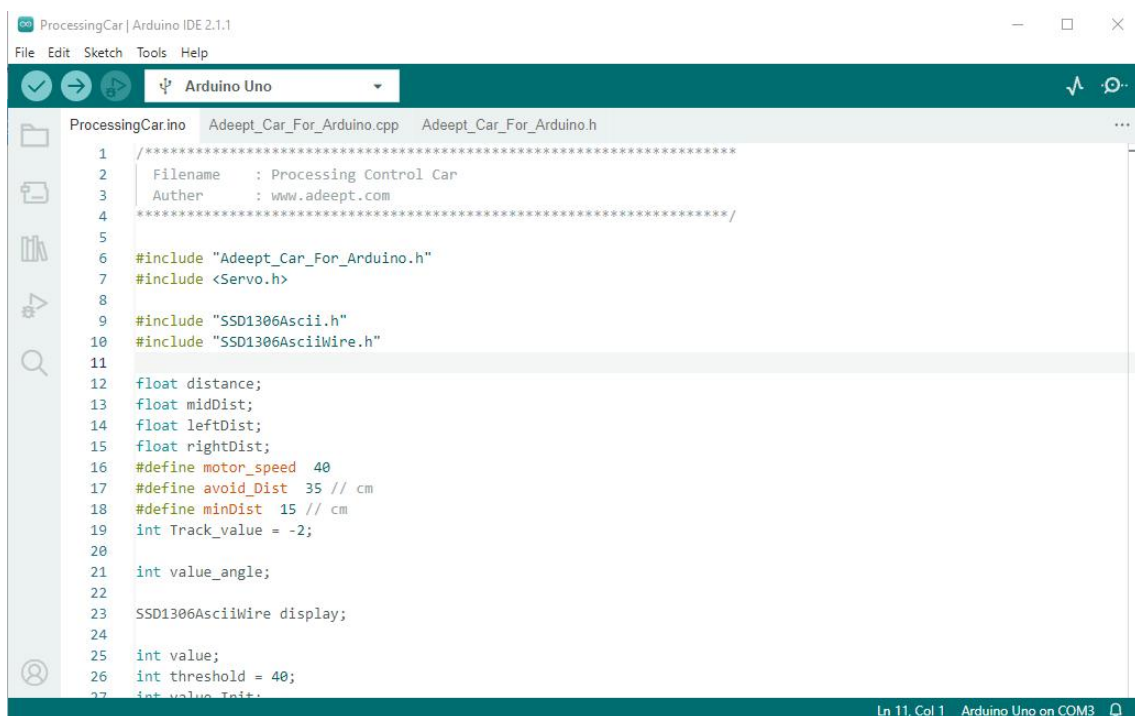


Control the car through the Processing GUI interface

Please make sure that the Arduino car has been assembled.

Upload the program to the Arduino Car

1. Connect your computer and Adeept Robot Control Board with a USB cable.
2. Open "ProcessingCode" folder in "ProcessingCar", double-click "ProcessingCar.ino".



