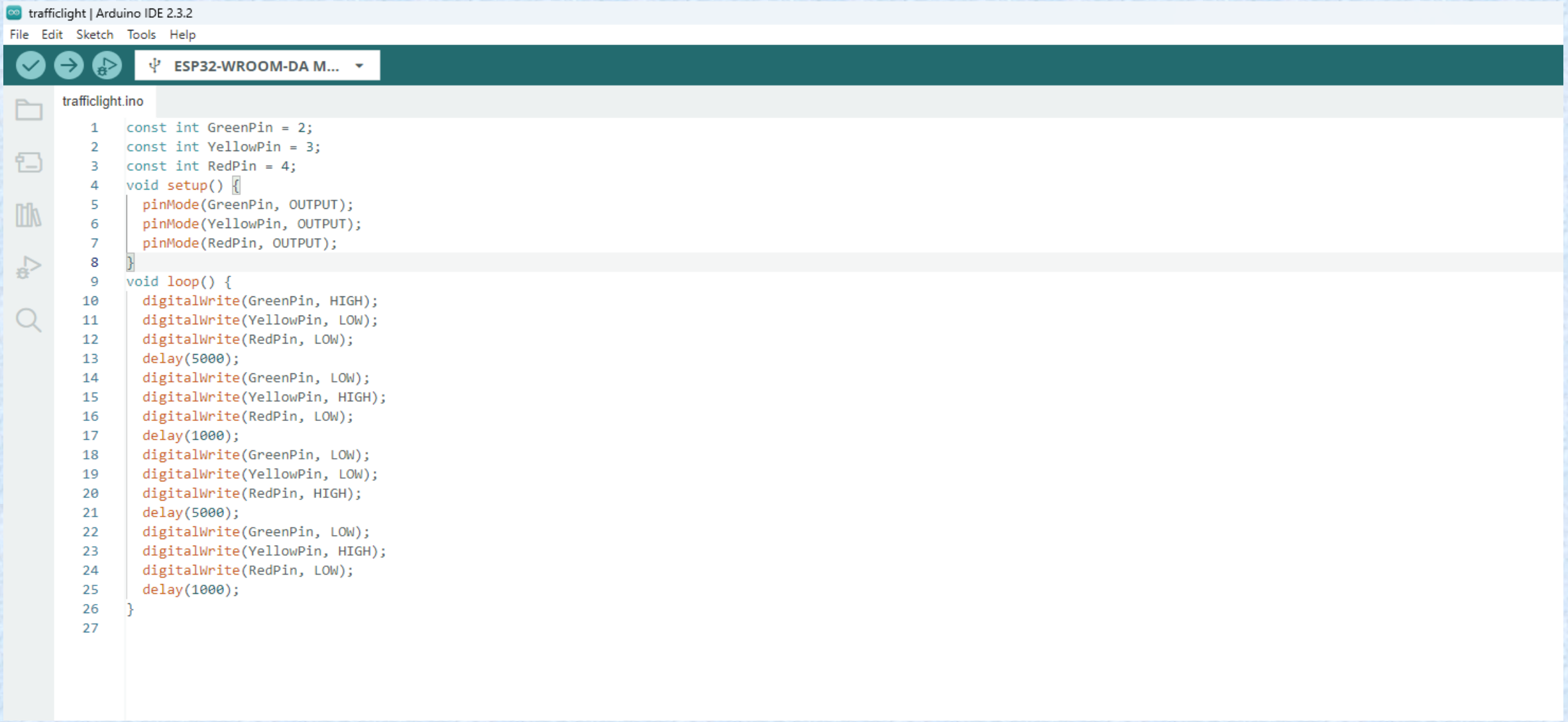
```
const int GreenPin = 2;
const int YellowPin = 3;
const int RedPin = 5;
void setup() {
  pinMode(GreenPin, OUTPUT);
  pinMode(YellowPin, OUTPUT);
  pinMode(RedPin, OUTPUT);
}
void loop() {
  digitalWrite(GreenPin, HIGH);
  digitalWrite(YellowPin, LOW);
  digitalWrite(RedPin, LOW);
  delay(5000);
  digitalWrite(GreenPin, LOW);
  digitalWrite(YellowPin, HIGH);
  digitalWrite(RedPin, LOW);
```

