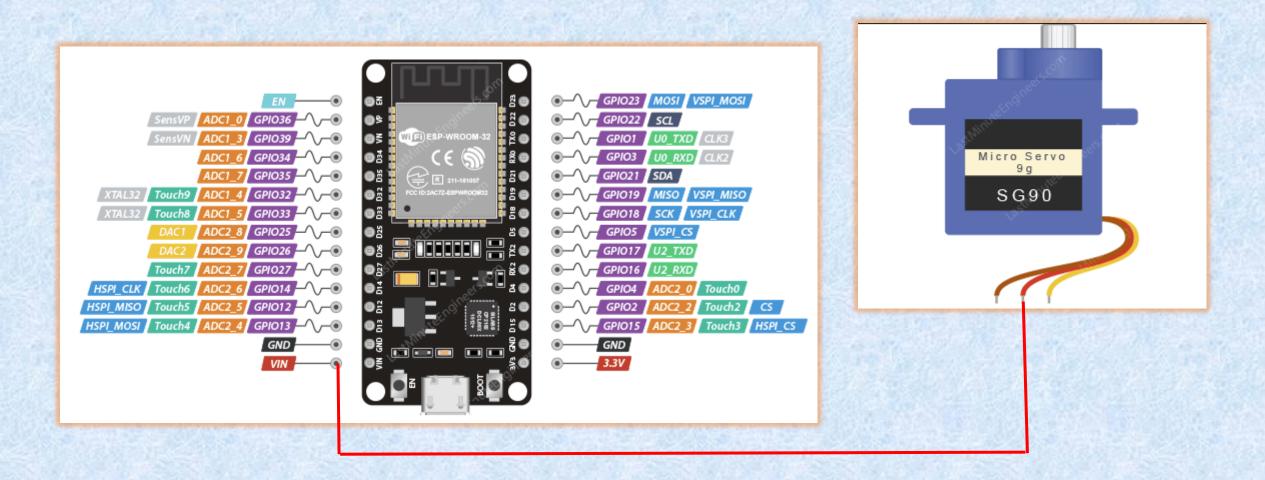


Unleashing Servo Motor Control

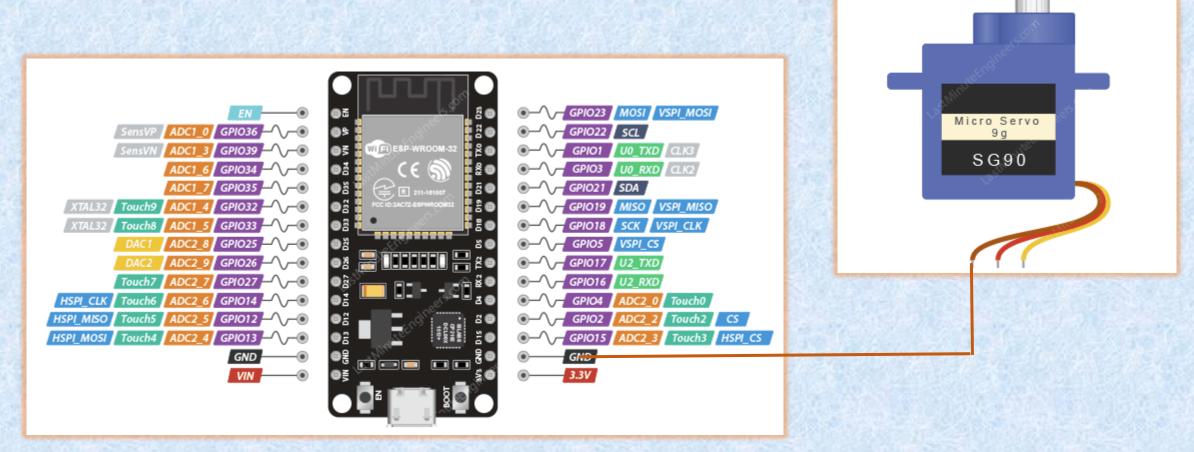
LIST OF COMPONENTS:

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

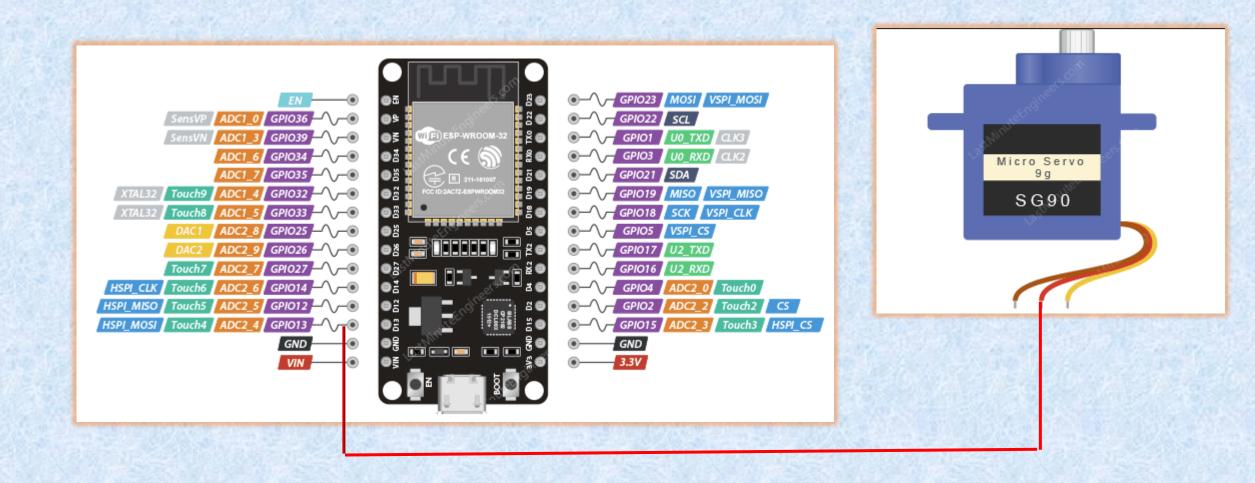
CIRCUIT DAIGRAM



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 \leq 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);
```

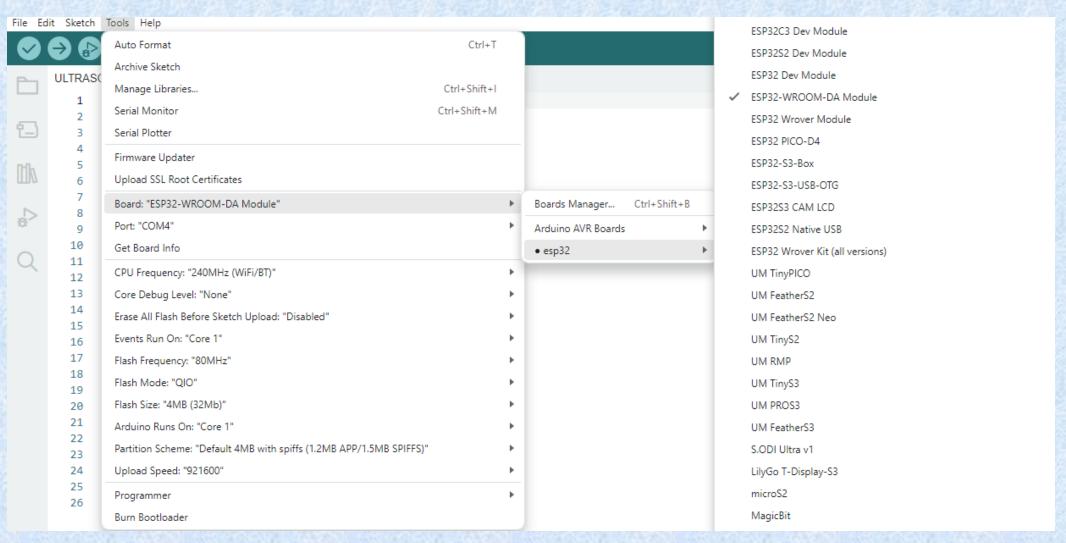
STEP 1

Copy code paste in Arduino new Sketch

```
SERVOMOTOR | Arduino IDE 2.3.2
File Edit Sketch Tools Help
                   ESP32-WROOM-DA M... ▼
       SERVOMOTOR.ino
              #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
         11
         12
              void loop() {
        13
                // Sweep the servo from 0 to 180 degrees
                for (angle = 0; angle <= 180; angle += 1) {
        15
                 myservo.write(angle); // Set the servo position
        16
                 Serial.print("Angle: ");
         17
                  Serial.println(angle); // Print the angle to the Serial Monitor
         18
                 delay(1000);
                                // Wait for the servo to reach the position
         19
         20
        21
                delay(1000); // Wait for 1 second at the end position
        22
        23
                // Sweep the servo from 180 to 0 degrees
        24
                for (angle = 180; angle >= 0; angle -= 1) {
        25
                 myservo.write(angle); // Set the servo position
        26
        27
                 Serial.print("Angle: ");
                  Serial.println(angle); // Print the angle to the Serial Monitor
         28
                                          // Wait for the comus to meach the position
      Output Serial Monitor
```

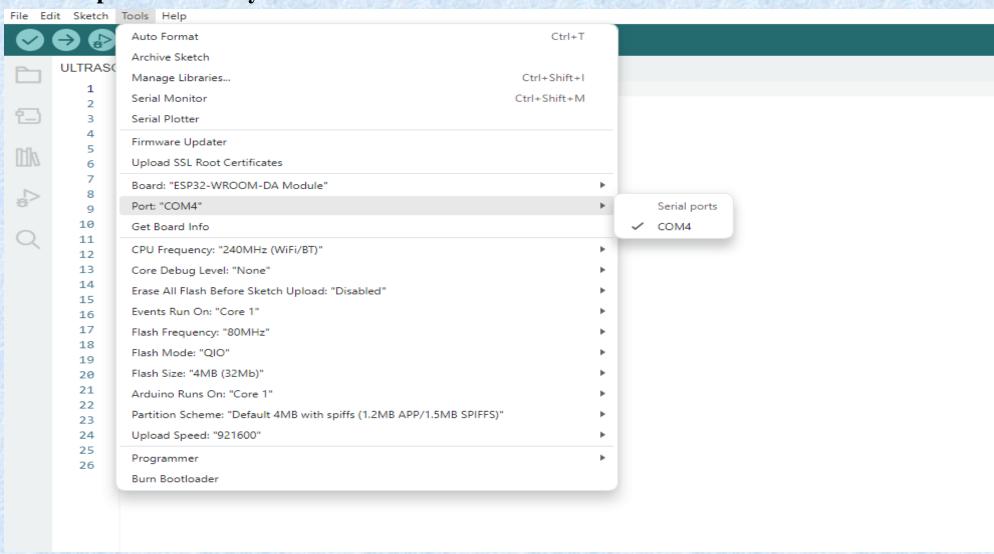
STEP 2:

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



STEP 3:

Tools---->select your com



File Edit Sketch Tools Help

