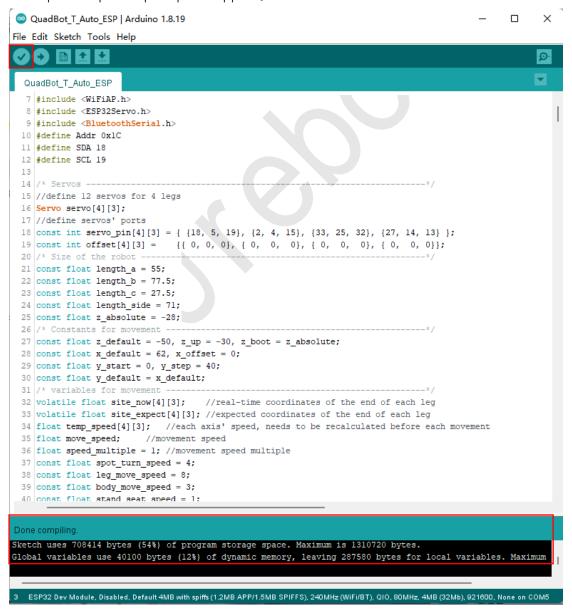
# 1. robot automatically runs the specified action

### 1.1 Open source code

Open the tutorial we provided, double-click to open the QuadBot\_T\_Atuo\_ESP.ino under "03\_Tutorial\_&\_Code >> Lesson3 Automatically runs the specified action >> QuadBot\_T\_Auto\_ESP"。

## 1.2 Compile source code

Click the 1 compile button as shown in the figure below, and if there is no problem, the 2 compile completion prompt will appear.



#### 1.3 Upload code to ESP32

Connect the ESP 32 and the computer with a USB cable, select the correct COM port, and then click the 1 "Download" button as shown in the figure below. If everything goes well, the 2 "Upload succeeded" prompt will appear. At this point, the program is downloaded successfully, and then unplug the USB cable.

```
QuadBot_T_Auto_ESP | Arduino 1.8.19
                                                                                                X
File Edit Sketch Tools Help
 QuadBot_T_Auto_ESP
  7 #include <WiFiAP.h>
  8 #include <ESP32Servo.h>
  9 #include <BluetoothSerial.h>
 10 #define Addr 0x1C
 11 #define SDA 18
 12 #define SCL 19
 14 /* Servos -
 15 //define 12 servos for 4 legs
 16 Servo servo[4][3];
 17 //define servos' ports
 18 const int servo_pin[4][3] = { {18, 5, 19}, {2, 4, 15}, {33, 25, 32}, {27, 14, 13} };
                                                              0, 0}, { 0, 0, 0}};
 19 const int offset[4][3] = {{ 0, 0, 0}, { 0, 0}, { 0,
 20 /* Size of the robot
 21 const float length_a = 55;
 22 const float length_b = 77.5;
 23 const float length_c = 27.5;
 24 const float length_side = 71;
 25 const float z_absolute = -28;
 26 /* Constants for movement
 27 const float z_default = -50, z_up = -30, z_boot = z_absolute;
 28 const float x_default = 62, x_offset = 0;
 29 const float y_start = 0, y_step = 40;
 30 const float y_default = x_default;
 31 /* variables for movement
 33 volatile float site_expect[4][3]; //expected coordinates of the end of each leg
 34 float temp_speed[4][3]; //each axis' speed, needs to be recalculated before each movement
 35 float move_speed;
                        //movement speed
 36 | float speed_multiple = 1; //movement speed multiple
 37 const float spot_turn_speed = 4;
 38 const float leg move_speed = 8;
 39 const float body_move_speed = 3;
 40 const float stand seat speed = 1:
 ESP32 Dev Module, Disabled, Default 4MB with spiffs (1.2MB APP/1.5MB SPIFFS), 240MHz (WiFi/BT), QIO, 80MHz, 4MB (32Mb), 921600, None on COM5
```

#### 1.4.Power on

If normal, the robot will perform the following actions. Standing for two seconds >

advancing for two seconds  $\rightarrow$  retreating for two seconds  $\rightarrow$  turning left for two seconds  $\rightarrow$  turning right for two seconds  $\rightarrow$  waving for two seconds  $\rightarrow$  shaking hands for two seconds  $\rightarrow$  dancing for two seconds  $\rightarrow$  sitting down for two seconds. Then it starts from standing and circulates.