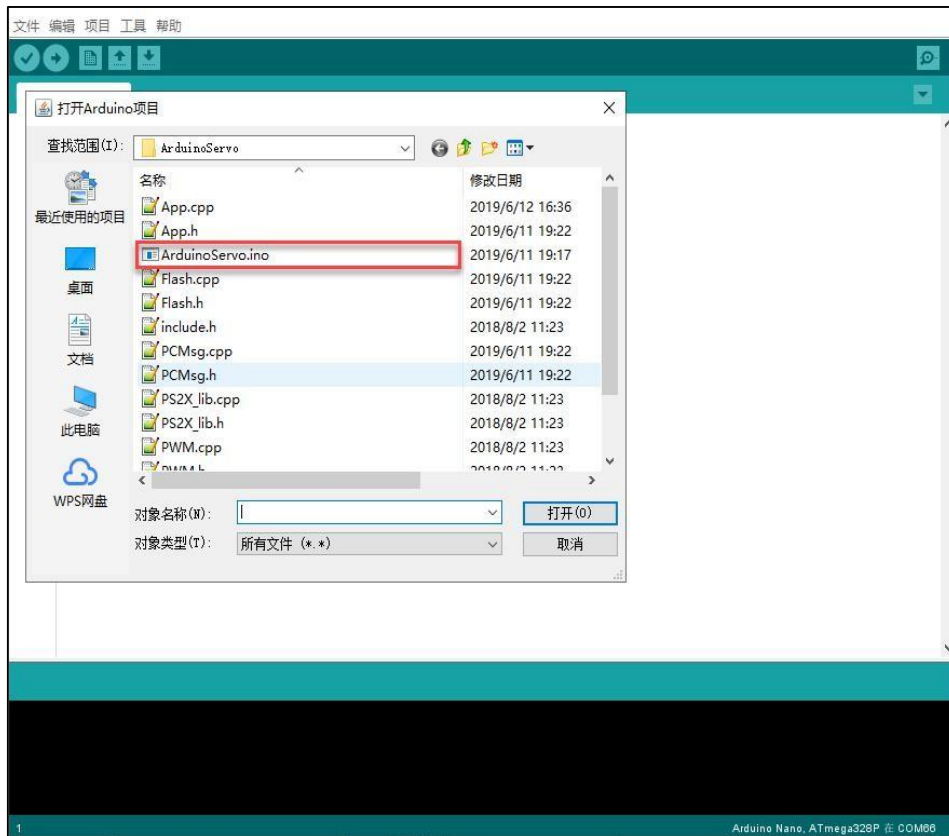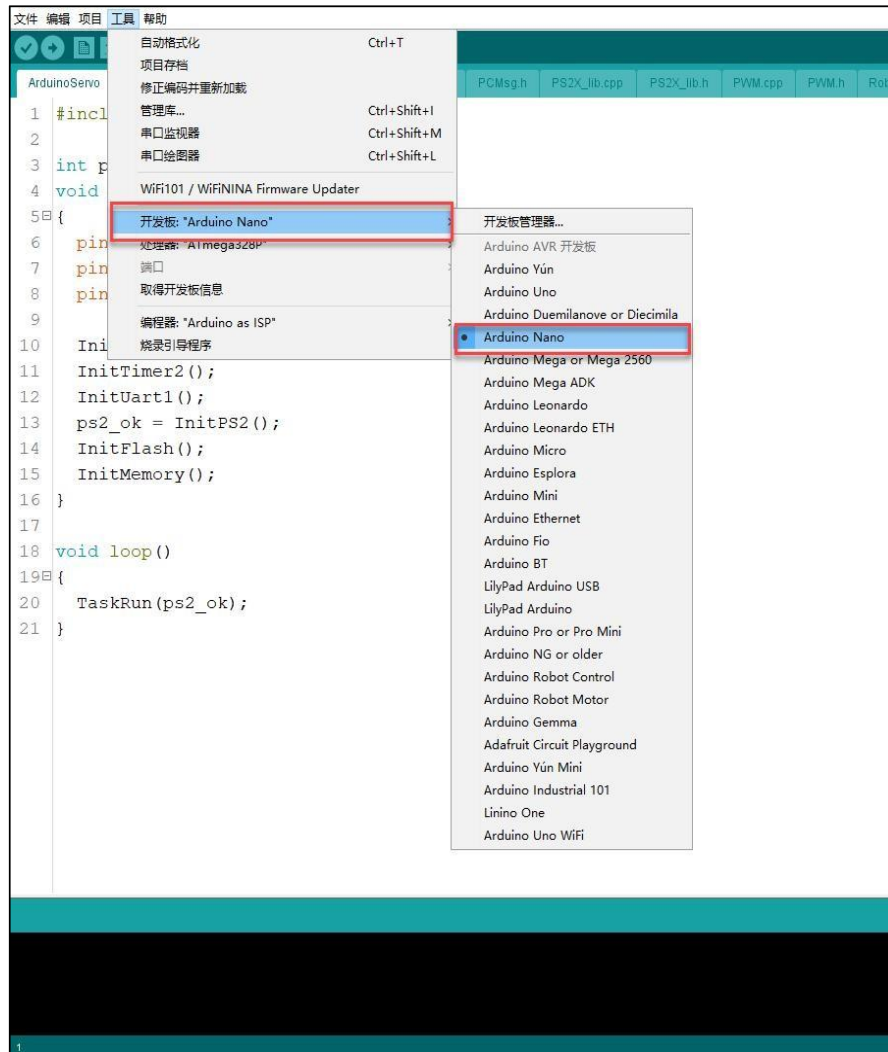# Lesson 2 