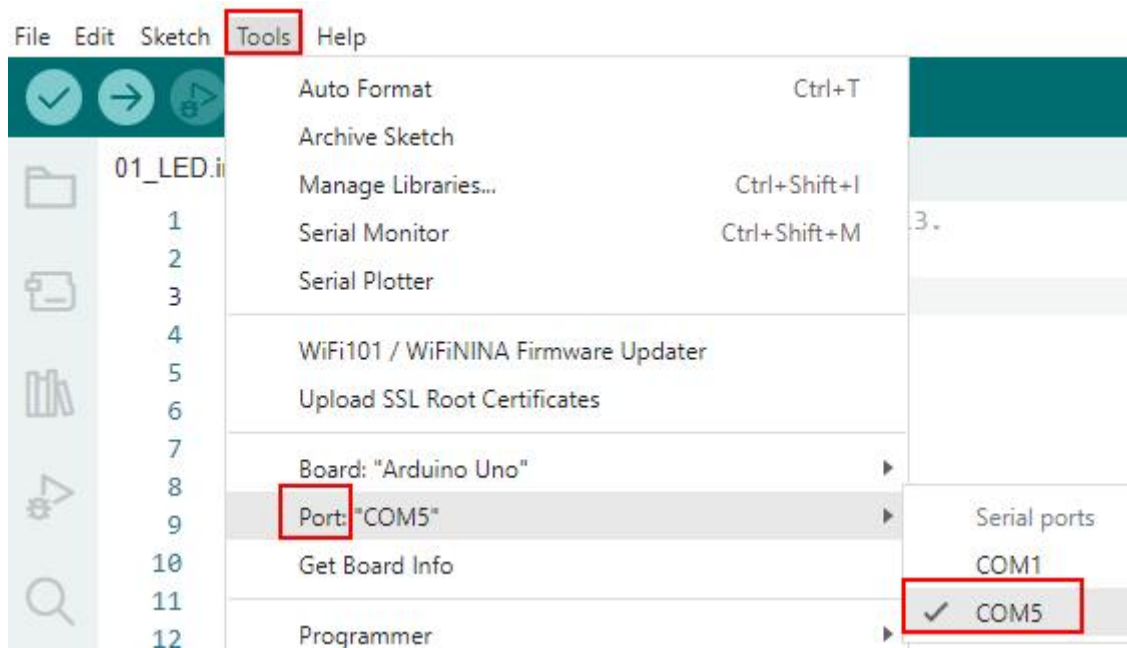
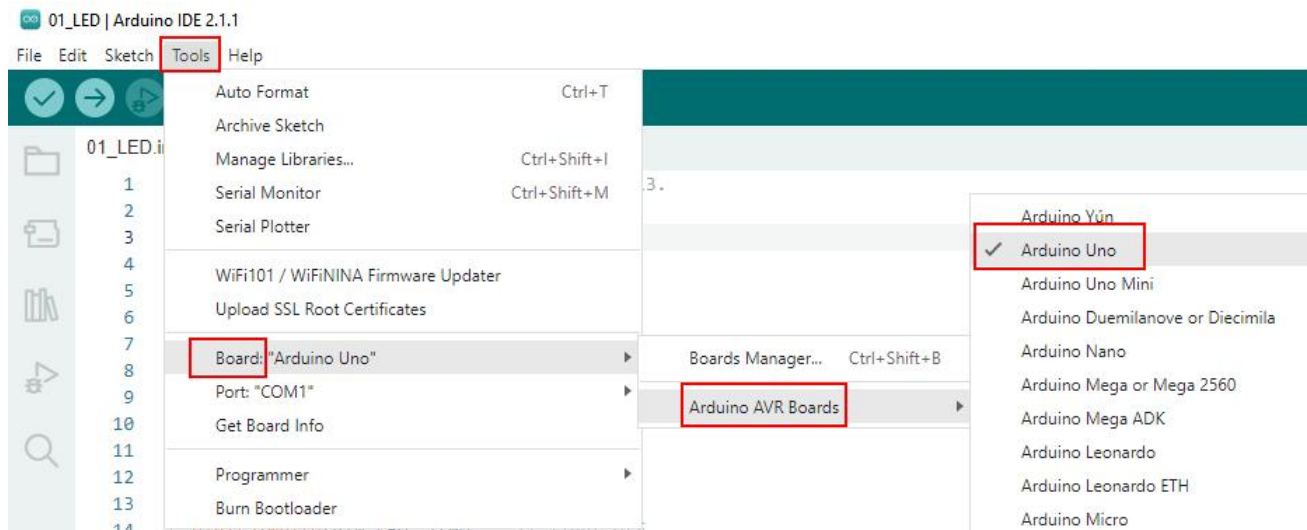
```
ProcessingCar | Arduino IDE 2.1.1
File Edit Sketch Tools Help
Arduino Uno
ProcessingCar.ino Adeept_Car_For_Arduino.cpp Adeept_Car_For_Arduino.h
1  /*****
2   Filename   : Processing Control Car
3   Author    : www.adeept.com
4   *****/
5
6   #include "Adeept_Car_For_Arduino.h"
7   #include <Servo.h>
8
9   #include "SSD1306Ascii.h"
10  #include "SSD1306AsciiWire.h"
11
12  float distance;
13  float midDist;
14  float leftDist;
15  float rightDist;
16  #define motor_speed 40
17  #define avoid_Dist 35 // cm
18  #define minDist 15 // cm
19  int Track_value = -2;
20
21  int value_angle;
22
23  SSD1306AsciiWire display;
24
25  int value;
26  int threshold = 40;
27  int value_Totals;
```


