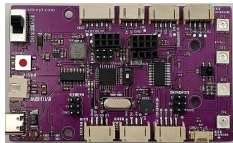



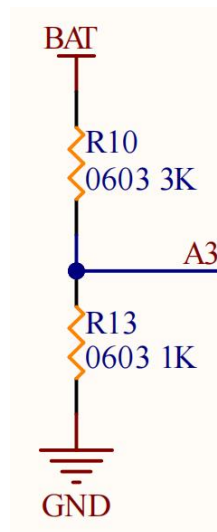
## Lesson 12 How to get battery level information.

### 12.1 Components used in this course

Components	Quantity	Picture
Adeept Robot Control Board	1	
Type-C USB Cable	1	

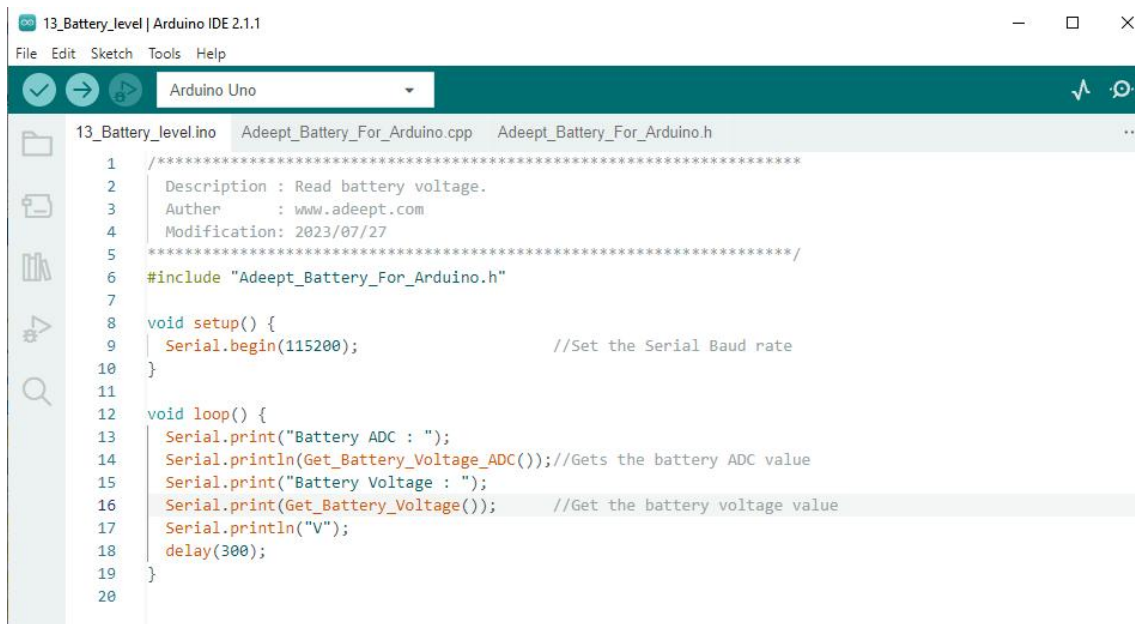
### 12.2 The introduction of the battery level information

The voltage acquisition range of A3 on Arduino Robot Control Board is 0-5V, while the car is powered by two 18650 lithium batteries, whose voltage is 8.4V when they are fully charged, which exceeds the acquisition range of Arduino.



## 12.3 Get battery level

1. Connect your computer and Arduino Robot Control with a USB cable.
2. Open “12\_Battery\_level” folder in “/Code”, double-click “12\_Battery\_level.ino”.



