TANSAM

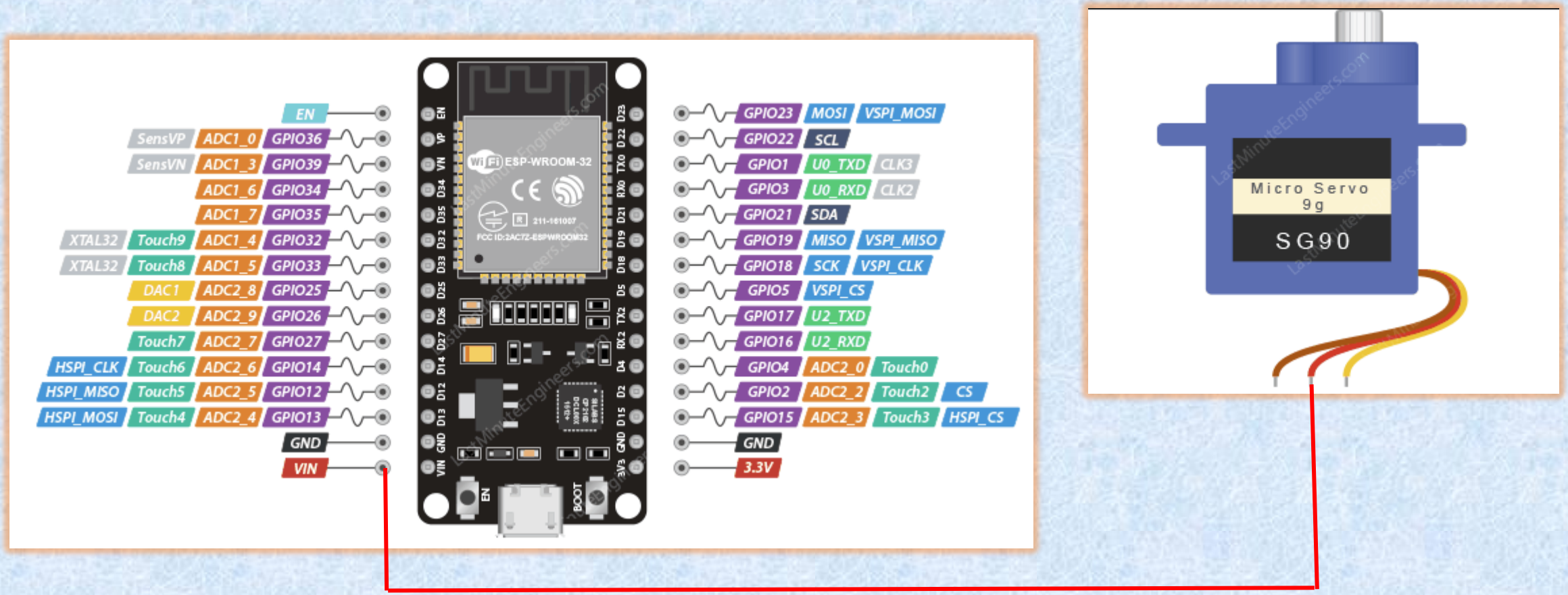
Powered by SIEMENS

Unleashing