3. Select development board and serial port.

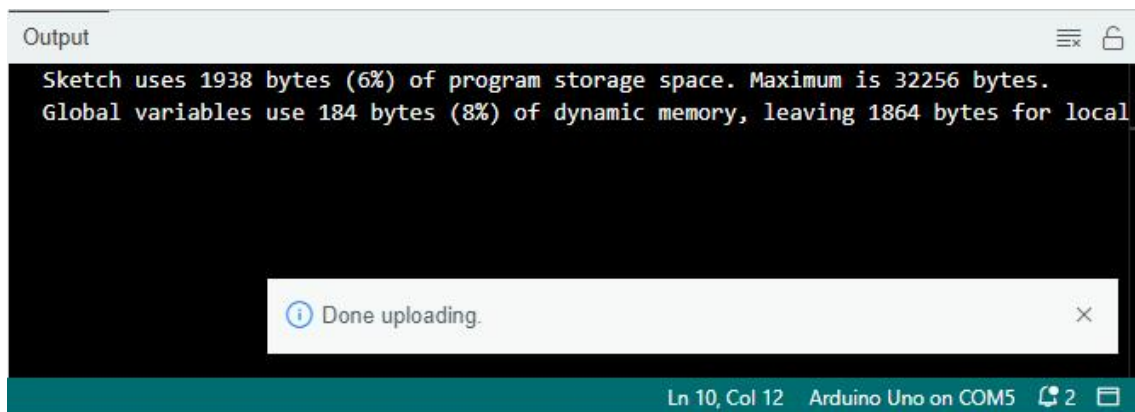
Board: **Tools**---->**Board**---->**Arduino AVR Boards**---->**Arduino Uno**

Port: **Tools** ---->**Port**---->**COMx**

Note: The port number will be different in different computers.



4. After opening, click  to upload the code program to the Arduino. If there is no error warning in the console below, it means that the Upload is successful.

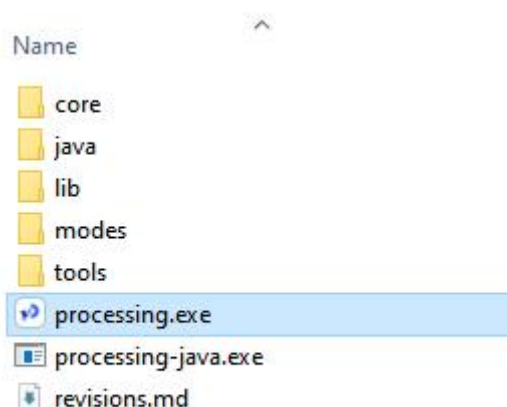


5. After uploading successfully, the PC can detect a WiFi name named "["MY_ESP8266"](#)", and the WiFi password is "["12345678"](#)". The WiFi name and password can be modified through the procedure below.

6. Connect to "["MY_ESP8266"](#)" WiFi via PC. Since this WiFi can only be used for communication between the PC and ESP8266, after the PC is connected to WiFi, it cannot access the Wide Area Network (WAN).