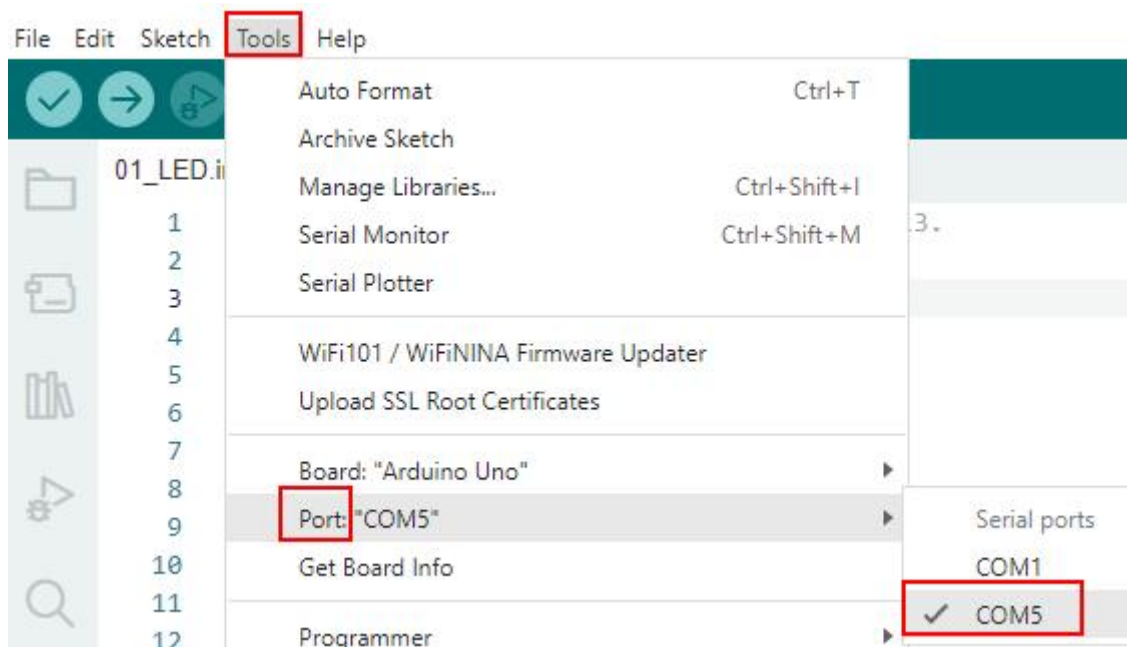
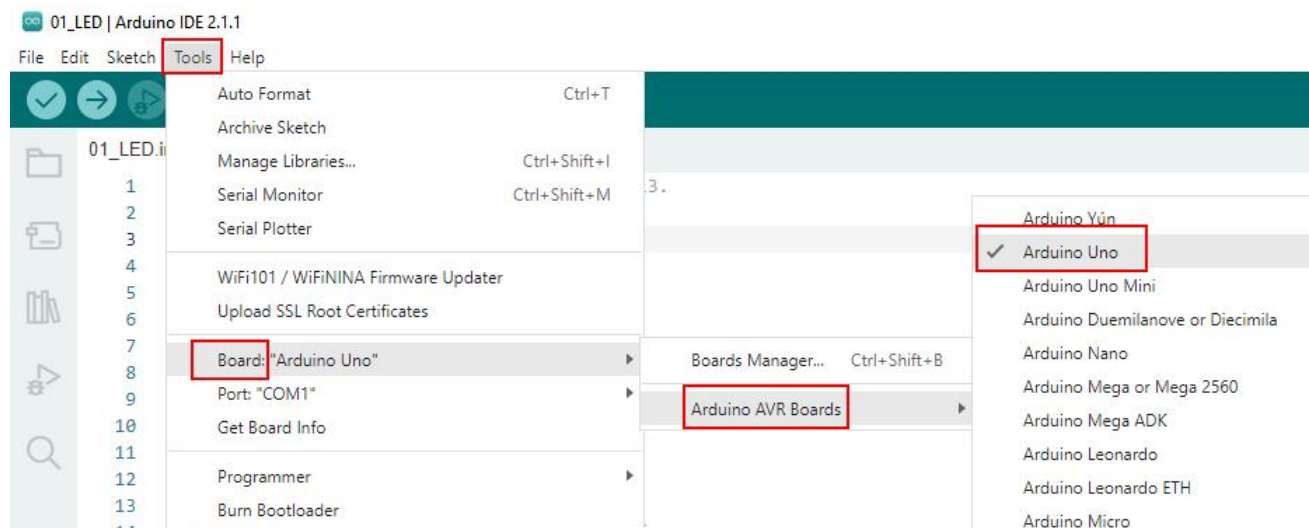
```
13_Battery_level | Arduino IDE 2.1.1
File Edit Sketch Tools Help
Arduino Uno
13_Battery_level.ino Adeept_Battery_For_Arduino.cpp Adeept_Battery_For_Arduino.h
1  /**
2   * Description : Read battery voltage.
3   * Author      : www.adeept.com
4   * Modification: 2023/07/27
5   */
6  #include "Adeept_Battery_For_Arduino.h"
7
8  void setup() {
9      Serial.begin(115200);           //Set the Serial Baud rate
10 }
11
12 void loop() {
13     Serial.print("Battery ADC : ");
14     Serial.println(Get_Battery_Voltage_ADC()); //Gets the battery ADC value
15     Serial.print("Battery Voltage : ");
16     Serial.print(Get_Battery_Voltage());       //Get the battery voltage value
17     Serial.println("V");
18     delay(300);
19 }
20
```