Program Compilation and Download
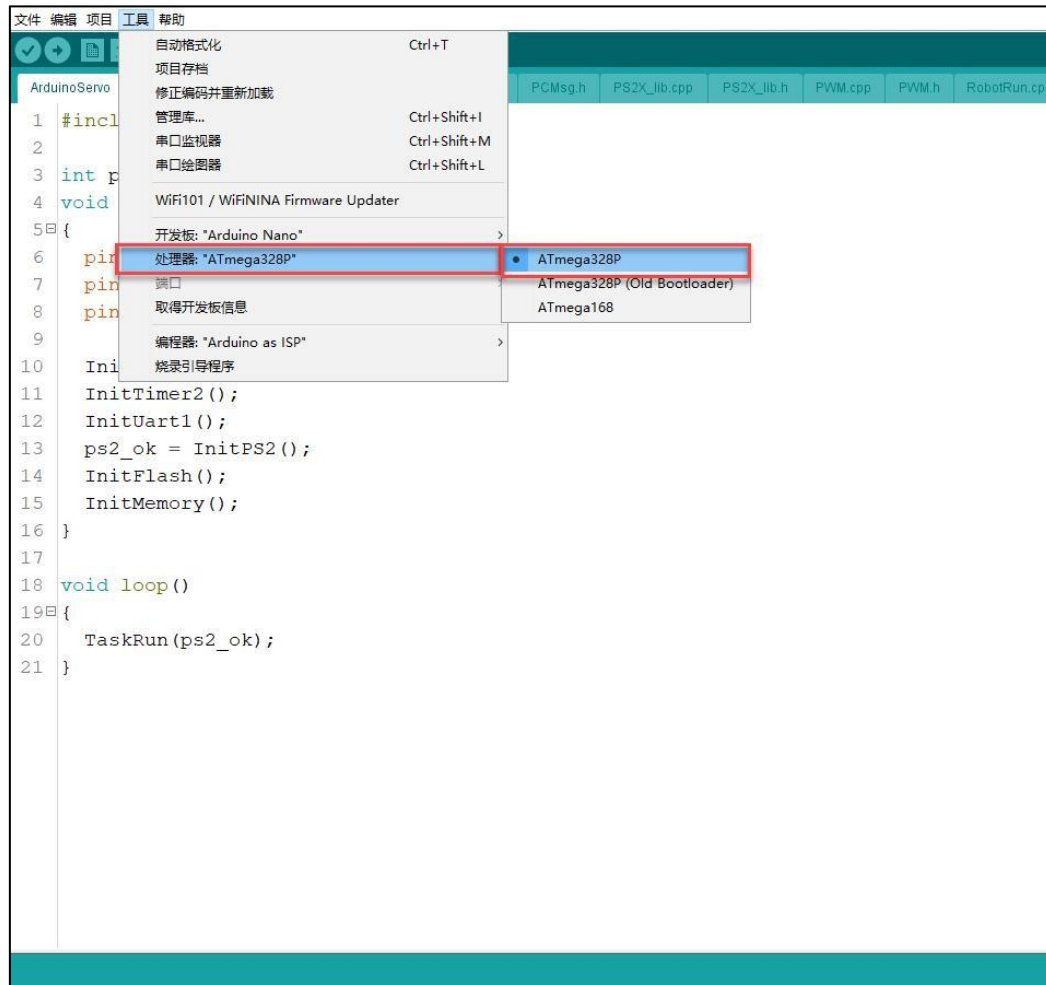
1. Program Compilation