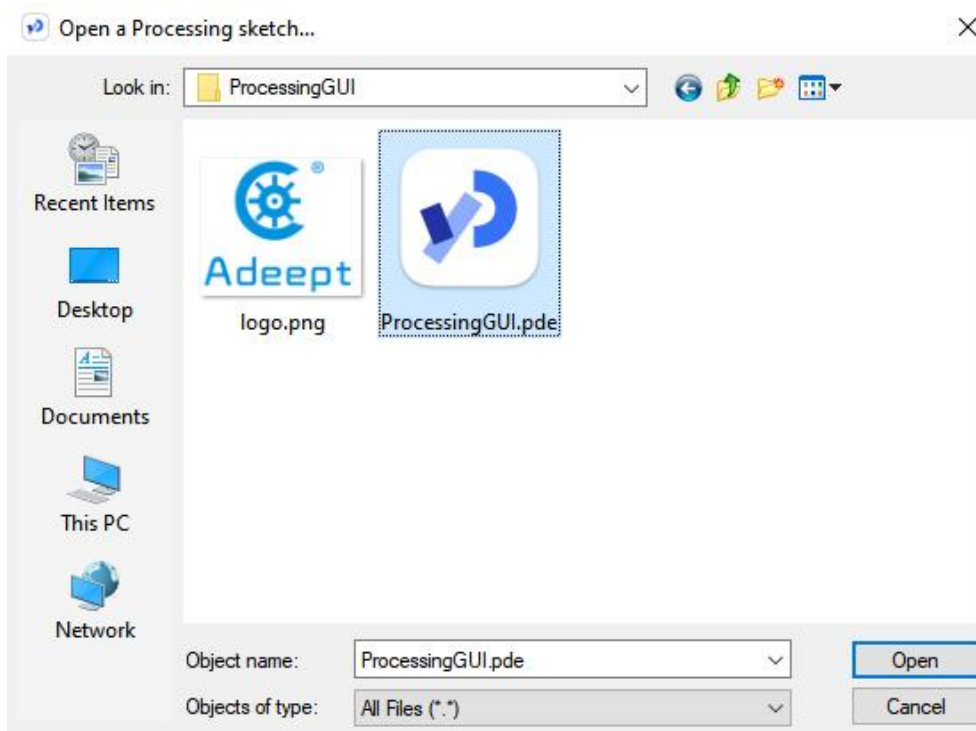
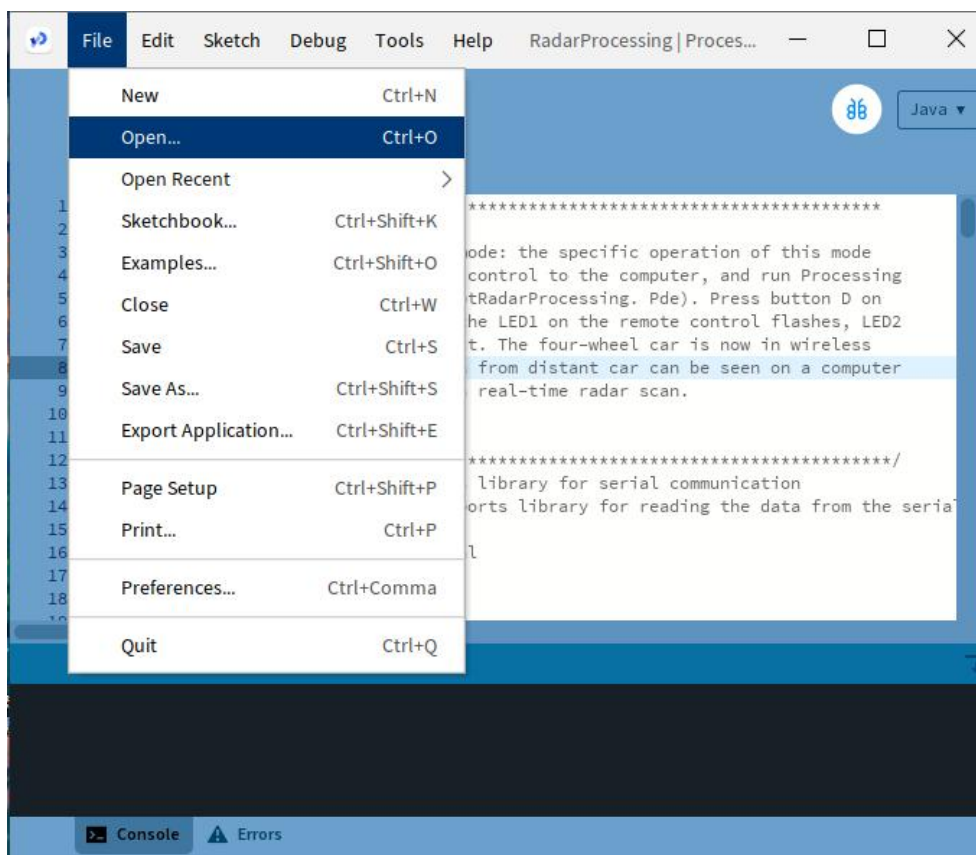
Use Processing

