1.APP control robot

1.1.Open source code

Open the tutorial we provide, navigate to the folder of "03_Tutorial_&_Code → Lesson4 Wifi Control → QuadBot_T_ESP", and double-click QuadBot_T_ESP.ino, open the source code.

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.

```
OuadBot T ESP | Arduino 1.8.19
                                                                                                           ×
File Edit Sketch Tools Help
    QuadBot T ESP
  1 #include <soc/soc.h>
  2 #include <soc/rtc_cntl_reg.h>
  3 #include <soc/rtc_wdt.h> //设置看门狗用//for setting wachdog
  4 #include <Wire.h>
  5 #include <WiFi.h>
  6 #include <WiFiClient.h>
  7 #include <WiFiAP.h>
  8 #include <ESP32Servo.h>
 10 /* Servos ---
 11 //define 12 servos for 4 legs
 12 Servo servo[4][3];
 13 //define servos' ports
 14 const int servo_pin[4][3] = { {18, 5, 19}, {2, 4, 15}, {33, 25, 32}, {27, 14, 13} };
 15 const int offset[4][3] = {{0, 0, 0}, {0, 0, 0}, {0, 0, 0}, {0, 0, 0}};
 16 /* Size of the robot
 17 const float length a = 55;
 18 const float length_b = 77.5;
 19 const float length_c = 27.5;
 20 const float length_side = 71;
 21 const float z_absolute = -28;
 22 /* Constants for movement
 23 const float z_default = -50, z_up = -30, z_boot = z_absolute;
 24 const float x_default = 62, x_offset = 0;
 25 const float y_start = 0, y_step = 40;
 26 const float y_default = x_default;
 27 /* variables for movement
 28 volatile float site_now[4][3]; //real-time coordinates of the end of each leg
 29 volatile float site_expect[4][3]; //expected coordinates of the end of each leg
 30 float temp_speed[4][3]; //each axis' speed, needs to be recalculated before each movement
 31 float move speed; //movement speed
 32 float speed_multiple = 1; //movement speed multiple
 33 const float spot_turn_speed = 4;
 34 const float led move speed = 8:
Done compiling.
Sketch uses 670714 bytes (51%) of program storage space. Maximum is 1310720 bytes.
Global variables use 39740 bytes (12%) of dynamic memory, leaving 287940 bytes for local variables. Maximum
3 ESP32 Dev Module, Disabled, Default 4MB with spiffs (1.2MB APP/1.5MB SPIFFS), 240MHz (WiFi/BT), Q10, 80MHz, 4MB (32Mb), 921600, None on COM
```

1.3. Download 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.



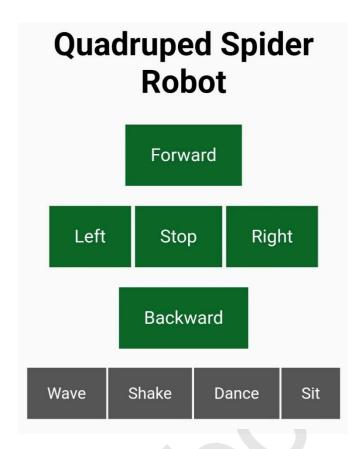
1.4 Web APP control robot

Mobile phone or computer wireless network scan WIFI (turn off GPRS and other shared networks to ensure that WIFI is the only network used) (specifically operate in the "Settings" "WLAN" of the mobile phone), connect the wifi hotspot named QuadBot-T, and the

password is 12345678, as shown in the following figure.



Enter the control page address 192.168.4.1 in the mobile phone or computer web browser, and the following interface will appear if it is correct



According to the interface button prompt, the remote control robot can complete the specified action $_{\circ}$