To generate the program that can run in the controller, we need to compile the readable code into the command that can be recognized by robot through Arduino IDE.

1) Double-click to open "Arduino IDE".

2) Select "ArduinoServo.ino" in folder "5. Sample Code/Arduino Nano/Arduino source code/ArduinoServo) , and then click "Open".
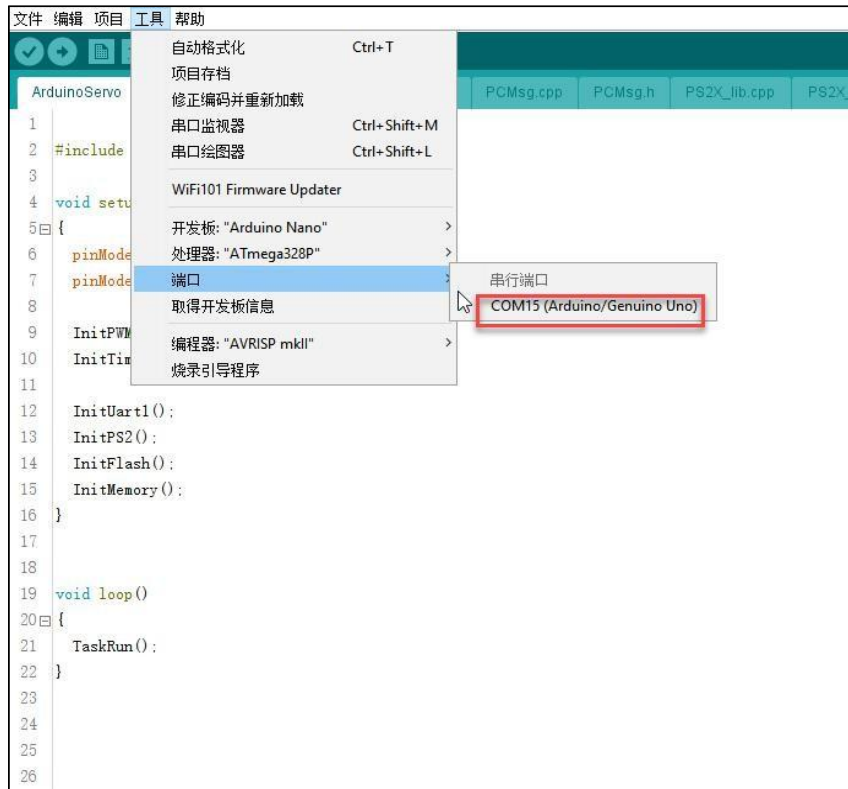

3) Confirm the selection of the development board and the port on toolbar. Select the development board "Arduino Nano" and the processor "ATmega328P" in "Tool-> Development board/ Processor".

文件 编辑 项目 工具 帮助

自动格式化	Ctrl+T
项目存档	
修正编码并重新加载	

ArduinoServo | PCMsg.h | PS2X_lib.cpp | PS2X_lib.h | PWM.cpp | PWM.h | Robo

管理库...	Ctrl+Shift+I
串口监视器	Ctrl+Shift+M
串口绘图器	Ctrl+Shift+L

WiFi101 / WiFiNINA Firmware Updater

开发板: "Arduino Nano" ▸   开发板管理器...