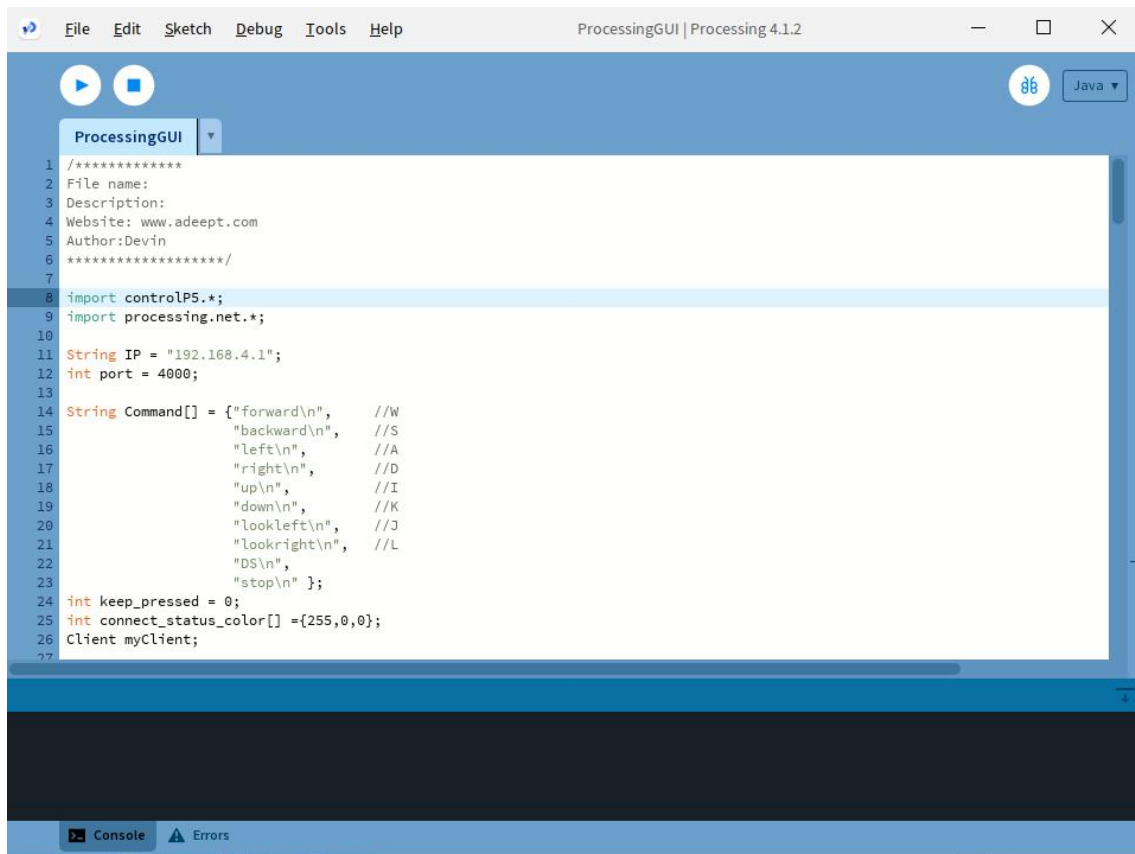
Click "[processing.exe](#)" as the figure below to run Processing IDE.



Open the [ProcessingGUI.pde](#) in the "[ProcessingCode\ProcessingGUI](#)" folder .