CONTINUE

```
delay(1000);
  digitalWrite(GreenPin, LOW);
  digitalWrite(YellowPin, LOW);
  digitalWrite(RedPin, HIGH);
  delay(5000);
  digitalWrite(GreenPin, LOW);
  digitalWrite(YellowPin, HIGH);
  digitalWrite(RedPin, LOW);
  delay(1000);
}
```

STEP 1

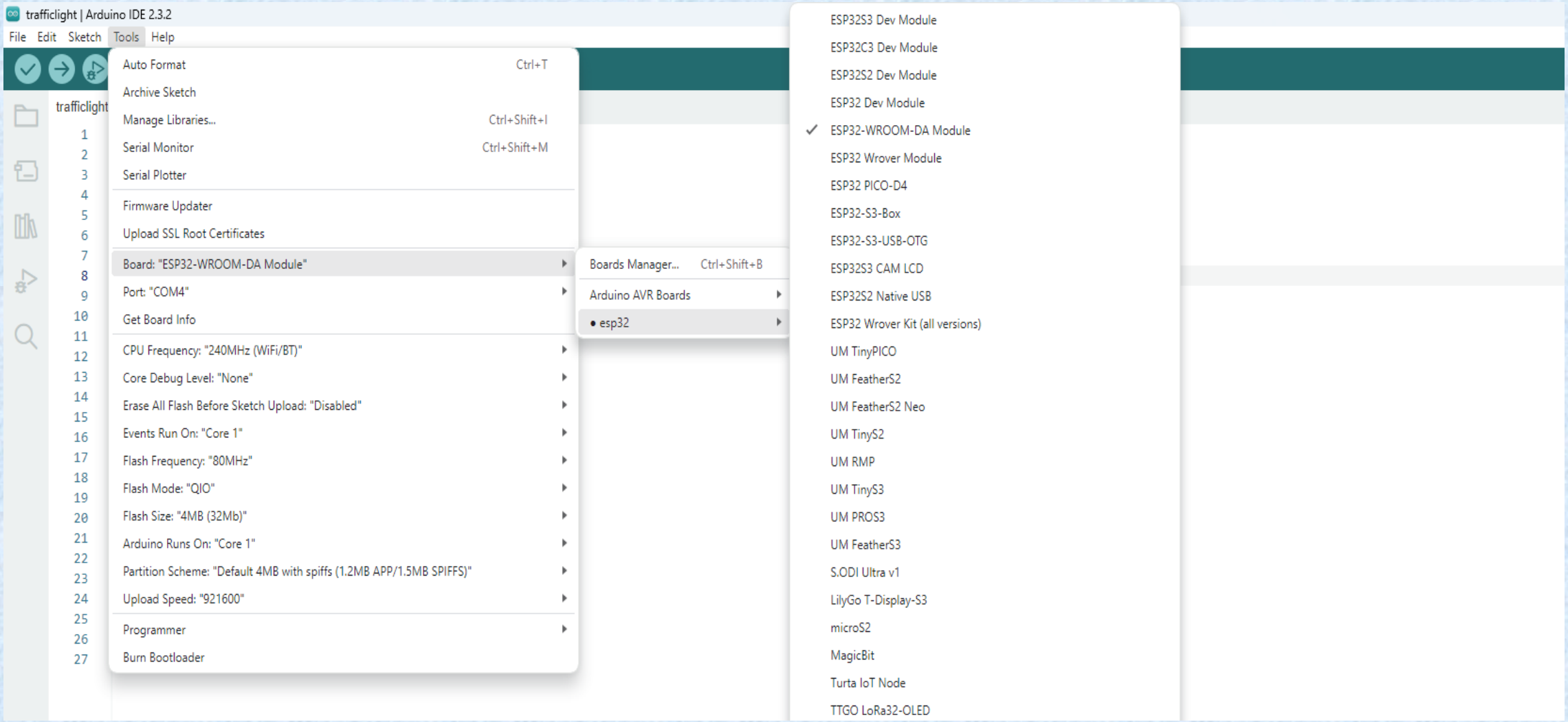
Copy code paste in Arduino new Sketch




```
const int GreenPin = 2;
const int YellowPin = 3;
const int RedPin = 4;
void setup() {
  pinMode(GreenPin, OUTPUT);
  pinMode(YellowPin, OUTPUT);
  pinMode(RedPin, OUTPUT);
}
void loop() {
  digitalWrite(GreenPin, HIGH);
  digitalWrite(YellowPin, LOW);
  digitalWrite(RedPin, LOW);
  delay(5000);
  digitalWrite(GreenPin, LOW);
  digitalWrite(YellowPin, HIGH);
  digitalWrite(RedPin, LOW);
  delay(1000);
  digitalWrite(GreenPin, LOW);
  digitalWrite(YellowPin, LOW);
  digitalWrite(RedPin, HIGH);
  delay(5000);
  digitalWrite(GreenPin, LOW);
  digitalWrite(YellowPin, HIGH);
  digitalWrite(RedPin, LOW);
  delay(1000);
}
```