```
ᢤ ESP32-WROOM-DA M... ▼
SERVOMOTOR.ino
       #include <ESP32Servo.h>
                                           board name
       Servo myservo; // Create a Servo
                                          automatically
                                         change to dark
       const int servoPin = 13; // Pin
       int angle = 0;
                                // Vari
       void setup() {
         myservo.attach(servoPin); // Attach the servo to the specified pin
                                 // Initialize the Serial Monitor
        Serial.begin(115200);
  11
  12
       void loop() {
  13
         // Sweep the servo from 0 to 180 degrees
  14
         for (angle = 0; angle <= 180; angle += 1) {
 15
          myservo.write(angle); // Set the servo position
  16
           Serial.print("Angle: ");
  17
           Serial.println(angle); // Print the angle to the Serial Monitor
  18
           delay(1000);  // Wait for the servo to reach the position
  19
  20
  21
  22
         delay(1000); // Wait for 1 second at the end position
  23
  24
         // Sweep the servo from 180 to 0 degrees
         for (angle = 180; angle \rightarrow 0; angle -= 1) {
  25
          myservo.write(angle); // Set the servo position
  26
           Serial.print("Angle: ");
  27
           Serial.println(angle); // Print the angle to the Serial Monitor
                                   // Wait for the carre to reach the recition
Output Serial Monitor
```

SERVOMOTOR | Arduino IDE 2.3.2 File Edit Sketch Tools Help ↓ ESP32-WROOM-DA M... ▼ SERVOMOTOR.ino #include <ESP32Servo.h>/ 2.After Compilation build Servo myservo; // Crea the code to board rvoPin = 13 onnected 1.Compile position the code ach(servoPin); // Attach the servo to the specified pin // Initialize the Serial Monitor n(115200); 12 void loop() { 14 // Sweep the servo from 0 to 180 degrees for (angle = 0; angle <= 180; angle += 1) { 15 myservo.write(angle); // Set the servo position 16 Serial.print("Angle: "); 17 18 Serial.println(angle); // Print the angle to the Serial Monitor delay(1000); // Wait for the servo to reach the position 19 20 21 delay(1000); // Wait for 1 second at the end position 22 23 // Sweep the servo from 180 to 0 degrees 24 25 for (angle = 180; angle \rightarrow = 0; angle \rightarrow = 1) { myservo.write(angle); // Set the servo position 26 Serial.print("Angle: "); 27 Serial.println(angle); // Print the angle to the Serial Monitor 28 // Wait for the campa to meach the pacition Output Serial Monitor

```
File Edit Sketch Tools Help
                ₽ ESP32-WROOM-DA M...
      SERVOMOTOR.ino
              #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
         10
         11
         12
         13
              void loop() {
         14
                // Sweep the servo from 0 to 180 degrees
                for (angle = 0; angle <= 180; angle += 1) {
         15
                 myservo.write(angle); // Set the servo position
         16
                  Serial.print("Angle: ");
         17
         18
                  Serial.println(angle); // Print the angle to the Serial Monitor
         19
                  delay(1000);
                                          // Wait for the servo to reach the position
         20
         21
         22
                delay(1000); // Wait for 1 second at the end position
         23
         24
                // Sweep the servo from 180 to 0 degrees
                                                                    After Build the
                for (angle = 180; angle >= 0; angle -= 1) {
         25
                 myservo.write(angle); // Set the servo positi
         26
                                                                   code the output
         27
                  Serial.print("Angle: ");
         28
                  Serial.println(angle); // Print the angle to t
                                                                         like this
                                           // Wait for the con
      Output Serial Monitor ×
      Message (Enter to send message to 'ESP32-WROOM-DA Mos
      Angle: 171
      Angle: 172
      Angle: 173
      Angle: 174
      Angle: 175
      Angle: 176
      Angle: 177
      Angle: 178
      Angle: 179
```

SERVOMOTOR | Arduino IDE 2.3.2