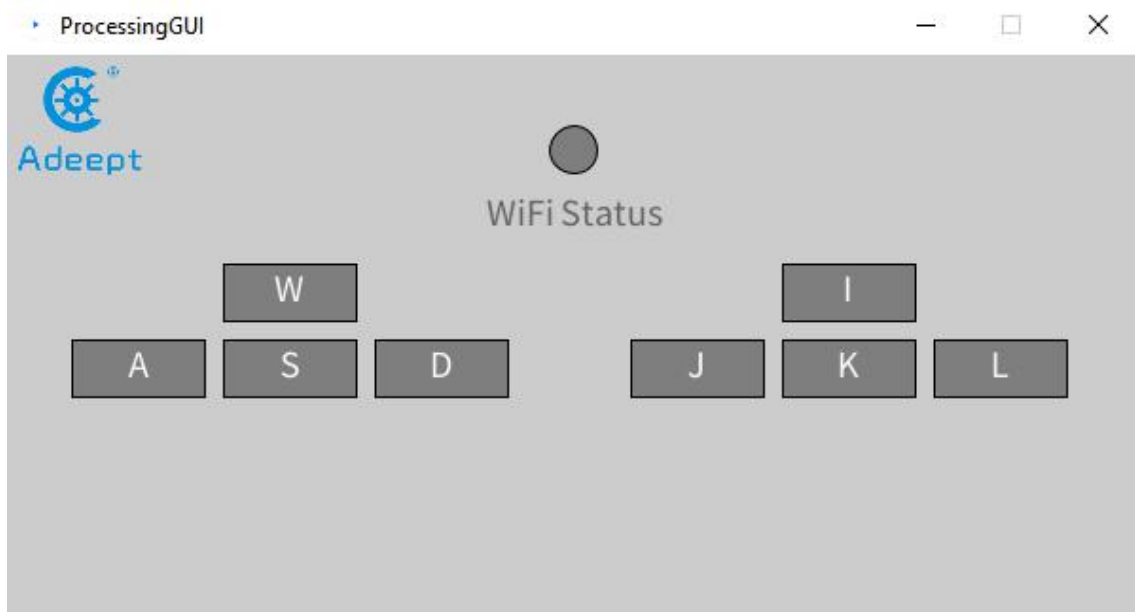
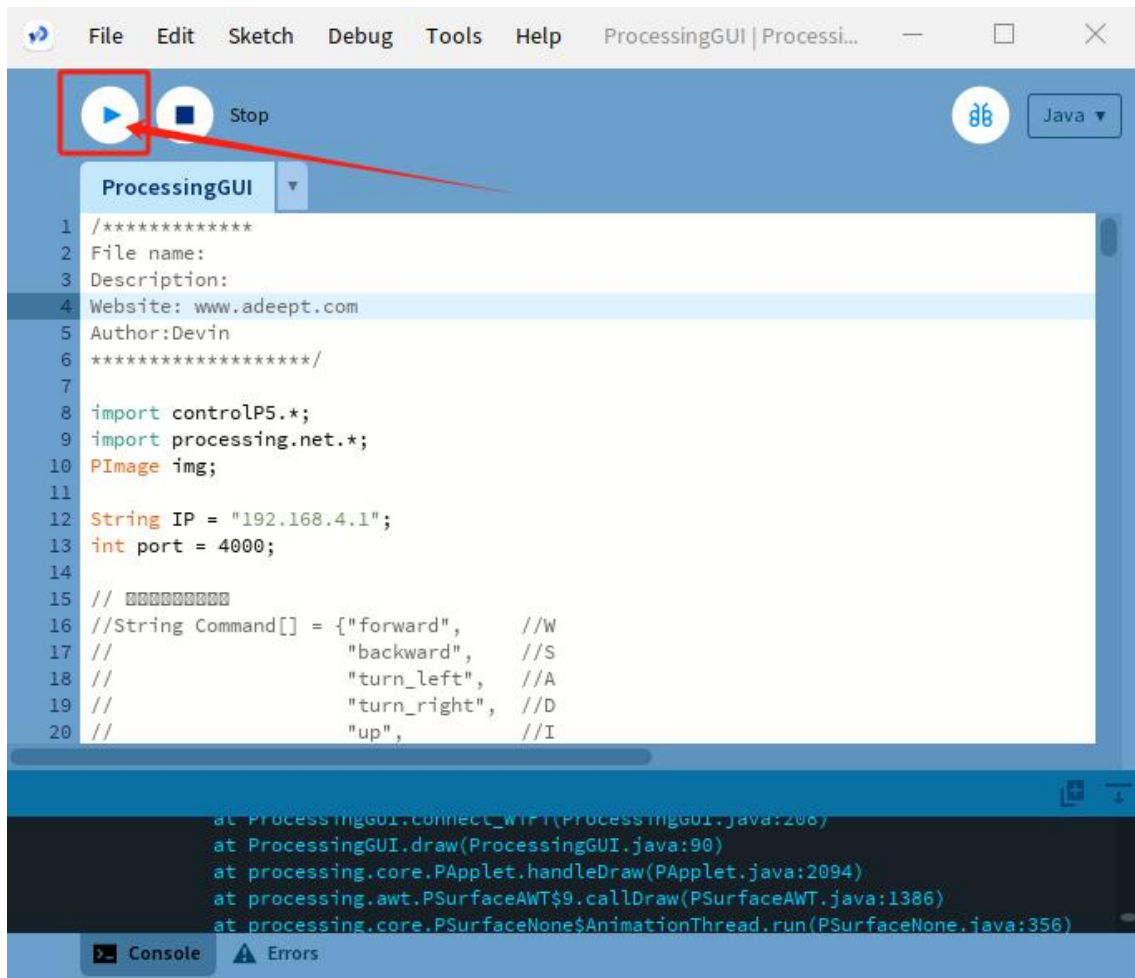
Here we take Windows as an example. Click to open **ProcessingGUI.pde**.