3. Select development board and serial port.

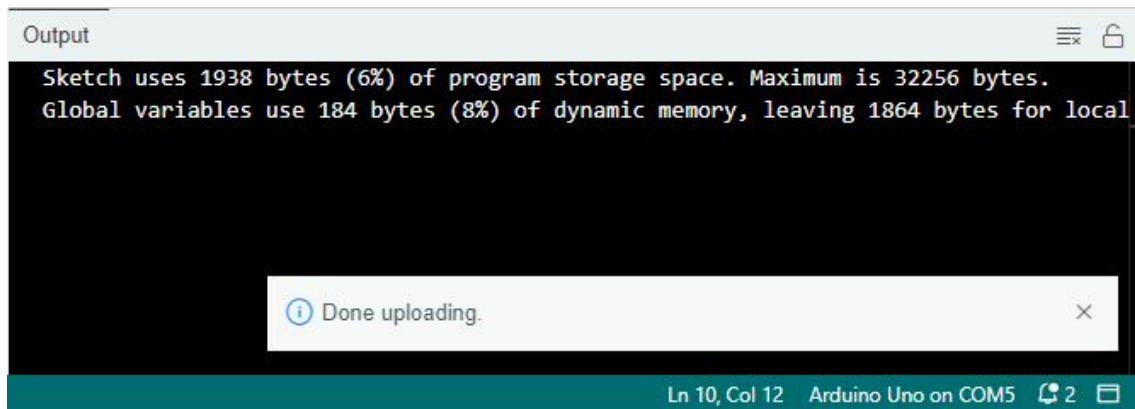
Board: **Tools**--->**Board**--->**Arduino AVR Boards**--->**Arduino Uno**

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

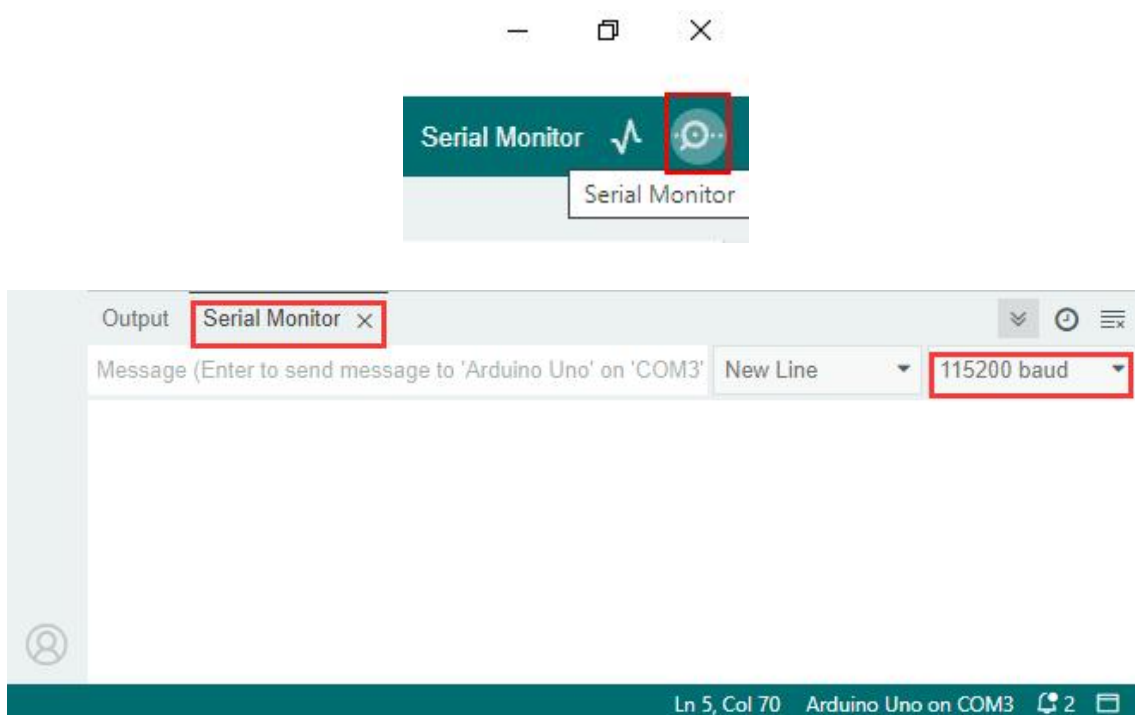
Note: The port number will be different in different computers.



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. Click Serial Monitor, Set the baud rate as 115200.



6. You can see the battery voltage. Since this is the calculated battery voltage, there may be a deviation from the actual voltage.

## 12.4 Code

```
1. #include "Adeept_Battery_For_ESP32.h"
2.
3. void setup() {
4.     Serial.begin(115200);           //Set the Serial Baud rate
5. }
6.
7. void loop() {
8.     Serial.print("Battery ADC : ");
9.     Serial.println(Get_Battery_Voltage_ADC()); //Gets the battery ADC value
10.    Serial.print("Battery Voltage : ");
11.    Serial.print(Get_Battery_Voltage());        //Get the battery voltage value
12.    Serial.println("V");
13.    delay(300);
14. }
```