Servo Motor Control

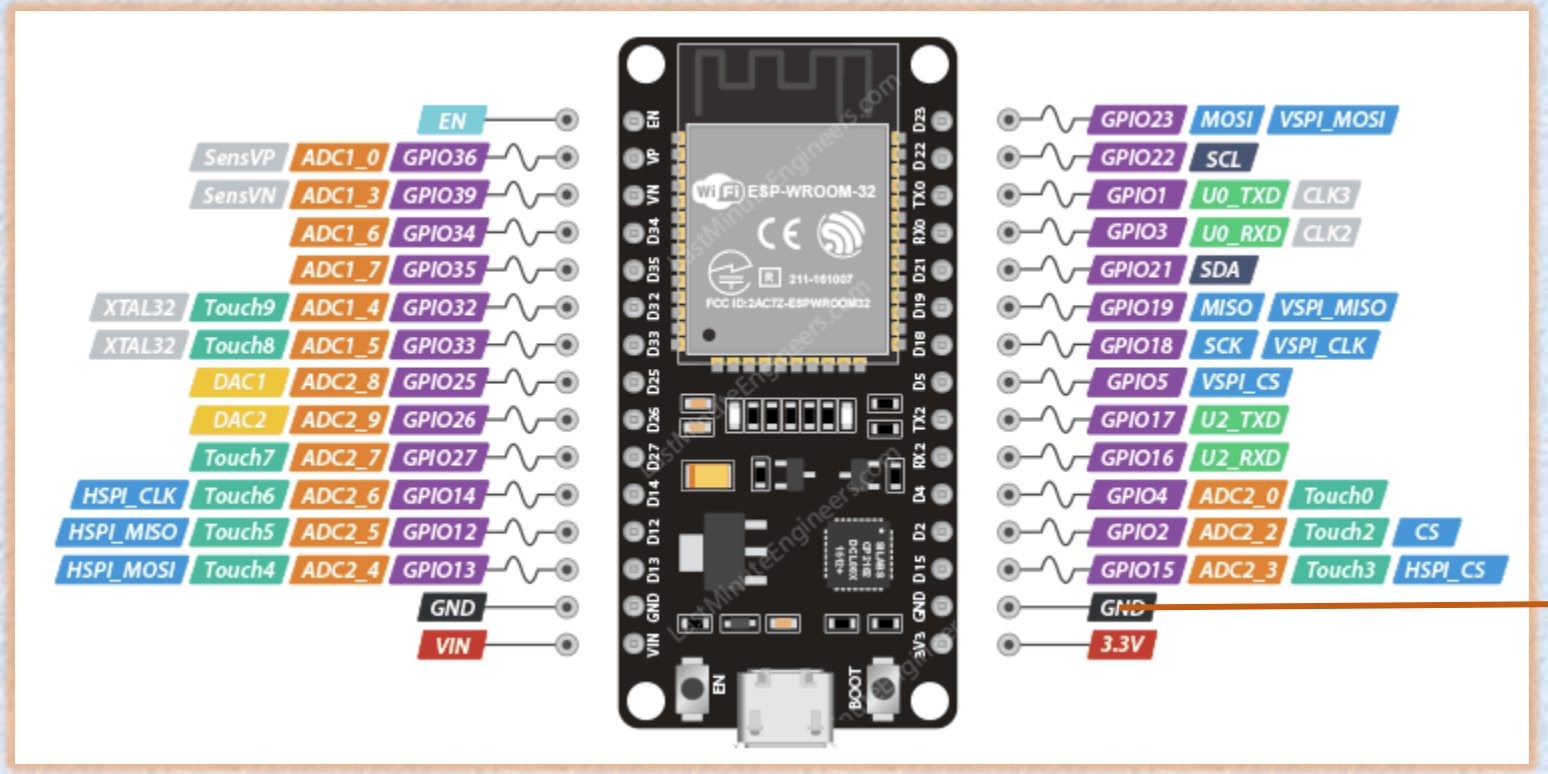
LIST OF COMPONENTS:

1. ESP32 MICROCONTROLLER
2. SERVO MOTOR(SG90)
3. JUMPER WIRES

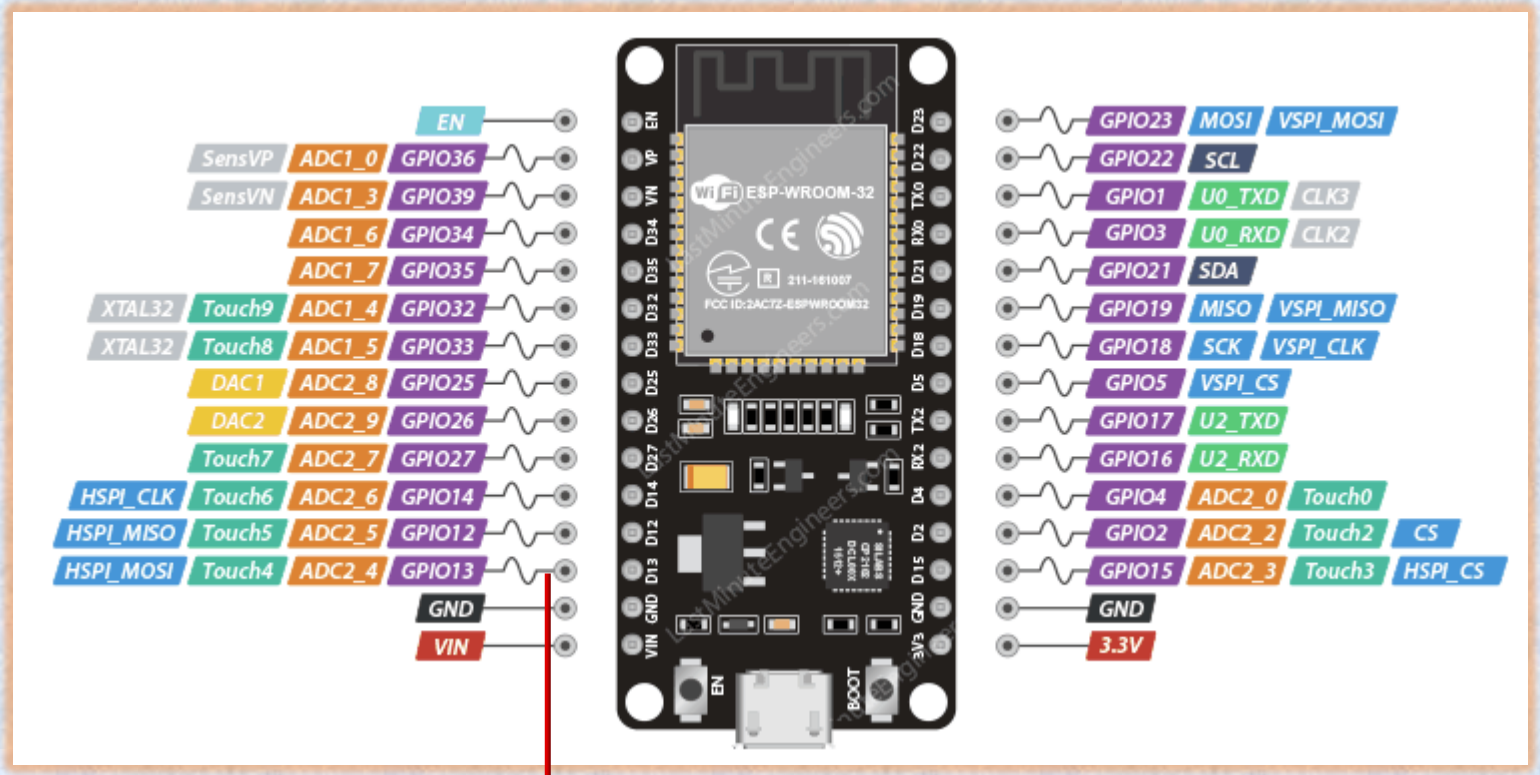
CIRCUIT DAIGRAM



CONNECT RED WIRE-VIN



CONNECT BROWN WIRE-GND



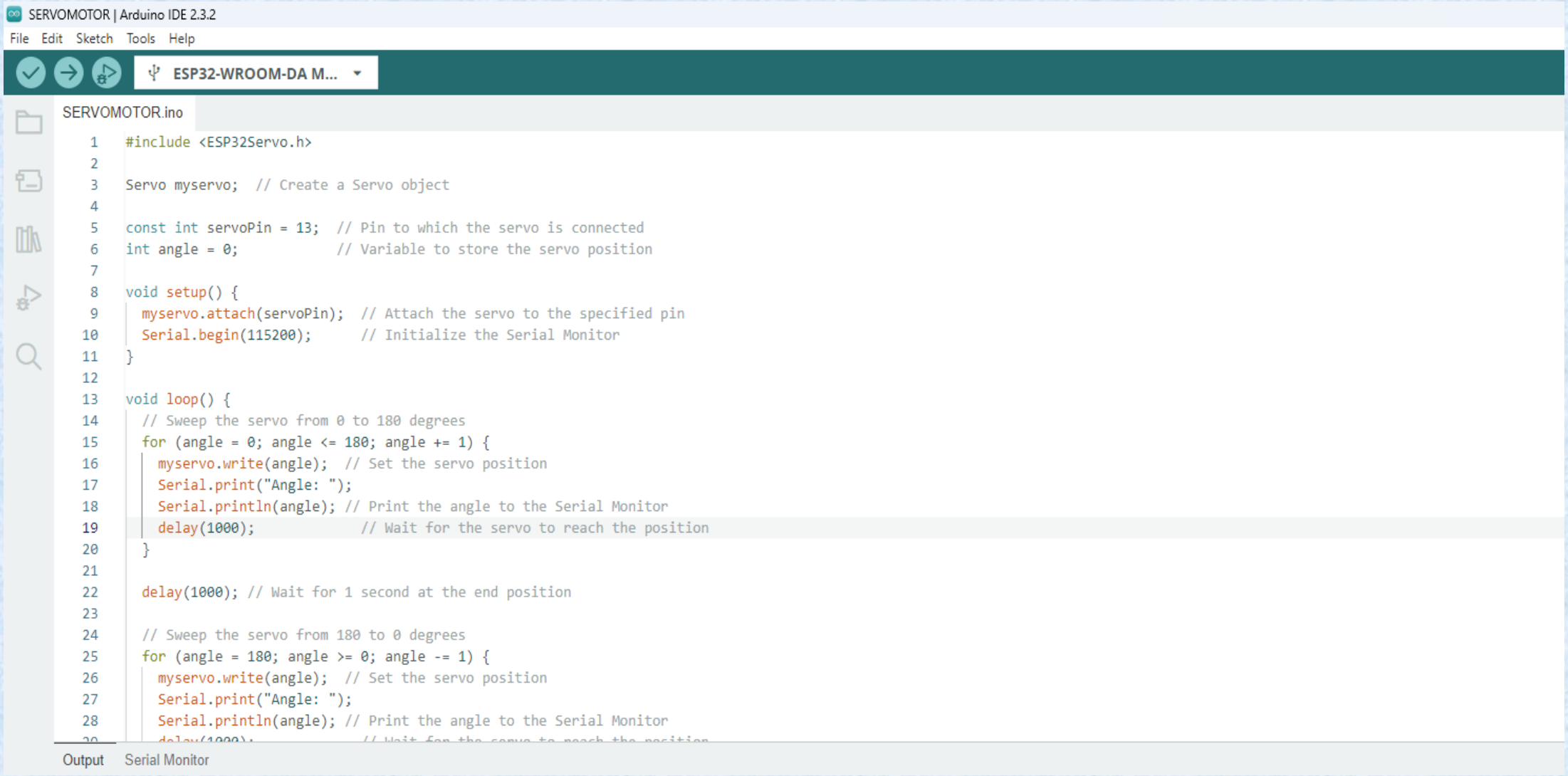
CONNECT YELLOW WIRE-D13

CODE:

```
#include <ESP32Servo.h>
Servo myservo;
const int servoPin = 13;
int angle = 0;
void setup() {
  myservo.attach(servoPin);
  Serial.begin(115200);
}
void loop() {
  for (angle = 0; angle <= 180; angle += 1) {
    myservo.write(angle);
    Serial.print("Angle: ");
    Serial.println(angle);
    delay(1000);
  delay(1000);
  for (angle = 180; angle >= 0; angle -= 1) {
    myservo.write(angle);
    Serial.print("Angle: ");
    Serial.println(angle);
    delay(1000);
  }
  delay(1000);
}
```