Processing GUI Interface

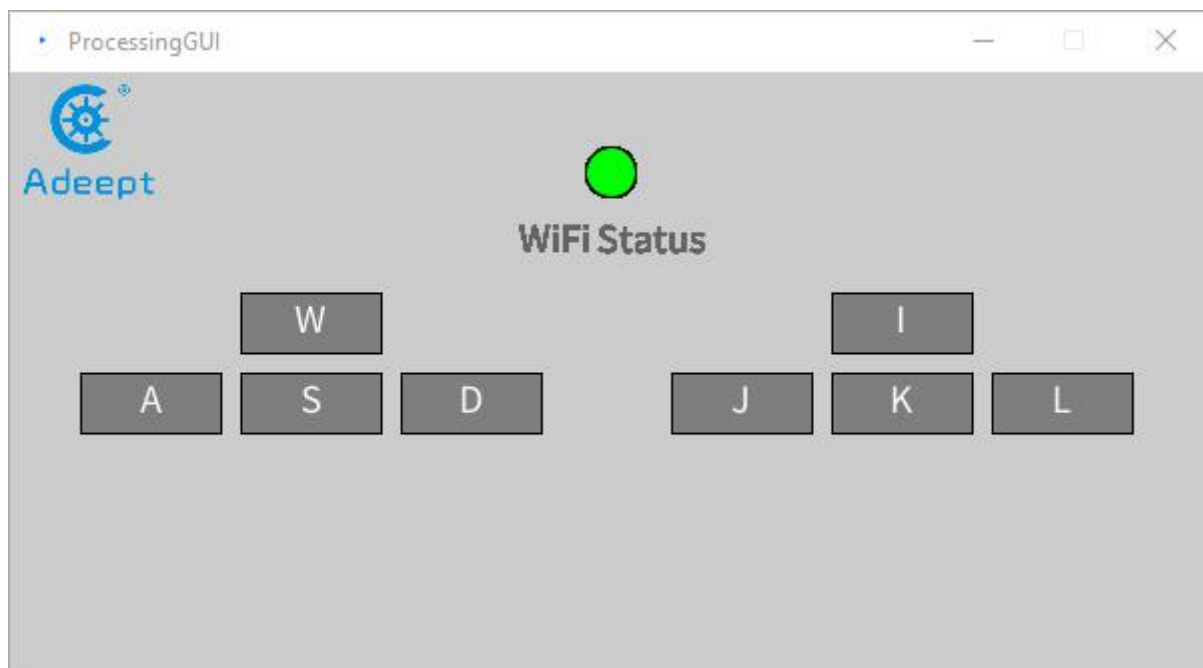
1. Make sure that the corresponding programs are successfully uploaded to the ESP32 car.
2. Confirm whether the computer is successfully connected to the WiFi sent by the ESP32 car.
3. Click **"Run"**.



The WiFi connection status corresponding to the color in the GUI interface.

 WiFi Status	Connecting to WiFi. Buttons are not available.
 WiFi Status	WiFi connection failed, or WiFi was disconnected.
 WiFi Status	WiFi connect successful.

4. After successfully connecting to WiFi, you can control the movement of the car and the rotation of the servo through buttons.

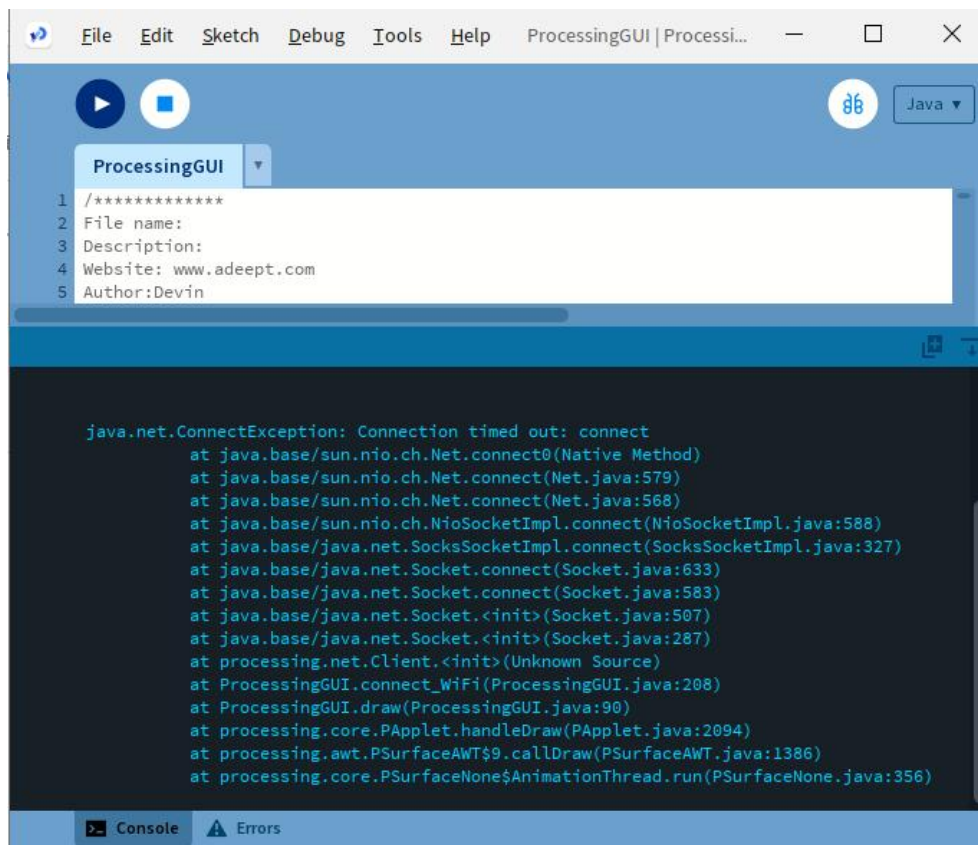


Button	Function	Button	Function
W	Forward	I	/
S	Backward	K	/
A	Turn Left	J	Head Turn Left
D	Turn Right	L	Head Turn Right

NOTE: Keyboard controls are temporarily unavailable.

FAQ

When the GUI interface cannot communicate with the car, an error message will appear. During the process of running the *ProcessingGUI.pde* program, the color of "**WiFi Status**" in the GUI interface changes from gray to red (about 5 seconds).



This is because the *ProcessingGUI.pde* program cannot communicate with the corresponding IP address and port number. It may be caused by the following.

- It may be that the computer did not successfully connect to the WiFi sent by the ESP32 car. Maybe some computers can only connect to wired networks and cannot use wireless networks, so this function cannot be implemented.
- It may be that the IP address and port number in the *ProcessingGUI.pde* program do not match the IP address and port number of the ESP8266 module. The default IP address of the ESP8266 module is "**192.168.4.1**" and the port number is "**4000**".

The IP address and Port of the *ProcessingGUI.pde* program are in lines 12-13 of the code.

```
10 PImage img;  
11  
12 String IP = "192.168.4.1";  
13 int port = 4000;  
14
```