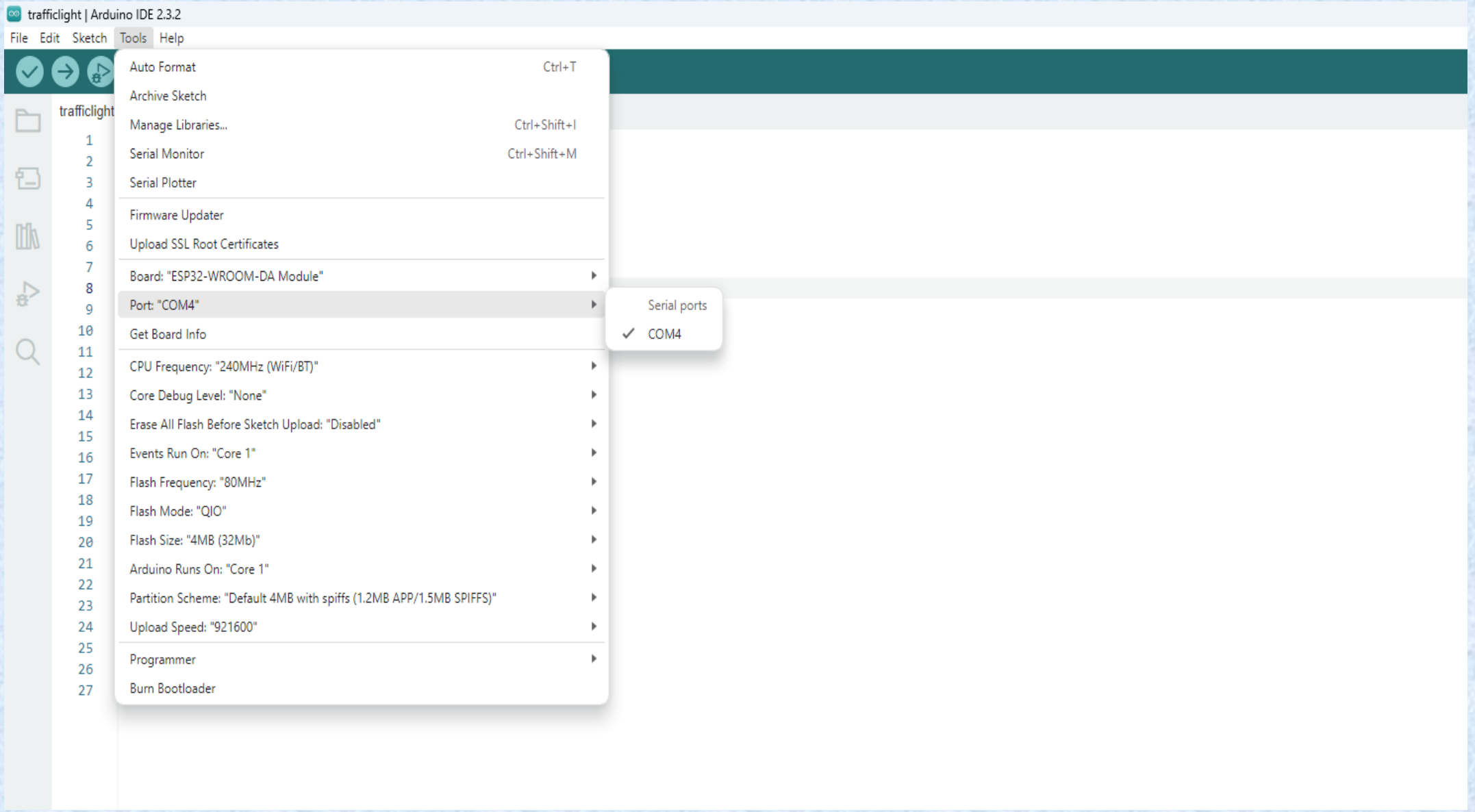
STEP 2:

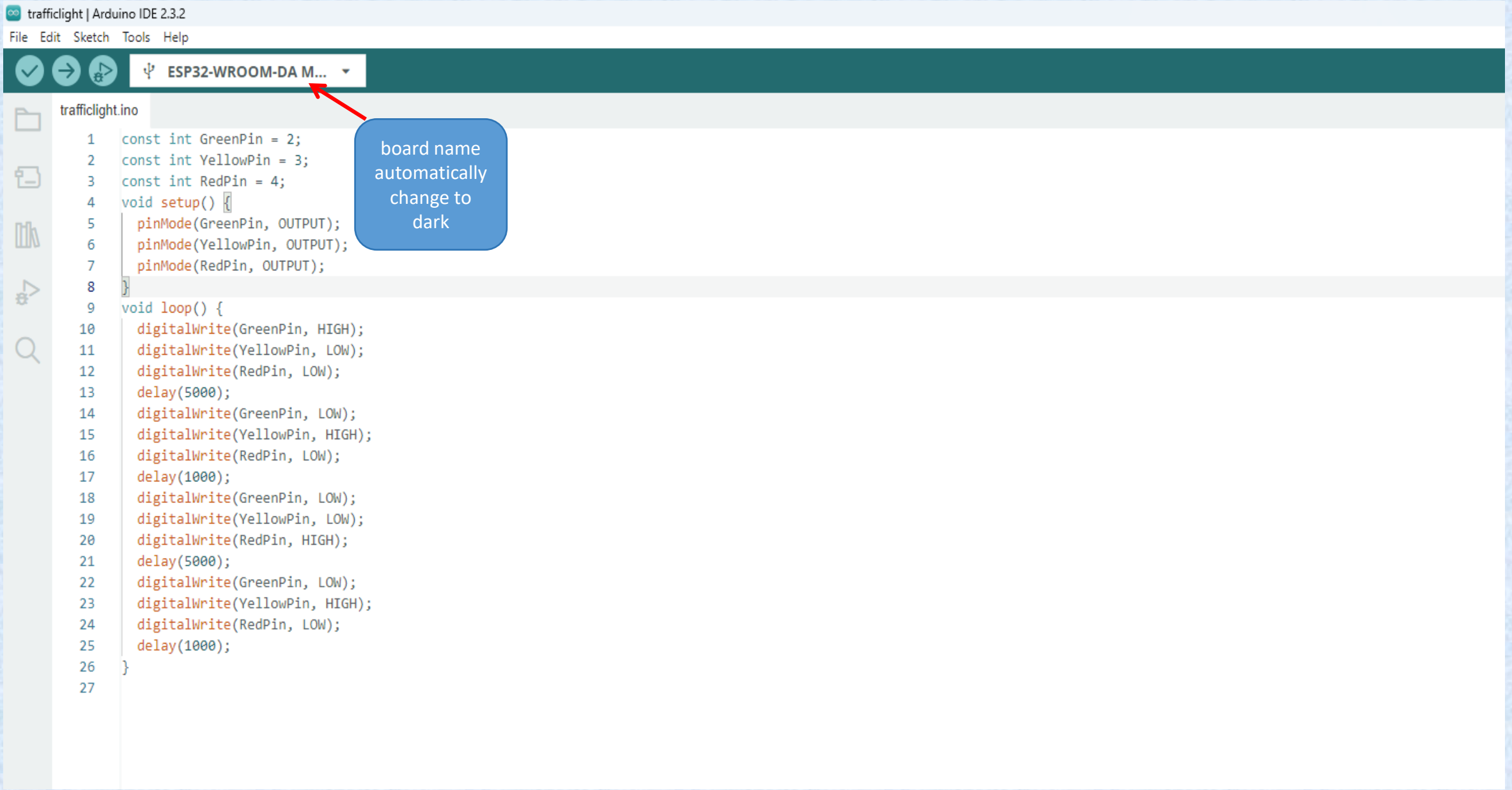
Board---->esp32---->esp32-wroom-DA module