STEP 1

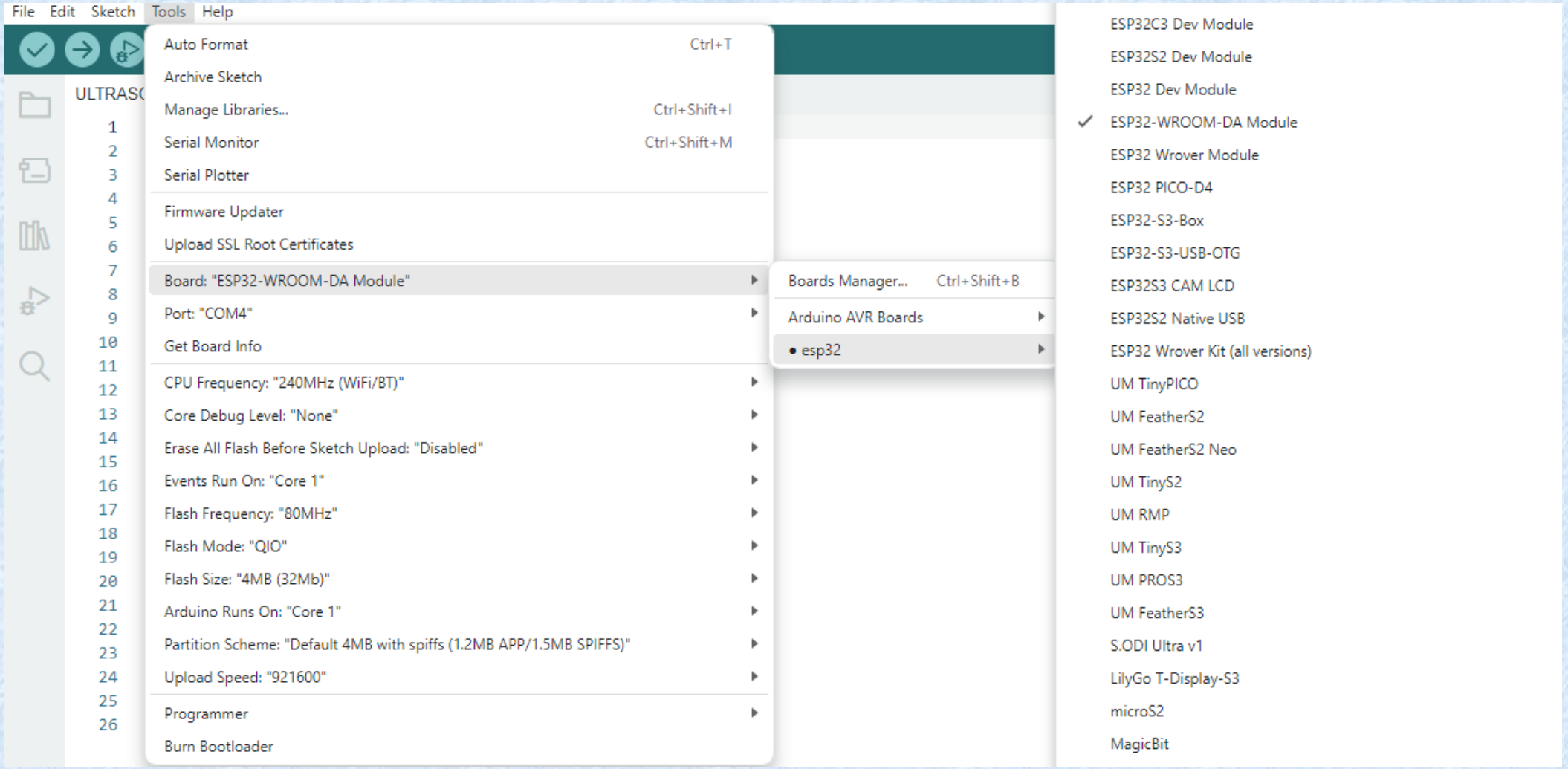
Copy code paste in Arduino new Sketch




```
#include <ESP32Servo.h>

Servo myservo;  // Create a Servo object

const int servoPin = 13;  // Pin to which the servo is connected
int angle = 0;            // Variable to store the servo position

void setup() {
  myservo.attach(servoPin);  // Attach the servo to the specified pin
  Serial.begin(115200);      // Initialize the Serial Monitor
}

void loop() {
  // Sweep the servo from 0 to 180 degrees
  for (angle = 0; angle <= 180; angle += 1) {
    myservo.write(angle);  // Set the servo position
    Serial.print("Angle: ");
    Serial.println(angle); // Print the angle to the Serial Monitor
    delay(1000);             // Wait for the servo to reach the position
  }

  delay(1000); // Wait for 1 second at the end position

  // Sweep the servo from 180 to 0 degrees
  for (angle = 180; angle >= 0; angle -= 1) {
    myservo.write(angle);  // Set the servo position
    Serial.print("Angle: ");
    Serial.println(angle); // Print the angle to the Serial Monitor
```

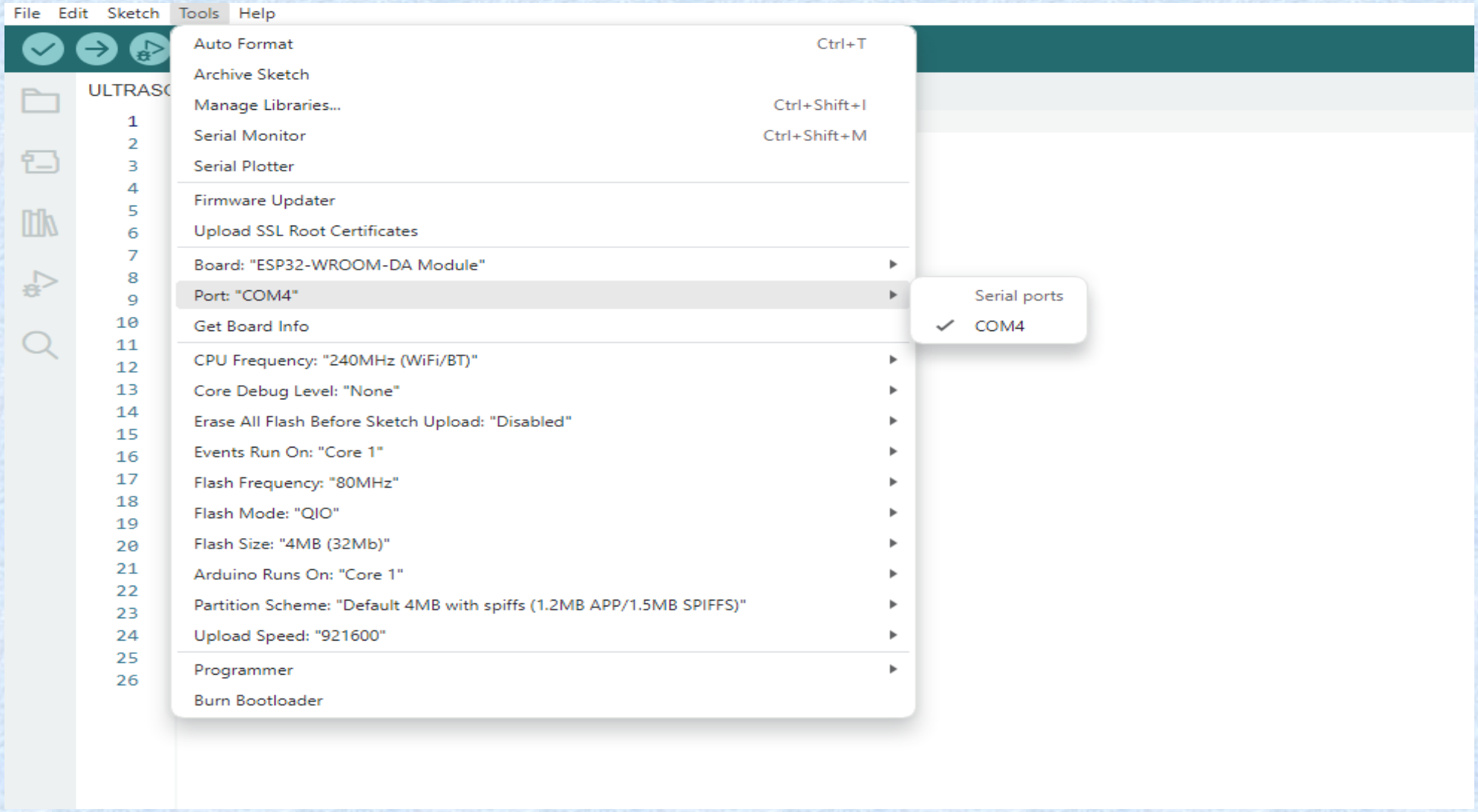
STEP 2:

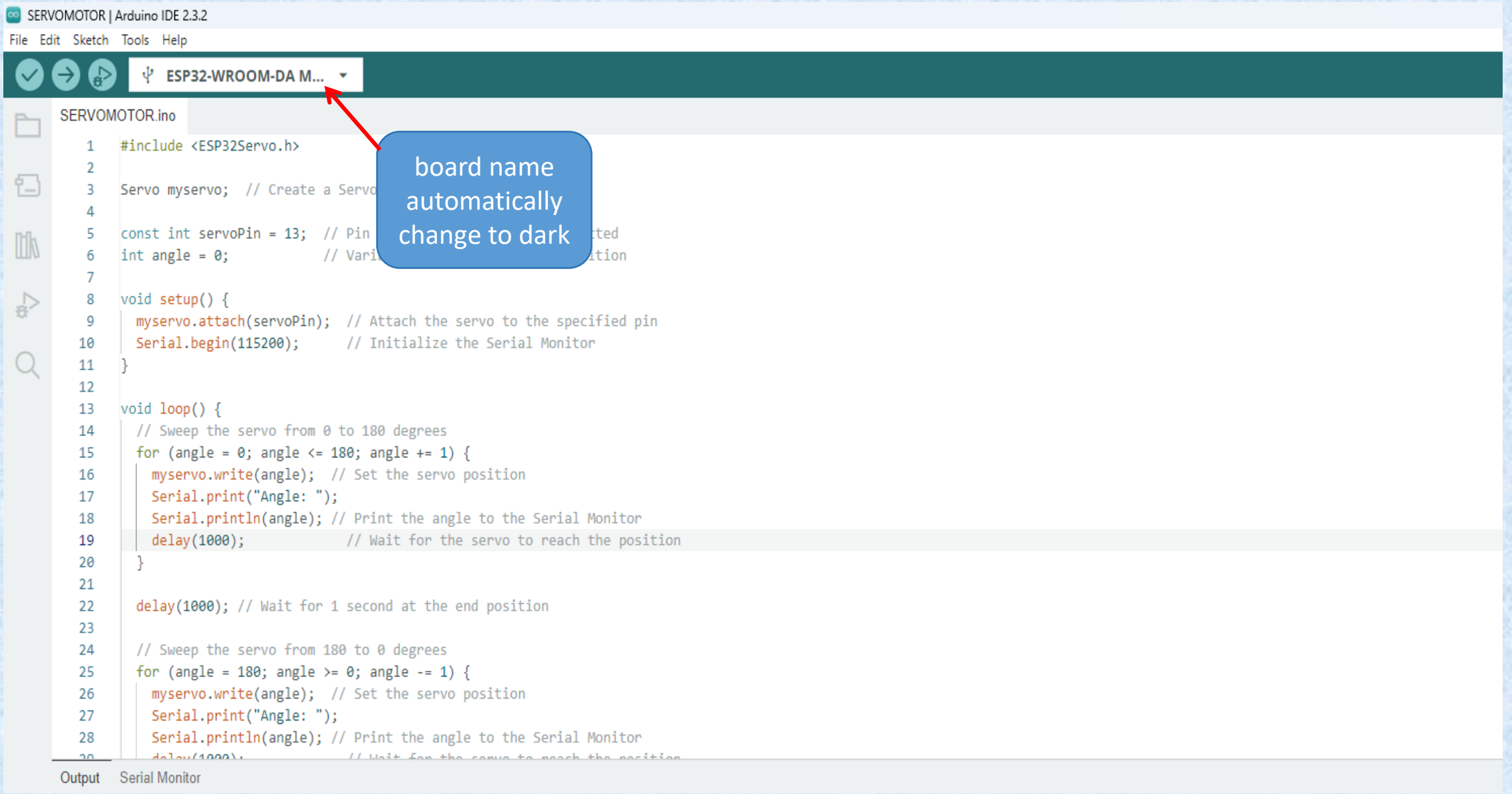
Board---->esp32---->esp32-wroom-DA module



STEP 3:

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




SERVOMOTOR | Arduino IDE 2.3.2
File Edit Sketch Tools Help
ESP32-WROOM-DA M...
SERVOMOTOR.ino
board name automatically change to dark
#include <ESP32Servo.h>
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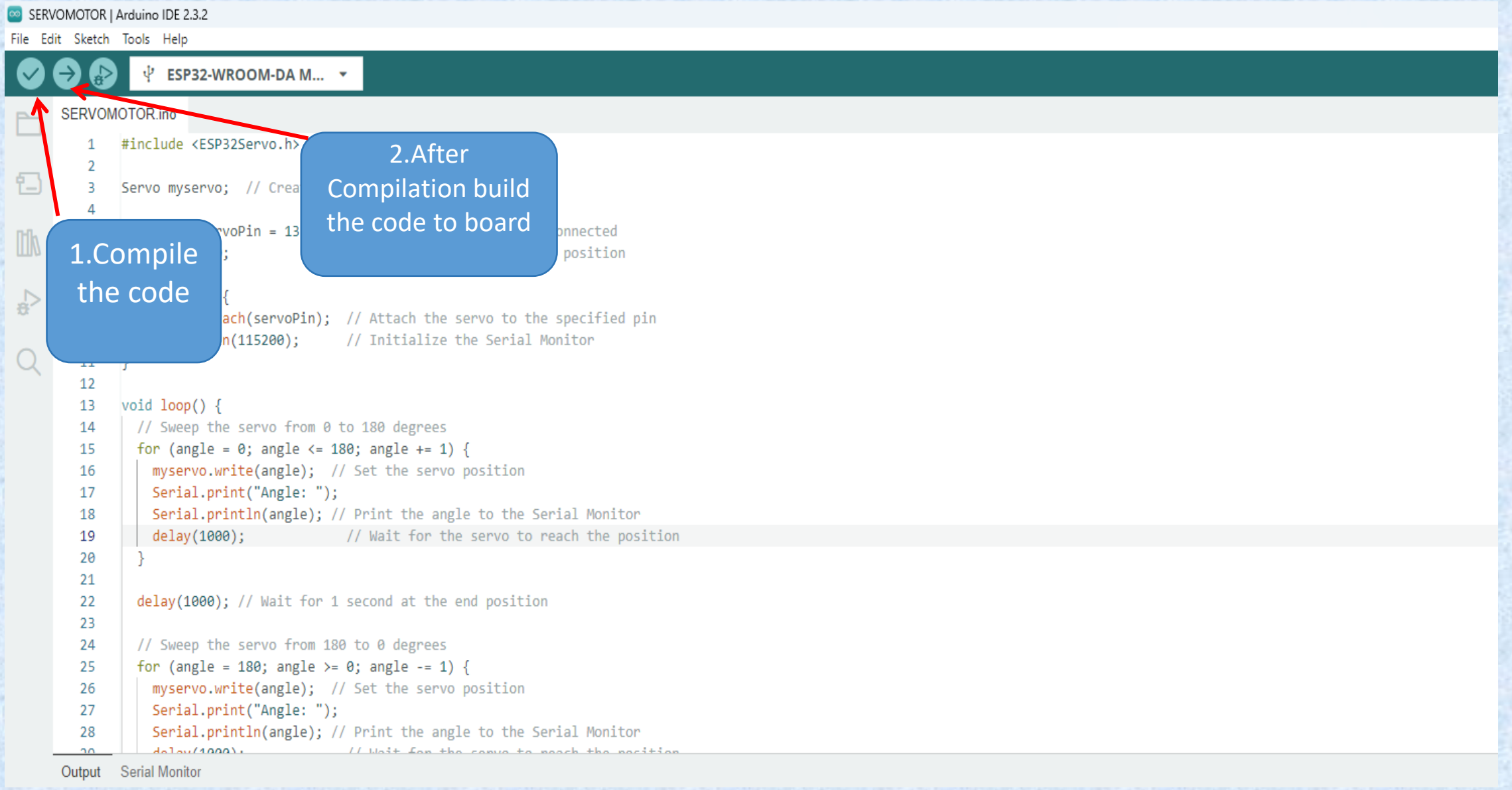
myservo.write(angle); // Set the servo position
Serial.print("Angle: ");
Serial.println(angle); // Print the angle to the Serial Monitor
delay(1000); // Wait for the servo to reach the position
}
delay(1000); // Wait for 1 second at the end position
// Sweep the servo from 180 to 0 degrees
for (angle = 180; angle >= 0; angle -= 1) {
myservo.write(angle); // Set the servo position
Serial.print("Angle: ");
Serial.println(angle); // Print the angle to the Serial Monitor
Output Serial Monitor


SERVOMOTOR | Arduino IDE 2.3.2
File Edit Sketch Tools Help
ESP32-WROOM-DA M...
SERVOMOTOR.ino
1.Compile the code
2.After Compilation build the code to board
#include <ESP32Servo.h>
Servo myservo; // Crea
rvoPin = 13
onnected
position
{
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n(115200); // Initialize the Serial Monitor
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myservo.write(angle); // Set the servo position
Serial.print("Angle: ");
Serial.println(angle); // Print the angle to the Serial Monitor
delay(1000); // Wait for the servo to reach the position
}
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for (angle = 180; angle >= 0; angle -= 1) {
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Serial.println(angle); // Print the angle to the Serial Monitor
Output
Serial Monitor

SERVOMOTOR | Arduino IDE 2.3.2

File Edit Sketch Tools Help

ESP32-WROOM-DA M...

SERVOMOTOR.ino

```
#include <ESP32Servo.h>

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  for (angle = 180; angle >= 0; angle -= 1) {
    myservo.write(angle);  // Set the servo positi
    Serial.print("Angle: ");
    Serial.println(angle); // Print the angle to t
```

After Build the code the output like this

Output Serial Monitor ×

Message (Enter to send message to 'ESP32-WROOM-DA Module' on 'COM4')

```
Angle: 171
Angle: 172
Angle: 173
Angle: 174
Angle: 175
Angle: 176
Angle: 177
Angle: 178
Angle: 179
```