处理器: "ATmega328P" ▸   Arduino AVR 开发板
端口   Arduino Yún
取得开发板信息   Arduino Uno
                         Arduino Duemilanove or Diecimila
编程器: "Arduino as ISP" ▸ ● Arduino Nano
烧录引导程序   Arduino Mega or Mega 2560
                         Arduino Mega ADK
                         Arduino Leonardo
                         Arduino Leonardo ETH
                         Arduino Micro
                         Arduino Esplora
                         Arduino Mini
                         Arduino Ethernet
                         Arduino Fio
                         Arduino BT
                         LilyPad Arduino USB
                         LilyPad Arduino
                         Arduino Pro or Pro Mini
                         Arduino NG or older
                         Arduino Robot Control
                         Arduino Robot Motor
                         Arduino Gemma
                         Adafruit Circuit Playground
                         Arduino Yún Mini
                         Arduino Industrial 101
                         Linino One
                         Arduino Uno WiFi

```
 1  #incl
 2
 3  int p
 4  void
 5 ⊟ {
 6    pin
 7    pin
 8    pin
 9
10    Init
11    InitTimer2();
12    InitUart1();
13    ps2_ok = InitPS2();
14    InitFlash();
15    InitMemory();
16  }
17
18  void loop()
19 ⊟ {
20    TaskRun(ps2_ok);
21  }
```
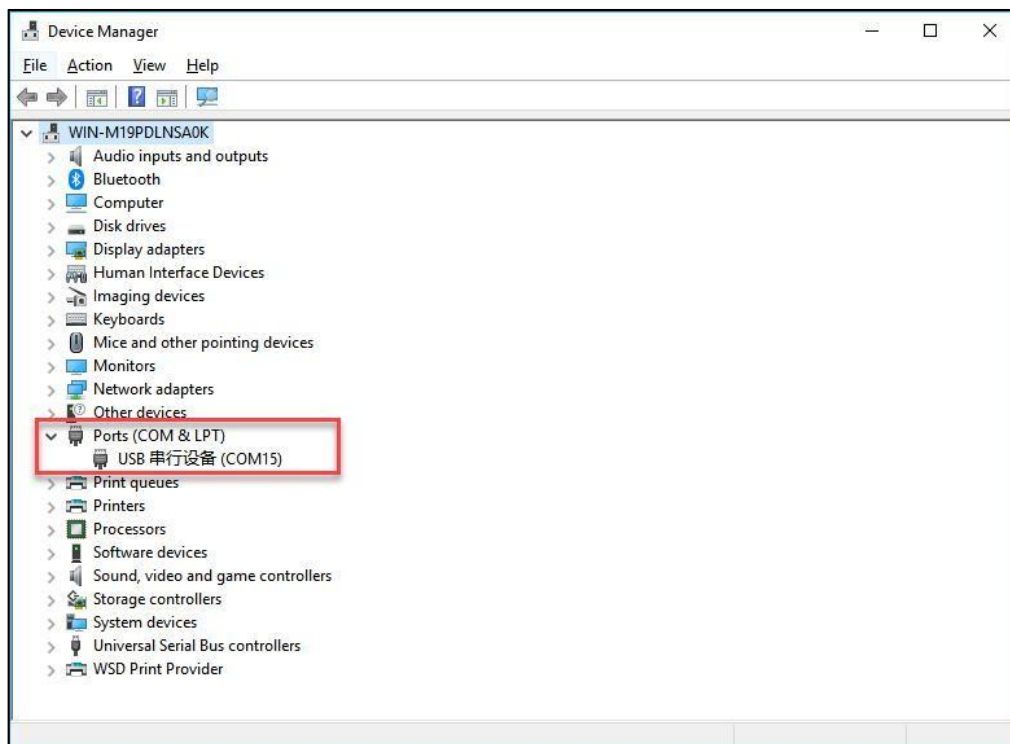
1

4) Select the corresponding port to Arduino controller in "Tool ->port".
(The export port here is COM15. Please choose the port according to your own computer because different computer may different. If COM1 appears in port options, it is generally a system communication port not the actual port of development board.)

5) If the computer is connected to multiple USB device and cannot determine the connection port of Arduino controller, you can open "your computer" on your desktop and then click "Property -> Device Management" to check the corresponding port of the Arduino controller.

6) Click button after setting the development board, processor and port. If the program is correct, the debugging area will display "compiling program.." and "compiling complete", and the debugging prompt area will show the number of bytes used by the current project, the occupied program storage space, etc.

2. Program Download

1) After compiling, download the hex file generated in the previous step into the Arduino development board. Click to download the program.
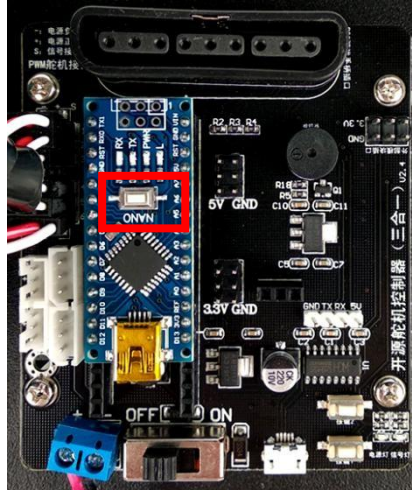
2) When uploading prompt is displayed, you need to press the white reset button on the Arduino Nano board immediately, and then wait for the program to be burned. After the program is downloaded, the debug status bar will show that the upload is successful.

If fail to download, you can try to choose the processor model to "ATmega328p (Old Bootloader)".