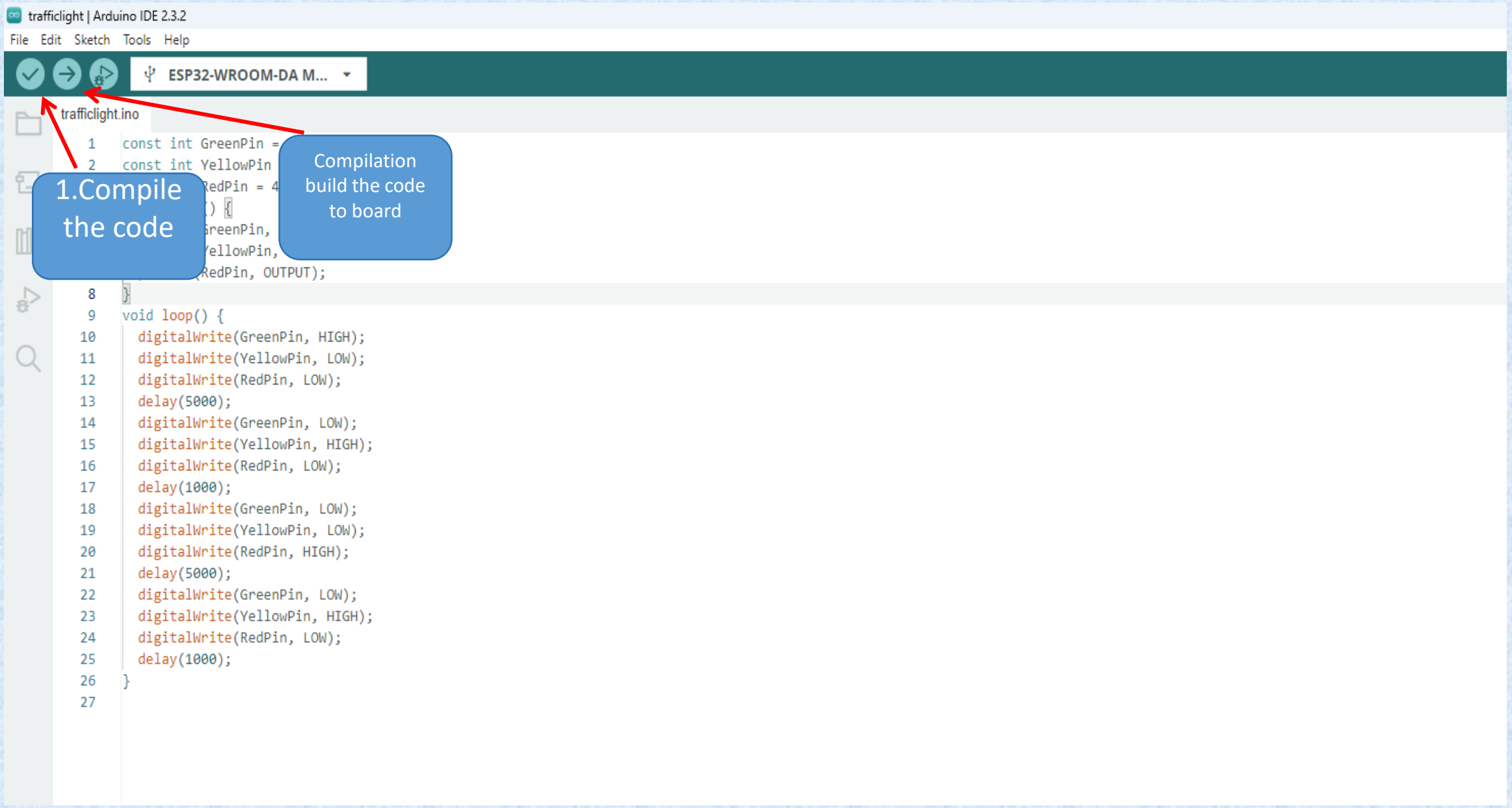


STEP 3:

Tools---->port---->select your com




trafficlight | Arduino IDE 2.3.2
File Edit Sketch Tools Help
ESP32-WROOM-DA M...
trafficlight.ino
board name automatically change to dark
const int GreenPin = 2;
const int YellowPin = 3;
const int RedPin = 4;
void setup() {
pinMode(GreenPin, OUTPUT);
pinMode(YellowPin, OUTPUT);
pinMode(RedPin, OUTPUT);
}
void loop() {
digitalWrite(GreenPin, HIGH);
digitalWrite(YellowPin, LOW);
digitalWrite(RedPin, LOW);
delay(5000);
digitalWrite(GreenPin, LOW);
digitalWrite(YellowPin, HIGH);
digitalWrite(RedPin, LOW);
delay(1000);
digitalWrite(GreenPin, LOW);
digitalWrite(YellowPin, LOW);
digitalWrite(RedPin, HIGH);
delay(5000);
digitalWrite(GreenPin, LOW);
digitalWrite(YellowPin, HIGH);
digitalWrite(RedPin, LOW);
delay(1000);
}


trafficlight | Arduino IDE 2.3.2
File Edit Sketch Tools Help
ESP32-WROOM-DA M...
trafficlight.ino
1.Compile the code
Compilation build the code to board
const int GreenPin =
const int YellowPin
RedPin = 4
() {
GreenPin,
YellowPin,
RedPin, OUTPUT);
}
void loop() {
digitalWrite(GreenPin, HIGH);
digitalWrite(YellowPin, LOW);
digitalWrite(RedPin, LOW);
delay(5000);
digitalWrite(GreenPin, LOW);
digitalWrite(YellowPin, HIGH);
digitalWrite(RedPin, LOW);
delay(1000);
digitalWrite(GreenPin, LOW);
digitalWrite(YellowPin, LOW);
digitalWrite(RedPin, HIGH);
delay(5000);
digitalWrite(GreenPin, LOW);
digitalWrite(YellowPin, HIGH);
digitalWrite(RedPin, LOW);
delay(1000);
}

trafficlight | Arduino IDE 2.3.2

File Edit Sketch Tools Help

ESP32-WROOM-DA M... Verify

trafficlight.ino

```
1  const int GreenPin = 2;
2  const int YellowPin = 3;
3  const int RedPin = 4;
4  void setup() {
5    pinMode(GreenPin, OUTPUT);
6    pinMode(YellowPin, OUTPUT);
7    pinMode(RedPin, OUTPUT);
8  }
9  void loop() {
10   digitalWrite(GreenPin, HIGH);
11   digitalWrite(YellowPin, LOW);
12   digitalWrite(RedPin, LOW);
13   delay(5000);
14   digitalWrite(GreenPin, LOW);
15   digitalWrite(YellowPin, HIGH);
16   digitalWrite(RedPin, LOW);
17   delay(1000);
18   digitalWrite(GreenPin, LOW);
19   digitalWrite(YellowPin, LOW);
20   digitalWrite(RedPin, HIGH);
21   delay(5000);
22   digitalWrite(GreenPin, LOW);
23   digitalWrite(YellowPin, HIGH);
24   digitalWrite(RedPin, LOW);
25   delay(1000);
26 }
27
```

After Build the code the output like this

Output

```
Sketch uses 236893 bytes (18%) of program storage space. Maximum is 1310720 bytes.
Global variables use 21048 bytes (6%) of dynamic memory, leaving 306632 bytes for local variables. Maximum is 327680 bytes.
```

SAMPLE OUTPUT IMAGE FOR TWO WAY TRAFFIC: