

Eclipse\_Arduino IDE

# OUTLINE

- 必要軟體
- 安裝流程
- 建立專案
- 編譯與上傳 執行

# 必要軟體

- JDK 7.0以上
- [Eclipse CDT](#)(目前版本 8.3.0)
- [Arduino IDE 1.0.1](#)(必要，目前以上版本可能有不同的裝法)
- [Arduino eclipse plugin](#) (讓eclipse 可以編譯 arduino，可以從eclipse 下載)

# 必要軟體

CDT Downloads x Eclipse IDE for C/C+ x Arduino IDE 1.0.1 - x Arduino - Software x Downloads - arduin x

www.eclipse.org/downloads/packages/eclipse-ide-cc-developers/keplersr2

Visit other Eclipse Sites

eclipse

mp 🔍 🗨️ 📄 📱

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- Juno Packages
- Indigo Packages
- Helios Packages
- Galileo Packages
- Ganymede Packages
- Europa Packages

## Eclipse IDE for C/C++ Developers

**Package Description**

An IDE for C/C++ developers with Mylyn integration.

**This package includes:**

- C/C++ Development Tools
- Eclipse Git Team Provider
- Mylyn Task List
- Remote System Explorer

[Detailed features list](#)

Maintained by: Eclipse Packaging Project

**Download Links**

- Windows 32-bit
- Windows 64-bit
- Mac OS X (Cocoa 32)
- Mac OS X (Cocoa 64)
- Linux 32-bit
- Linux 64-bit

Downloaded 402,450 Times

▶ [Checksums...](#)

**Bugzilla**

- ▶ [Open Bugs: 21](#)
- ▶ [Resolved Bugs: 28](#)

[File a Bug on this Package](#)

**New and Noteworthy**

- Eclipse CDT
- Eclipse Linux Tools
- Eclipse Platform
- Eclipse Mylyn
- Eclipse EGit

**Testing Details**

Package Testers

# 必要軟體

<a href="#">arduino-1.0.4-windows.zip</a>	Arduino 1.0.4 for Windows	Mar 2013	Mar 2013	91.4 MB	354185
<a href="#">arduino-1.0.4-linux32.tgz</a>	Arduino 1.0.4 for Linux (32-bit)	Mar 2013	Mar 2013	19.5 MB	22177
<a href="#">arduino-1.0.4-src.tar.gz</a>	Arduino 1.0.4 source	Mar 2013	Mar 2013	33.7 MB	8889
<a href="#">arduino-1.0.4-linux64.tgz</a>	Arduino 1.0.4 for Linux (64-bit)	Mar 2013	Mar 2013	20.3 MB	20994
<a href="#">arduino-1.0.3-src.tar.gz</a>	Arduino 1.0.3 source	Dec 2012	Dec 2012	12.8 MB	12752
<a href="#">arduino-1.0.3-macosx.zip</a>	Arduino 1.0.3 for Mac OS X	Dec 2012	Dec 2012	77.2 MB	79660
<a href="#">arduino-1.0.3-linux64.tgz</a>	Arduino 1.0.3 for Linux (64-bit)	Dec 2012	Dec 2012	20.2 MB	25322
<a href="#">arduino-1.0.3-linux32.tgz</a>	Arduino 1.0.3 for Linux (32-bit)	Dec 2012	Dec 2012	19.4 MB	26001
<a href="#">arduino-1.0.3-windows.zip</a>	Arduino 1.0.3 for Windows	Dec 2012	Dec 2012	91.3 MB	424304
<a href="#">arduino-1.0.2-src.tar.gz</a>	Arduino 1.0.2 source	Nov 2012	Nov 2012	14.0 MB	7300
<a href="#">arduino-1.0.2-linux64.tgz</a>	Arduino 1.0.2 for Linx (64-bit)	Nov 2012	Nov 2012	20.2 MB	11816
<a href="#">arduino-1.0.2-linux.tgz</a>	Arduino 1.0.2 for Linux (32-bit)	Nov 2012	Nov 2012	19.3 MB	13235
<a href="#">arduino-1.0.2-windows.zip</a>	Arduino 1.0.2 for Windows	Nov 2012	Nov 2012	91.2 MB	174816
<a href="#">arduino-1.0.2-macosx.zip</a>	Arduino 1.0.2 for Mac OS X	Nov 2012	Nov 2012	74.8 MB	31257
<a href="#">arduino-1.0.1-src.tar.gz</a>	Arduino 1.0.1 source	May 2012	May 2012	9.6 MB	24061
<a href="#">arduino-1.0.1-linux64.tgz</a>	Arduino 1.0.1 for Linx (64-bit)	May 2012	May 2012	15.8 MB	37771
<a href="#">arduino-1.0.1-linux.tgz</a>	Arduino 1.0.1 for Linux (32-bit)	May 2012	May 2012	15.0 MB	47306
<a href="#">arduino-1.0.1-windows.zip</a>	Arduino 1.0.1 for Windows	May 2012	May 2012	86.5 MB	650857
<a href="#">arduino-1.0.1-macosx.zip</a>	Arduino 1.0.1 for Mac OS X	May 2012	May 2012	71.1 MB	127008
<a href="#">gcc-arm-none-eabi-4.4.1-2010q1-188-win32.tar.gz</a>	ARM gcc 4.4.1 - Codesourcery ARM 2010q1-188 Win 32	May 2012	May 2012	20.4 MB	951
<a href="#">gcc-arm-none-eabi-4.4.1-2010q1-188-macosx.tar.gz</a>	ARM gcc 4.4.1 - Codesourcery ARM 2010q1-188 Mac	May 2012	May 2012	32.8 MB	602
<a href="#">gcc-arm-none-eabi-4.4.1-2010q1-188-linux32.tar.gz</a>	ARM gcc 4.4.1 - Codesourcery ARM 2010q1-188 Linux 32	May 2012	May 2012	20.9 MB	1781
<a href="#">arduino-1.0-src.tar.gz</a>	Arduino 1.0 source	Nov 2011	Nov 2011	8.1 MB	22373
<a href="#">arduino-1.0-linux64.tgz</a>	Arduino 1.0 for Linux (64-bit)	Nov 2011	Nov 2011	4.1 MB	43895
<a href="#">arduino-1.0-linux.tgz</a>	Arduino 1.0 for Linux (32-bit)	Nov 2011	Nov 2011	4.1 MB	58694

# 安裝流程

- 解壓縮 Eclipse
- 解壓縮 arduino IDE
- 安裝 arduino 的驅動程式
- 安裝 arduino plugging

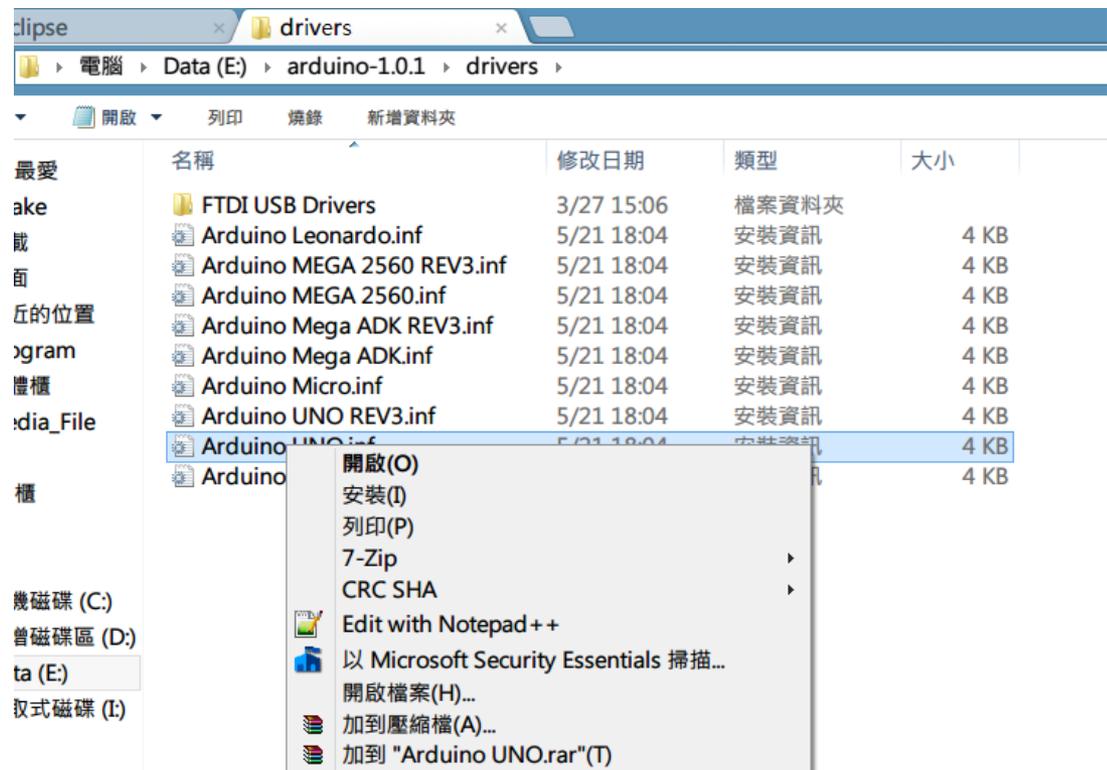
# 安裝流程

- 安裝 arduino 的驅動程式

驅動程是在 arduino-1.0.1/drivers 底下

這裡用的版子是  
arduino UNO 所以

在那邊按右鍵->  
安裝



# 安裝流程

可是我發現，我怎麼裝都是錯誤的..所以我就去下載 Arduino 1.0.5 的 driver，裡面有EXE檔可以直接安裝，下面是只有 [Arduino\\_Driver](#) 的壓縮檔，檔案是我自己放的，如果覺得不放心的話，請去官方網站下載(自己google Arduino IDE 1.0.5)



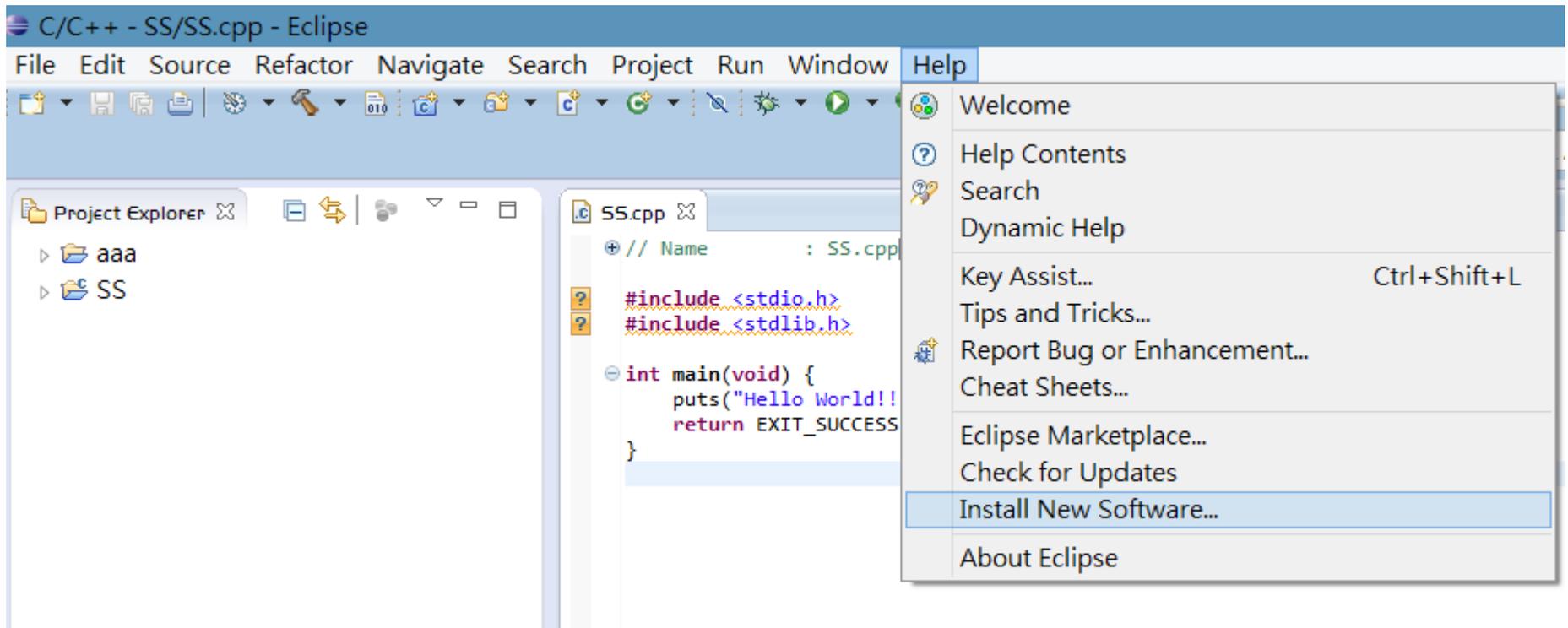
# 安裝流程

解壓縮後，看是 64 還是 32 位元



# 安裝流程

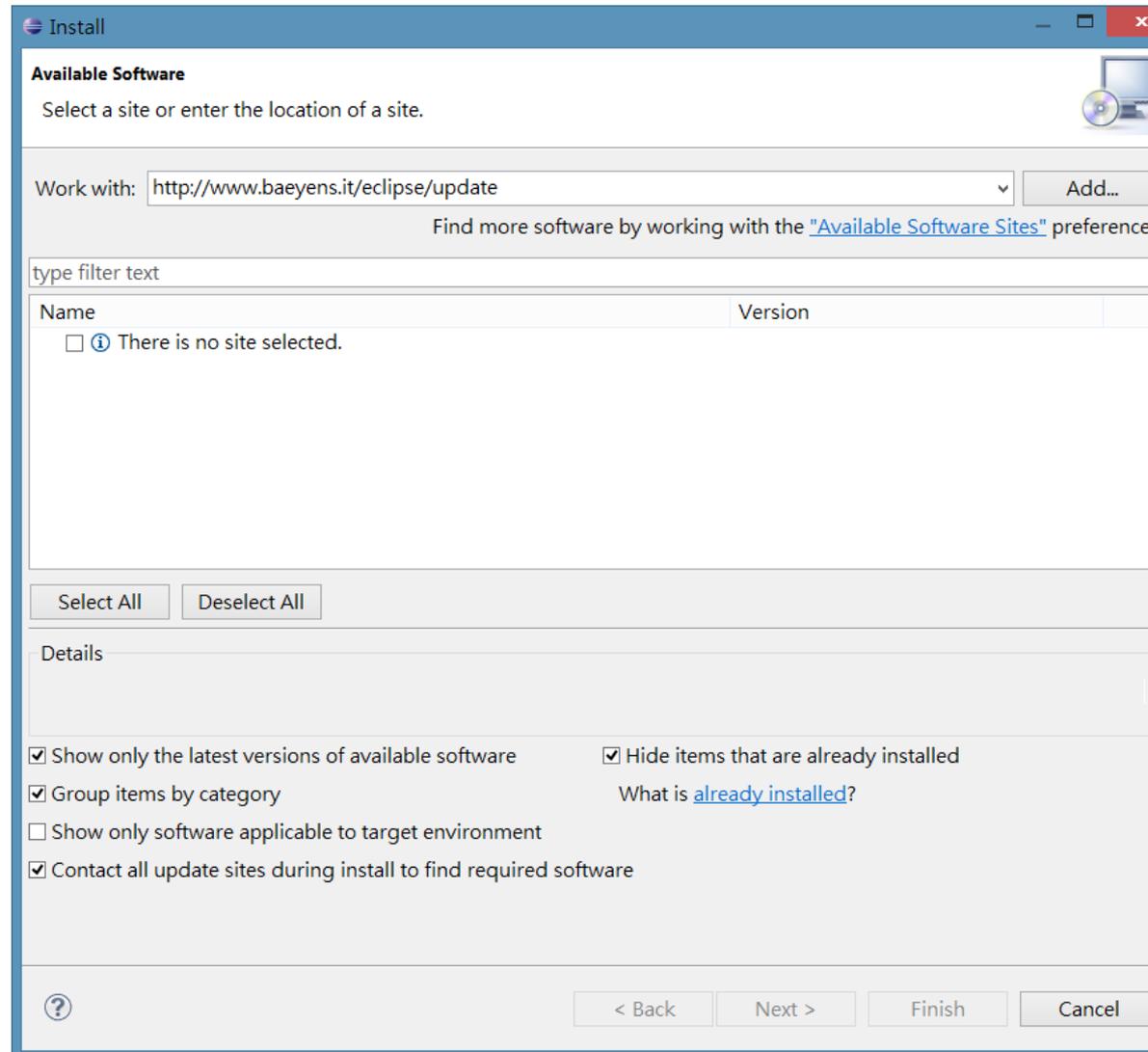
- 開啟ECLIPSE，安裝Arduino Plugin



# 安裝流程

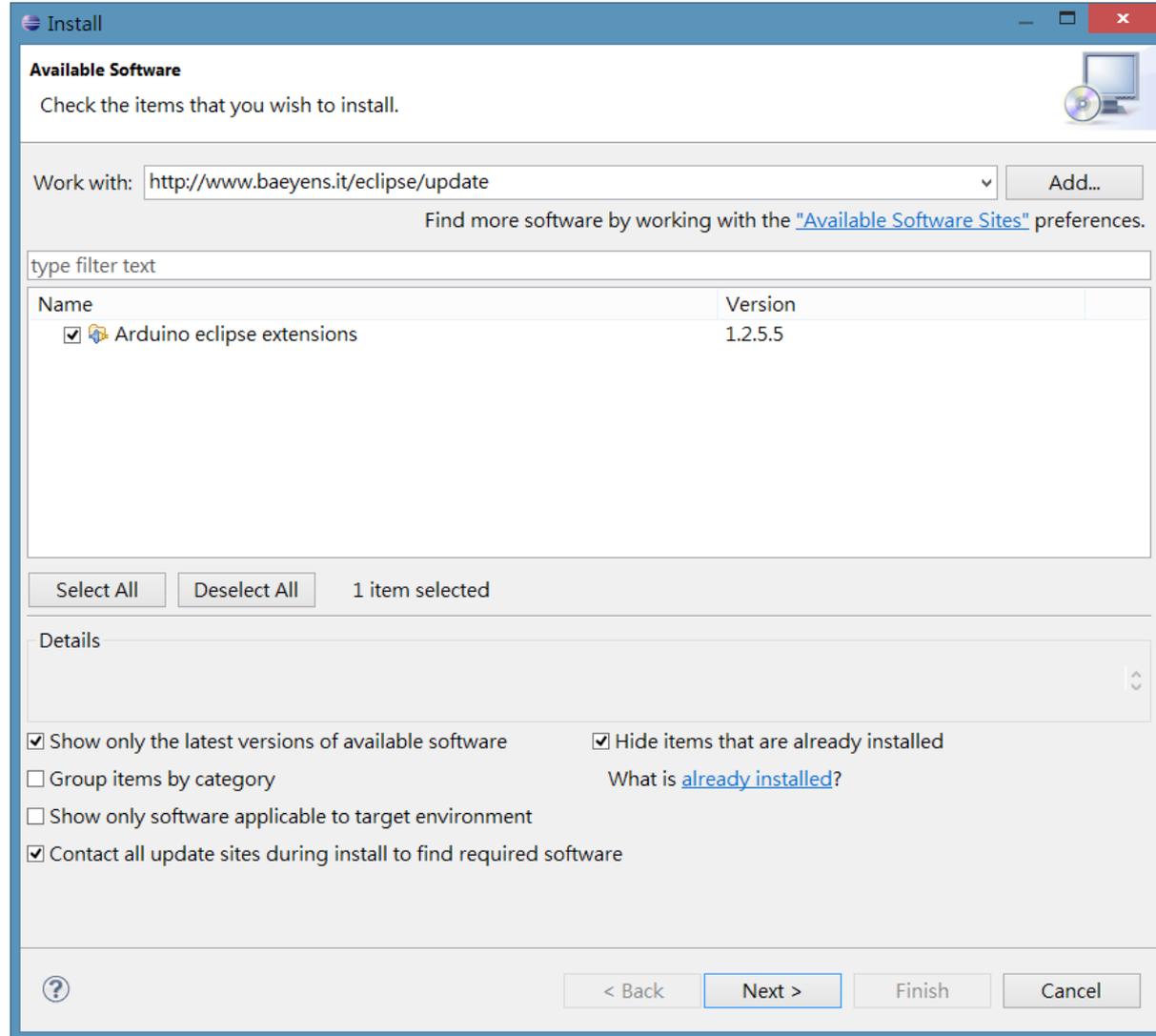
- 在Work with上輸入

<http://www.baeyens.it/eclipse/update> 後按 enter

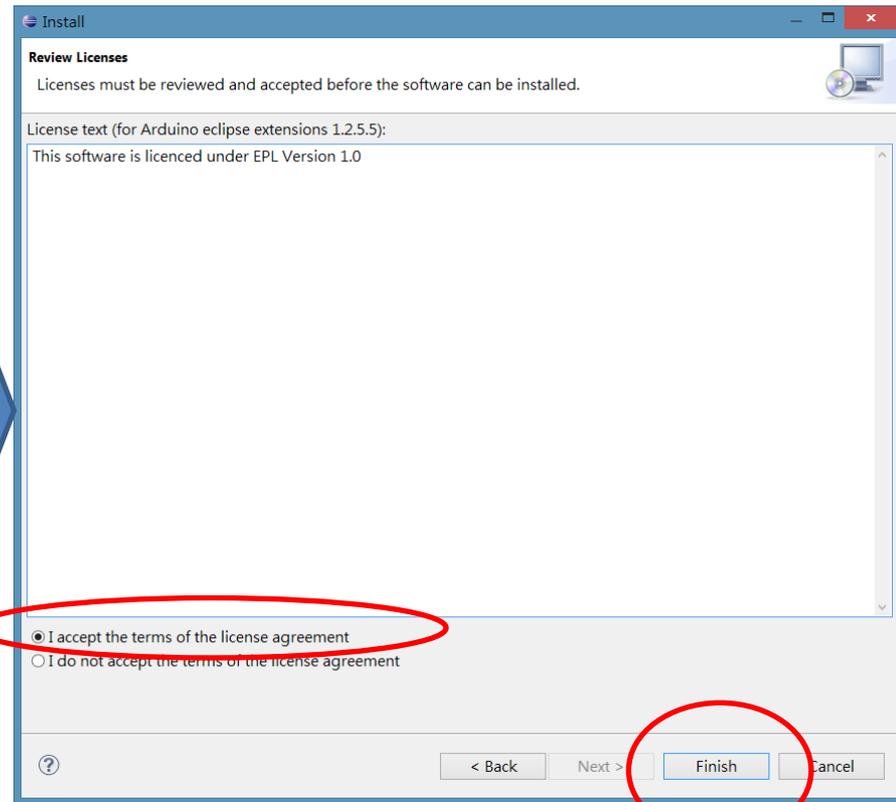
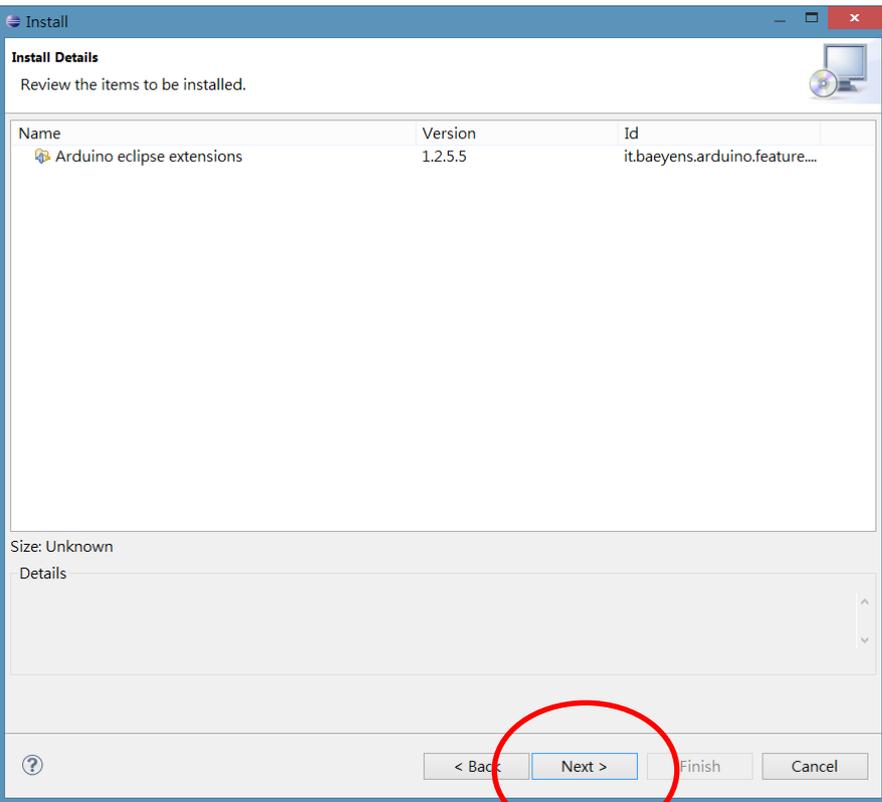


# 安裝流程

- 搜尋完畢後 把 Group items by category 取消勾選，並將 arduino eclipse extensions 打勾後按next

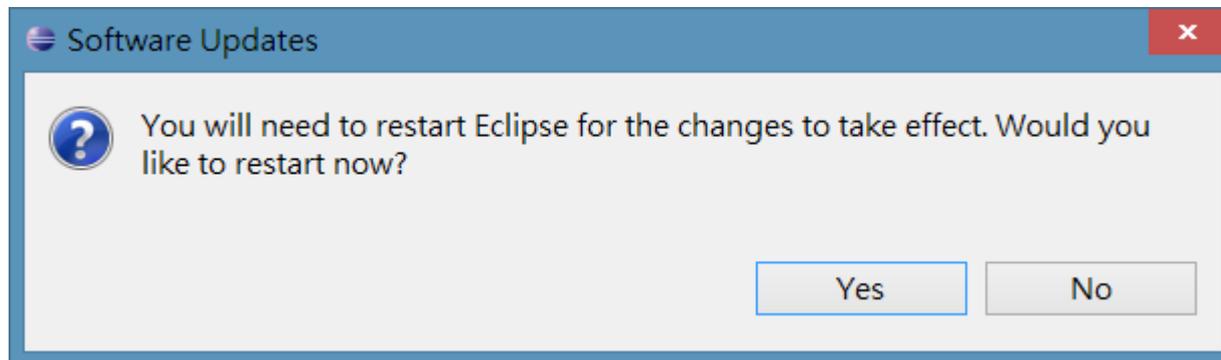
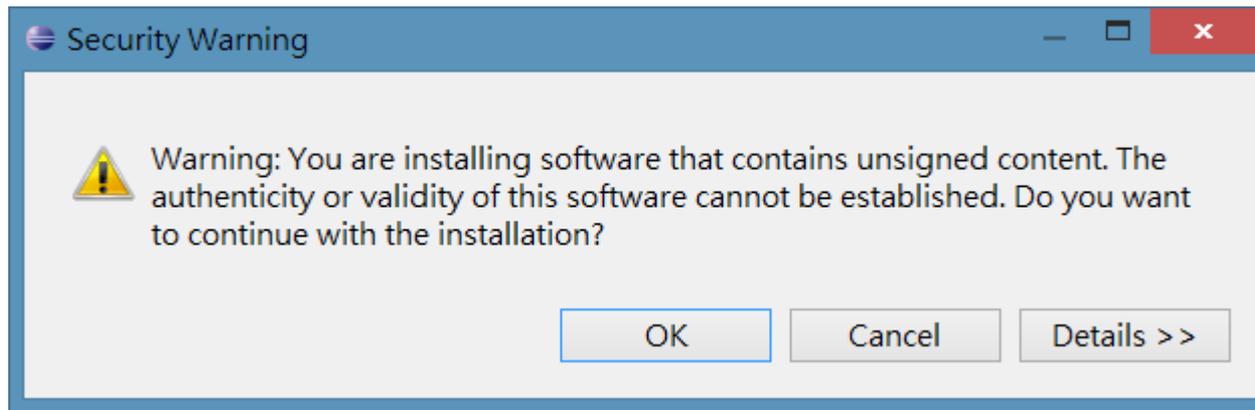


# 安裝流程



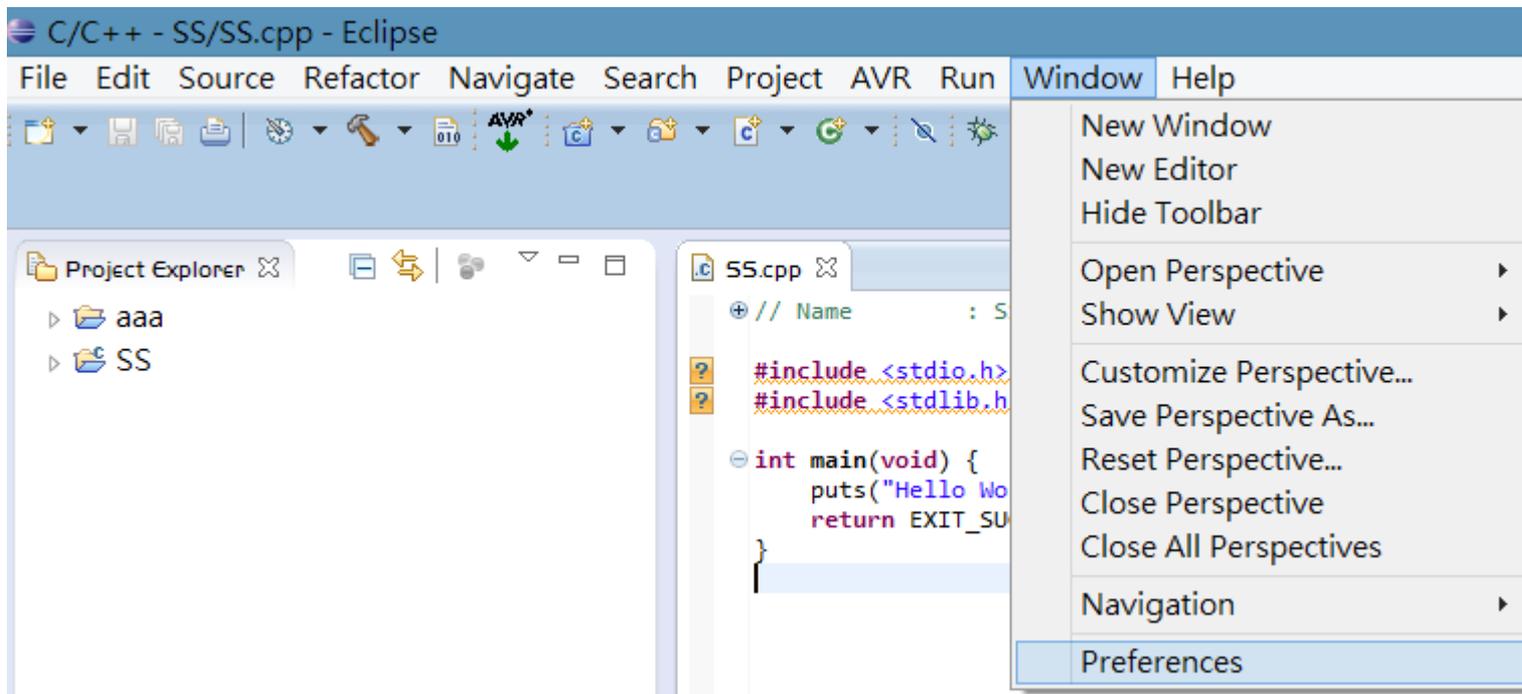
# 安裝流程

- 可能會跳出警告視窗，按OK後繼續，跑完後會要求重新開啟eclipse



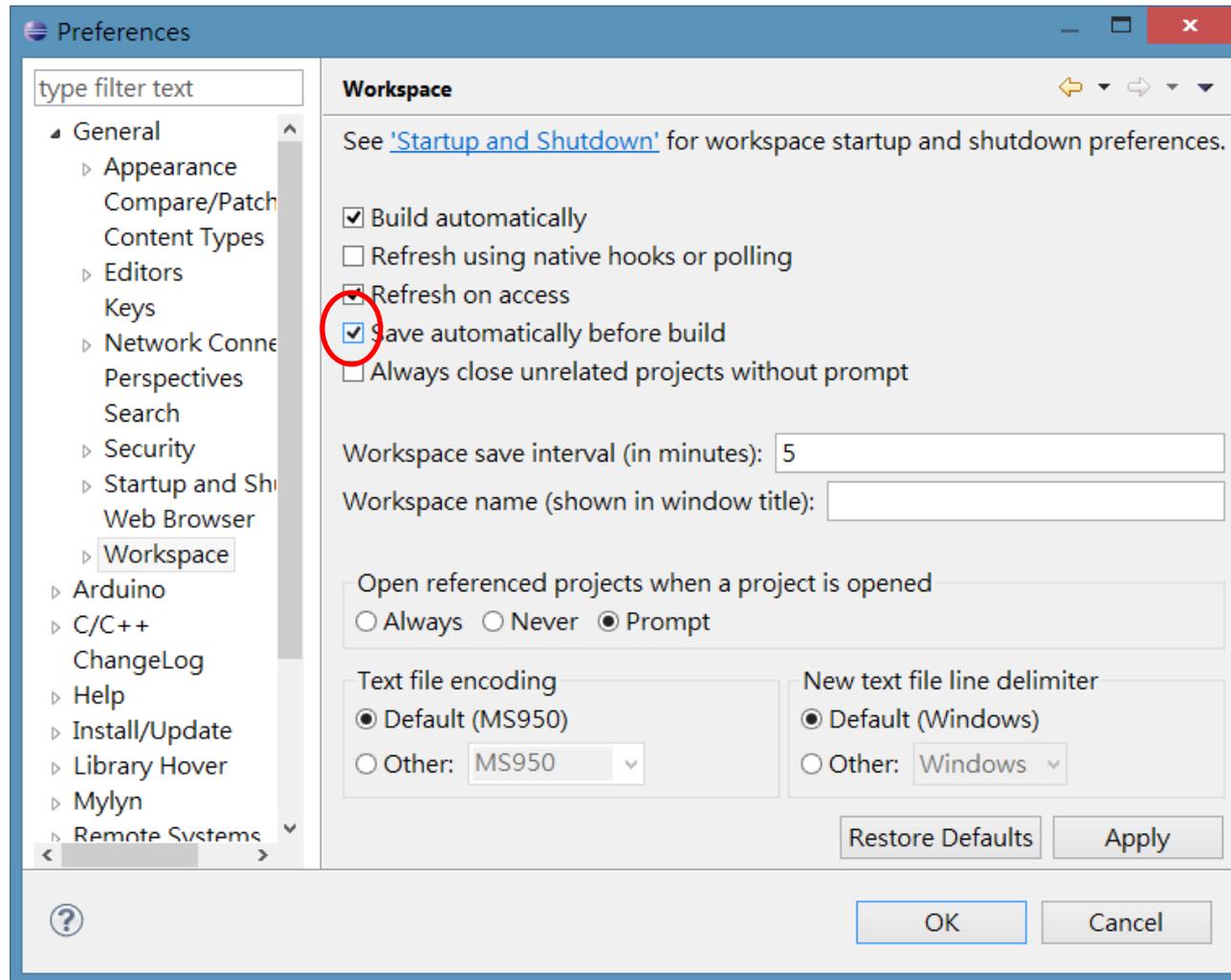
# 安裝流程

- Window->Preferences



# 安裝流程

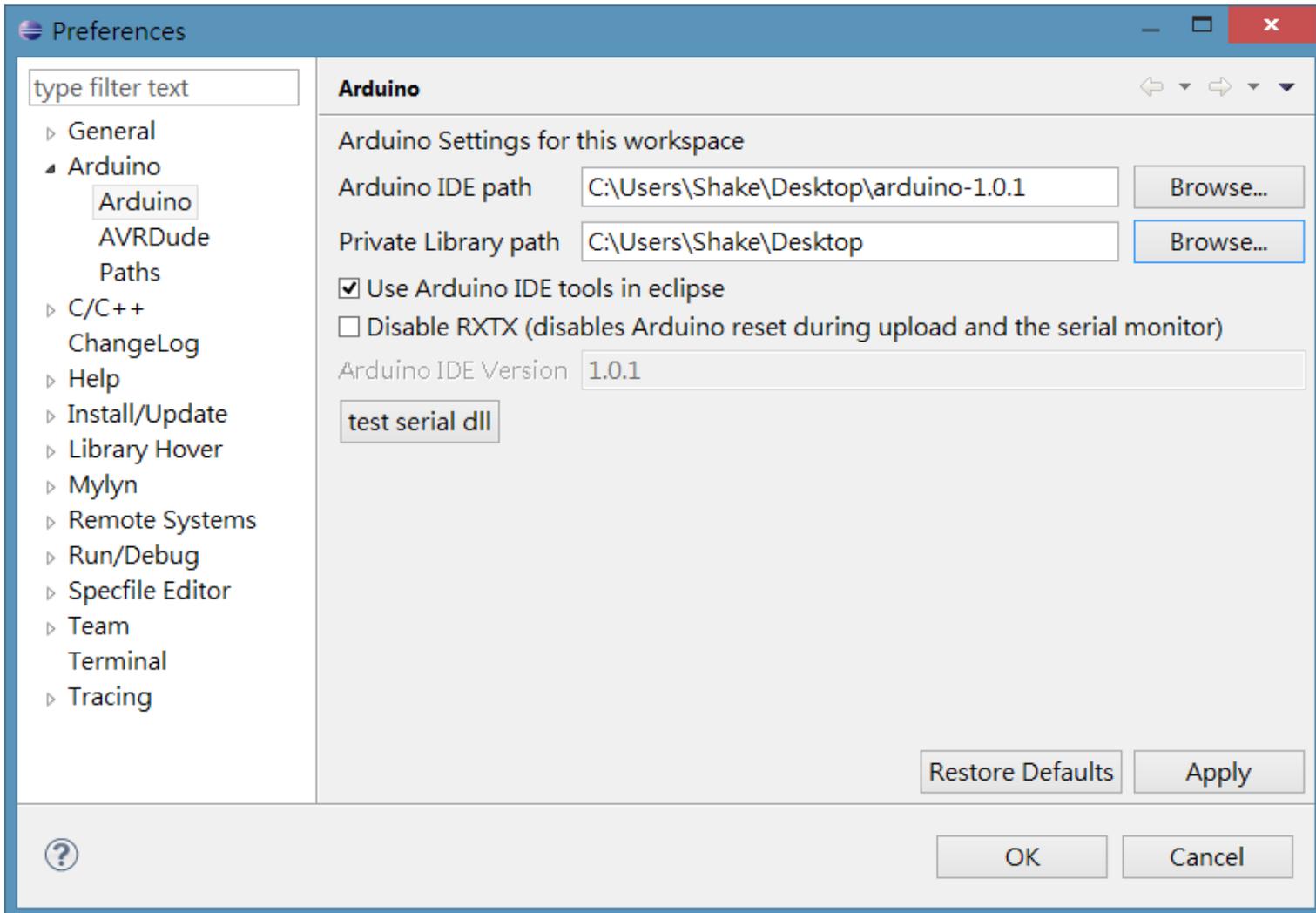
先到General->Workspace  
將“Save automatically before build”  
打勾(再建制前自動存檔)



# 安裝流程

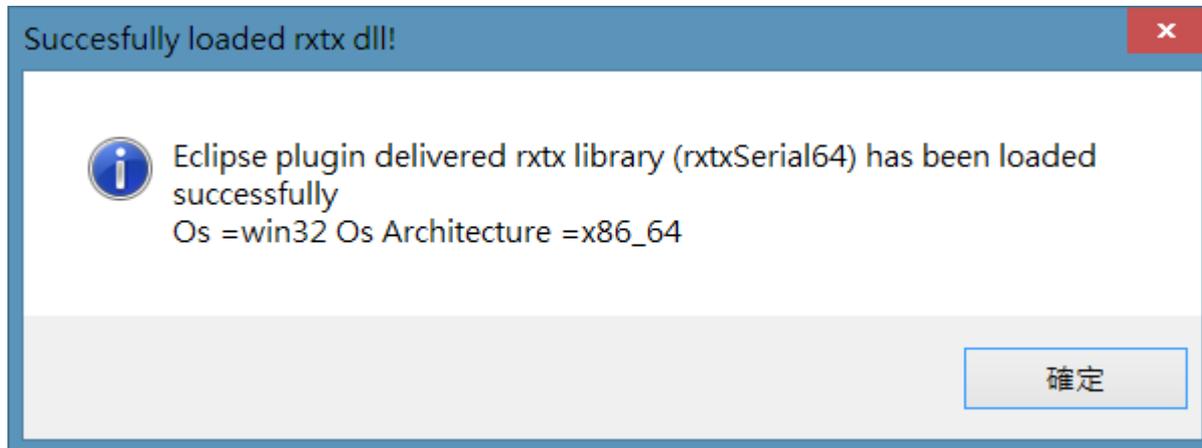
- 接著到 arduino 分頁裡
- 在arduino IDE path 設定為arduino ide 1.0.1 路徑
- 在private library path 設定 自己想要的路徑
- 將 “use arduino IDE tools in eclipse” 打勾

# 安裝流程



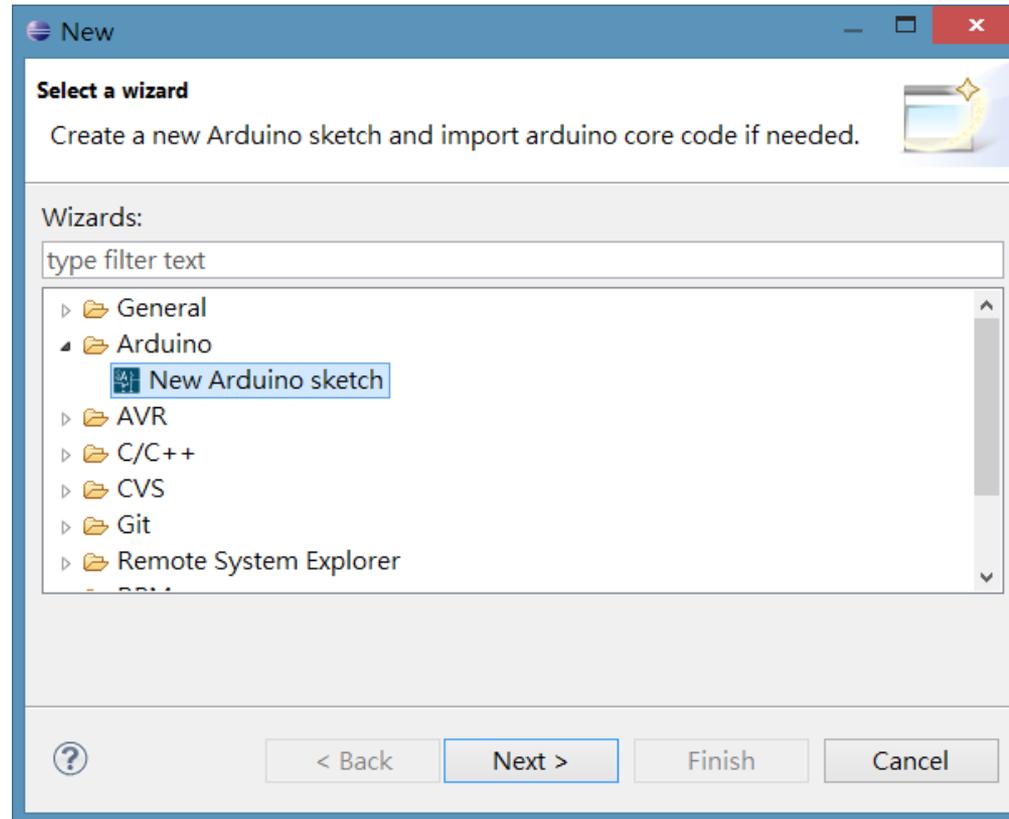
# 安裝流程

- 接著 按下 test serial dll 來測試 是否可以用，  
如果 上面寫 successfully 就代表成功



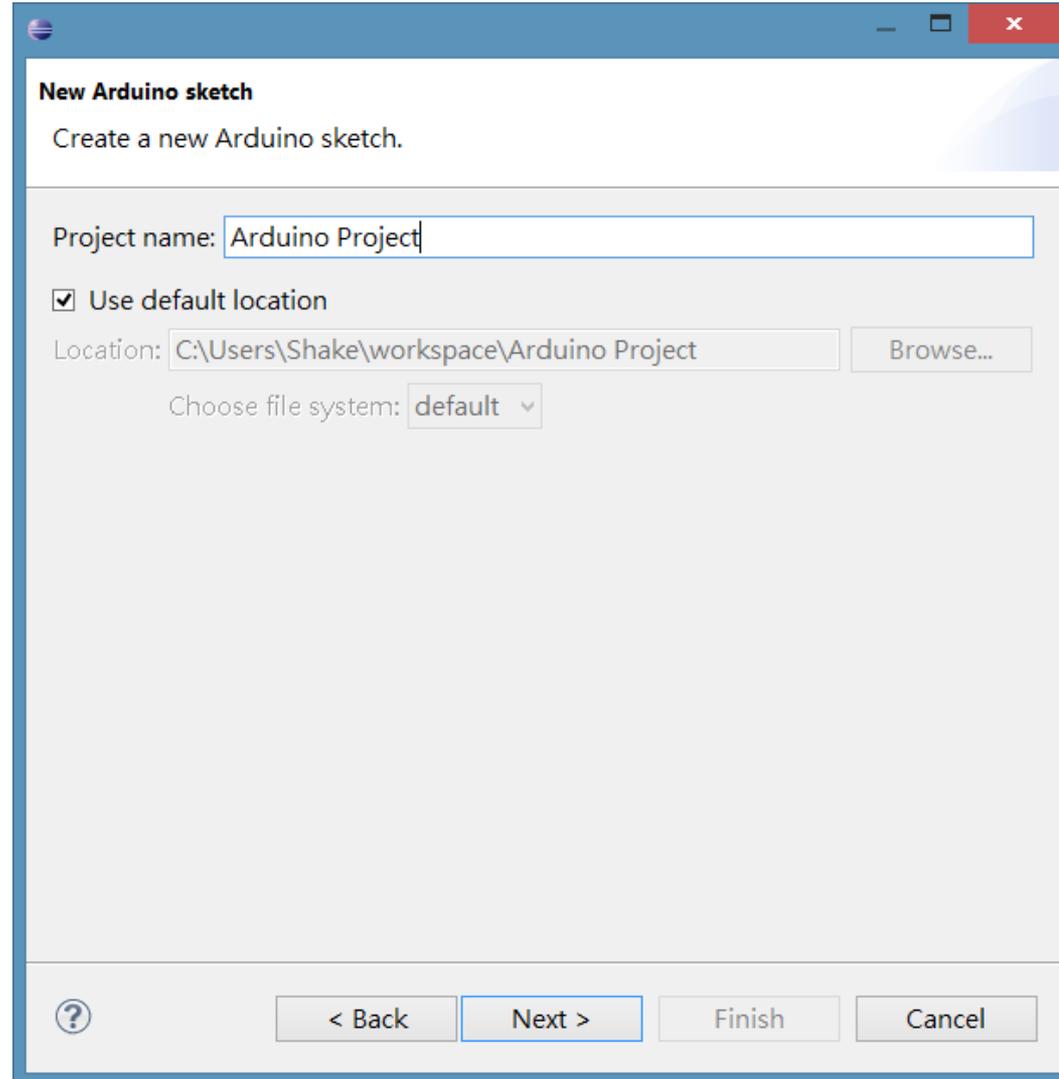
# 建立專案

- 先將arduino 插上去
- File->New->Other
- 選擇Arduino folder
- New Arduino sketch
- Next >



# 建立專案

專案名稱



**New Arduino sketch**  
Create a new Arduino sketch.

Project name:

Use default location

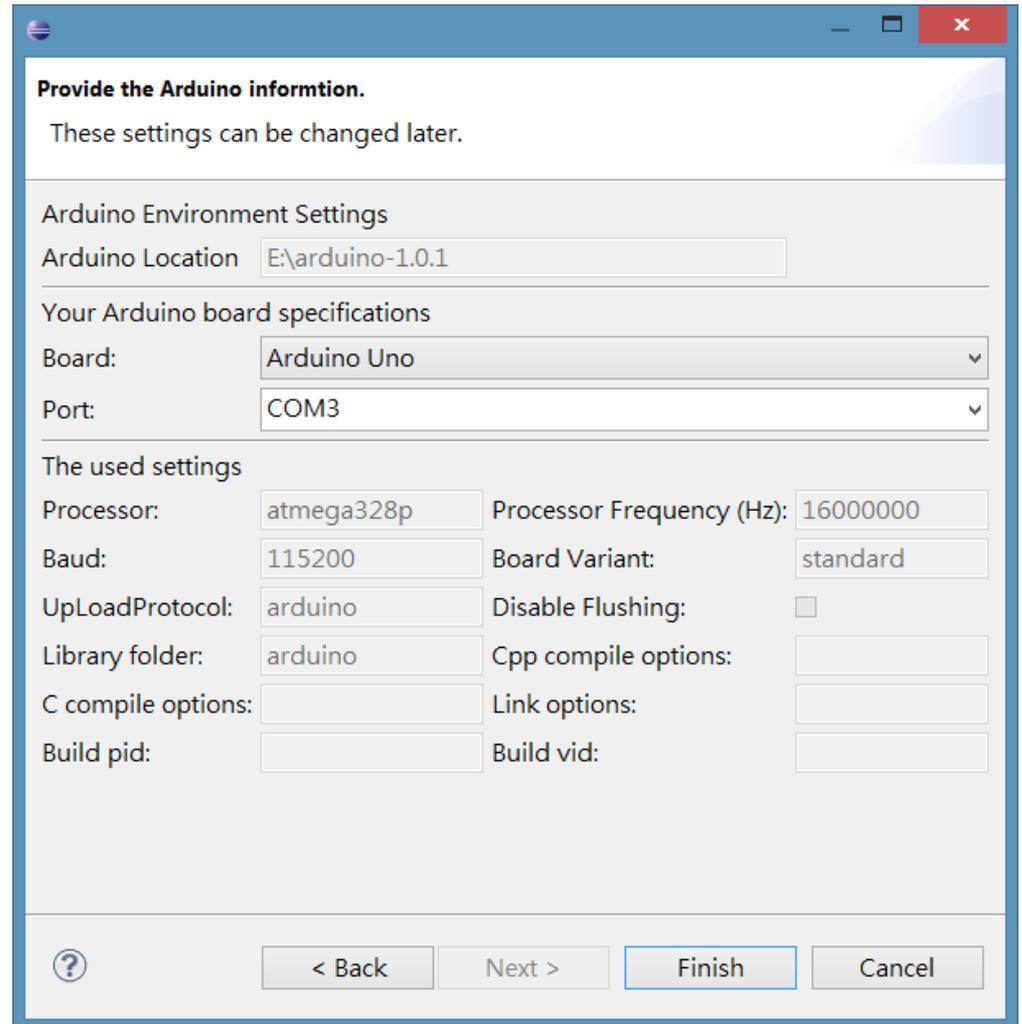
Location:

Choose file system:

# 建立專案

選擇板子型號!

還有port(在裝置管理員看，接著按 finish



Provide the Arduino information.  
These settings can be changed later.

Arduino Environment Settings  
Arduino Location: E:\arduino-1.0.1

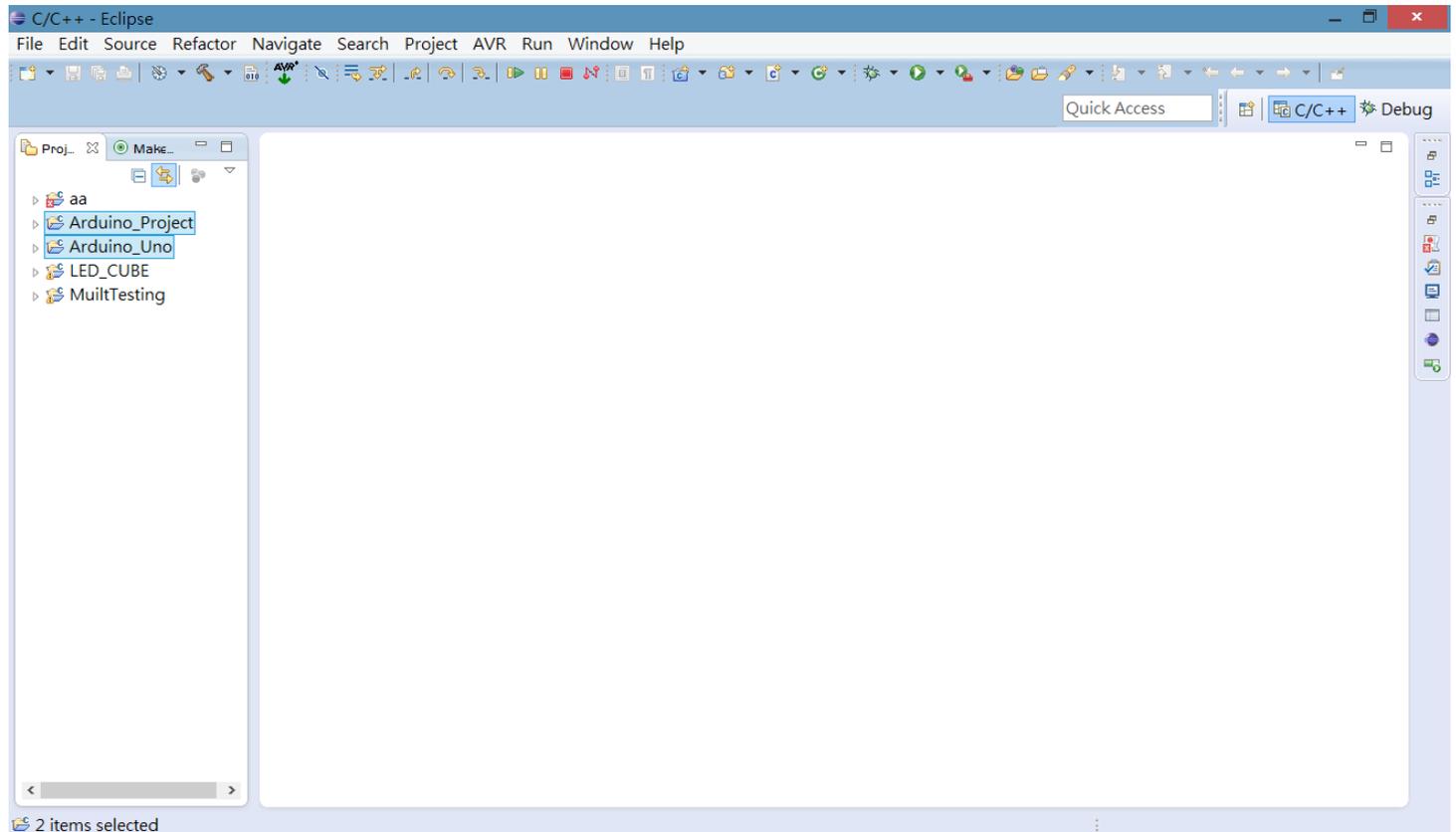
Your Arduino board specifications  
Board: Arduino Uno  
Port: COM3

The used settings  
Processor: atmega328p Processor Frequency (Hz): 16000000  
Baud: 115200 Board Variant: standard  
UpLoadProtocol: arduino Disable Flushing:   
Library folder: arduino Cpp compile options:  
C compile options: Link options:  
Build pid: Build vid:

? < Back Next > Finish Cancel

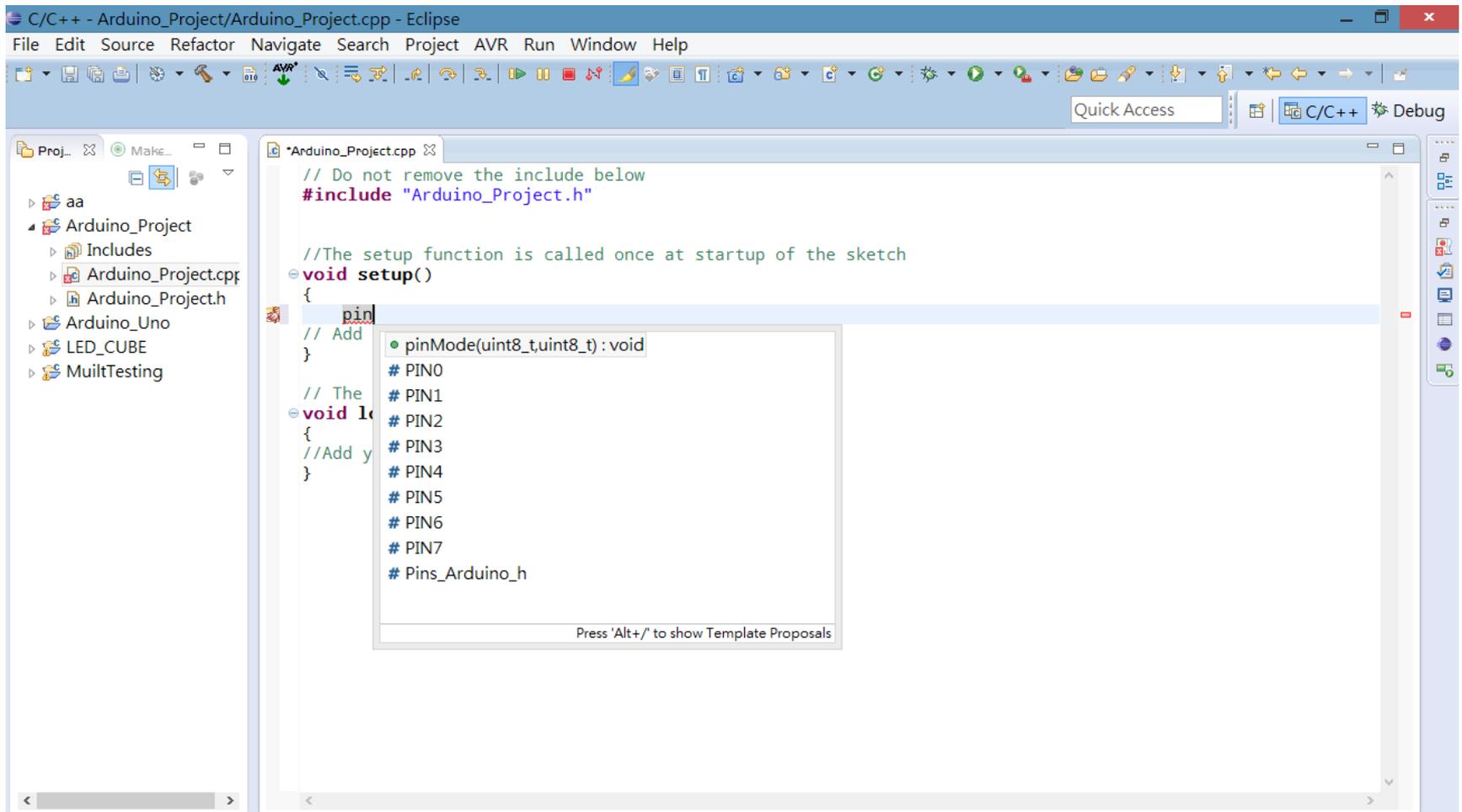
# 建立專案

- 接下來會看到兩個專案，一個是自己創的，另一個是板子的程式碼



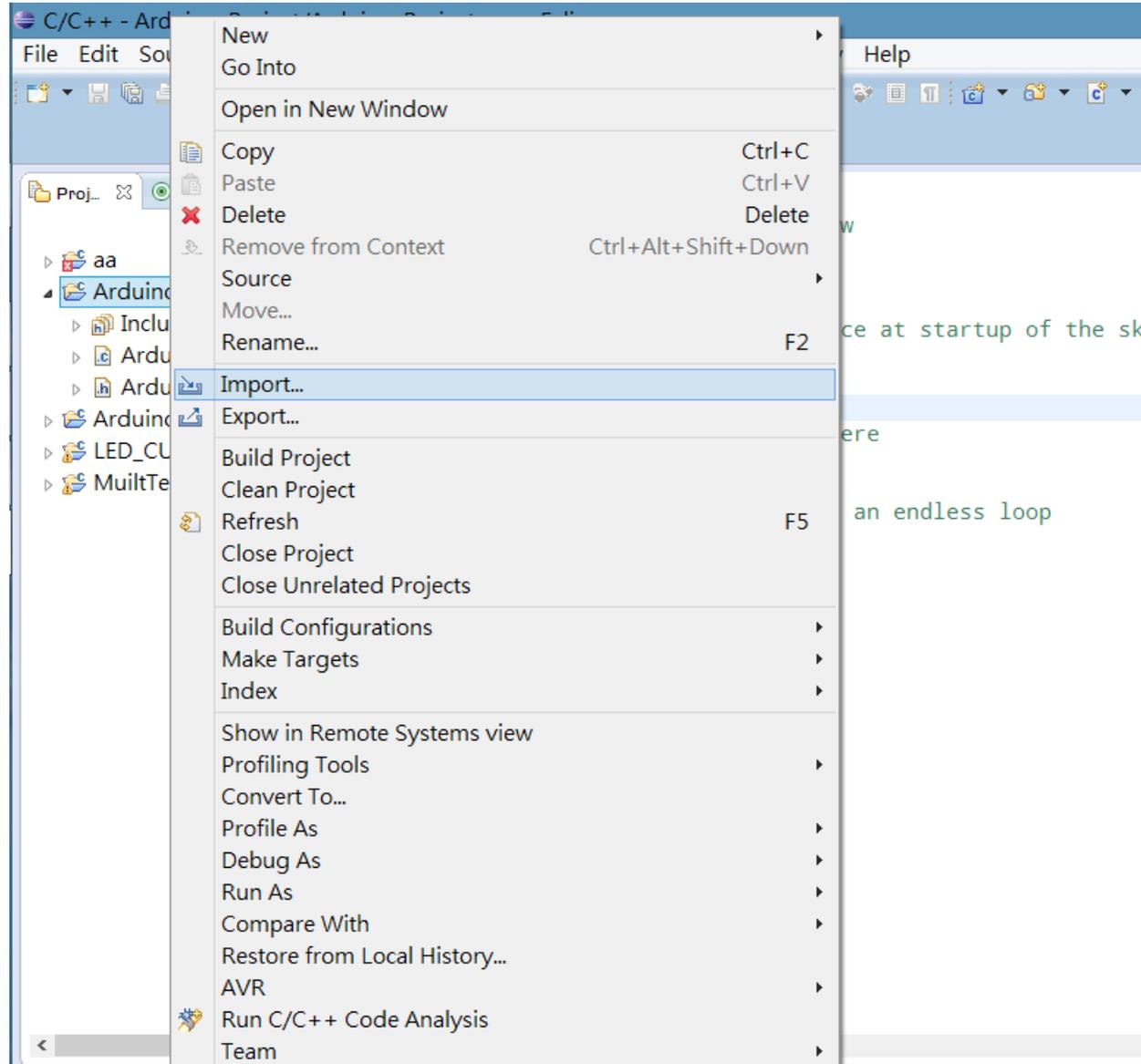
# 建立專案

- 接下來就可以用eclipse 來開發了 黑黑



# 建立專案

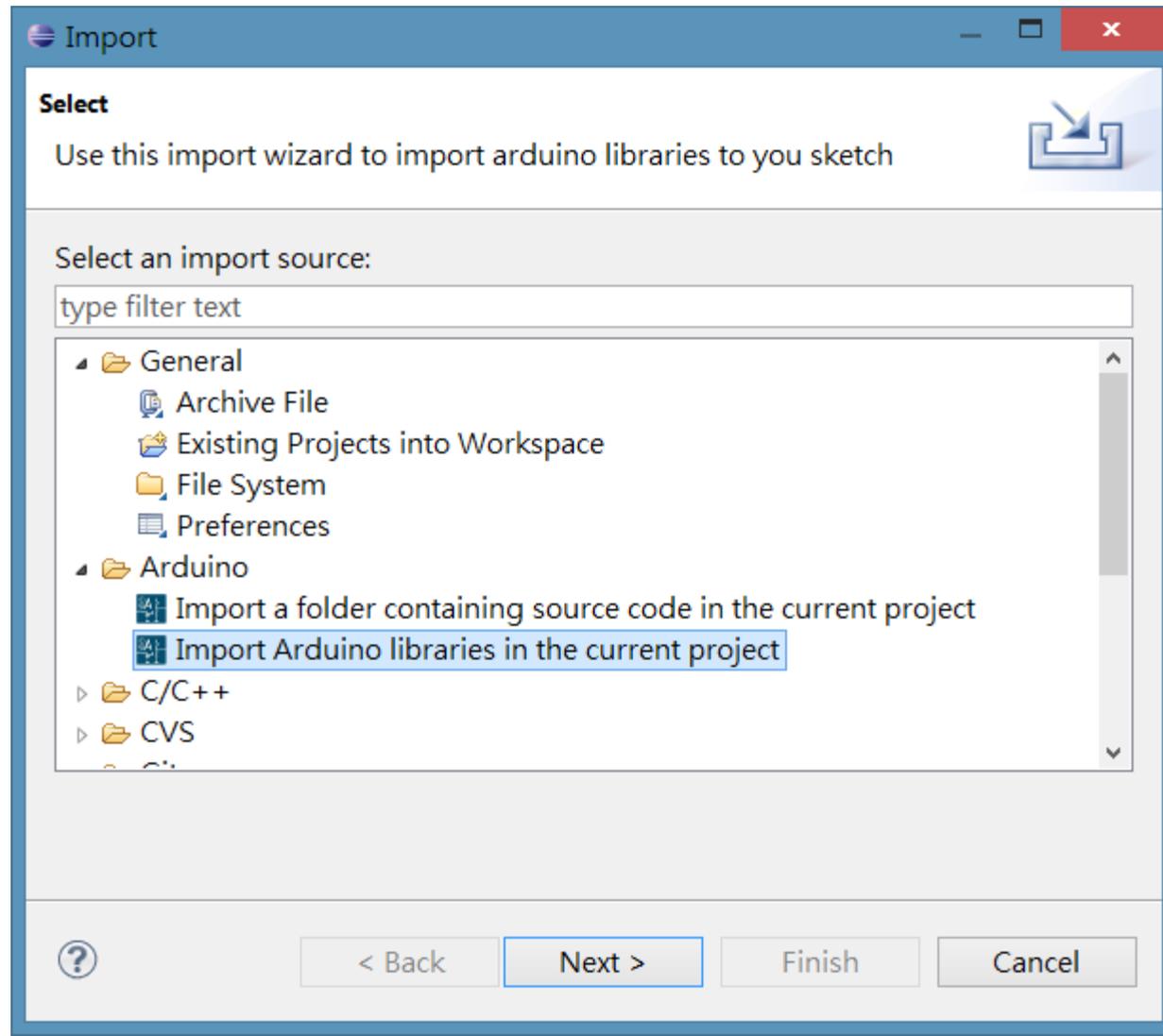
新增函式庫:  
專案->右鍵->  
Import



# 建立專案

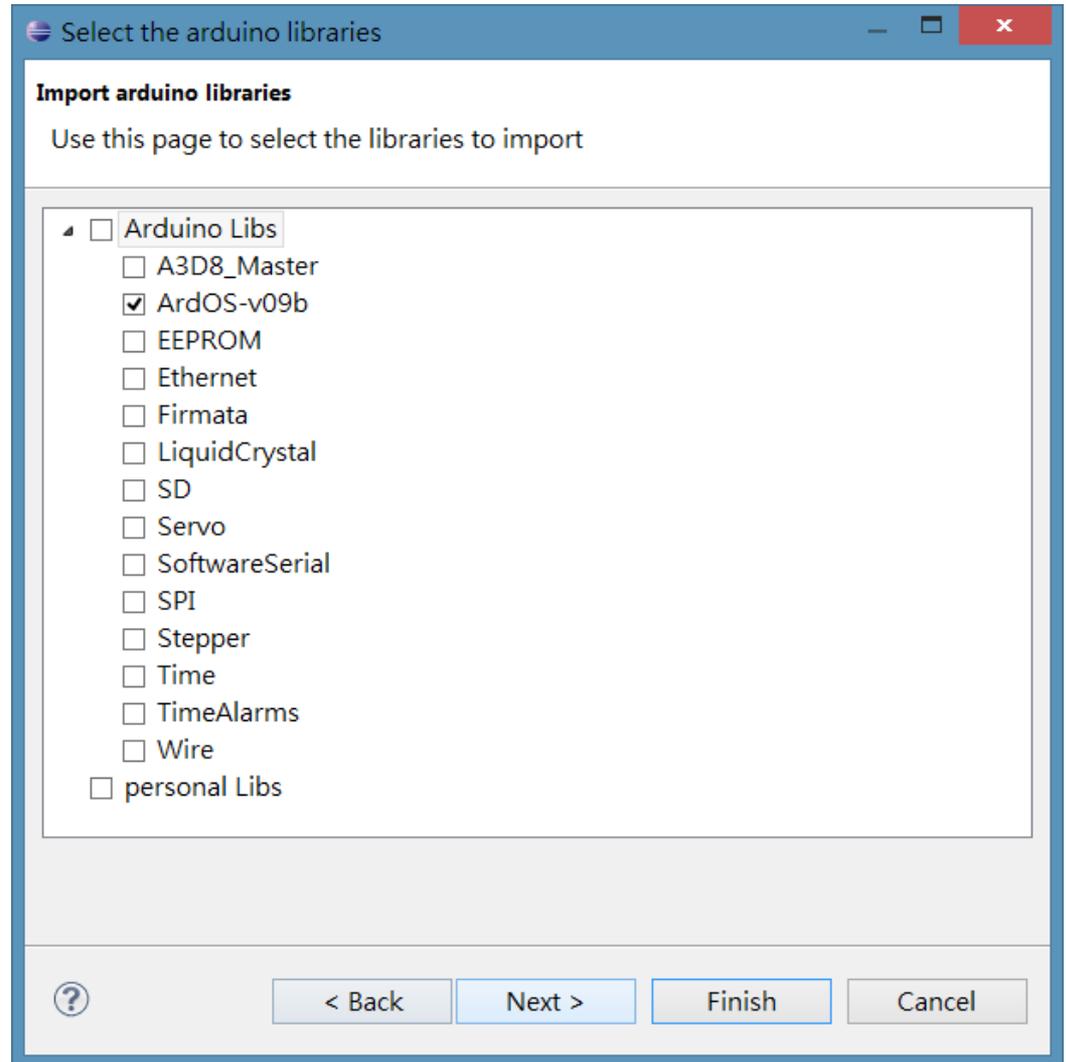
- Arduino  
Folder->

Import Arunino  
libraries  
XXXXXXXX



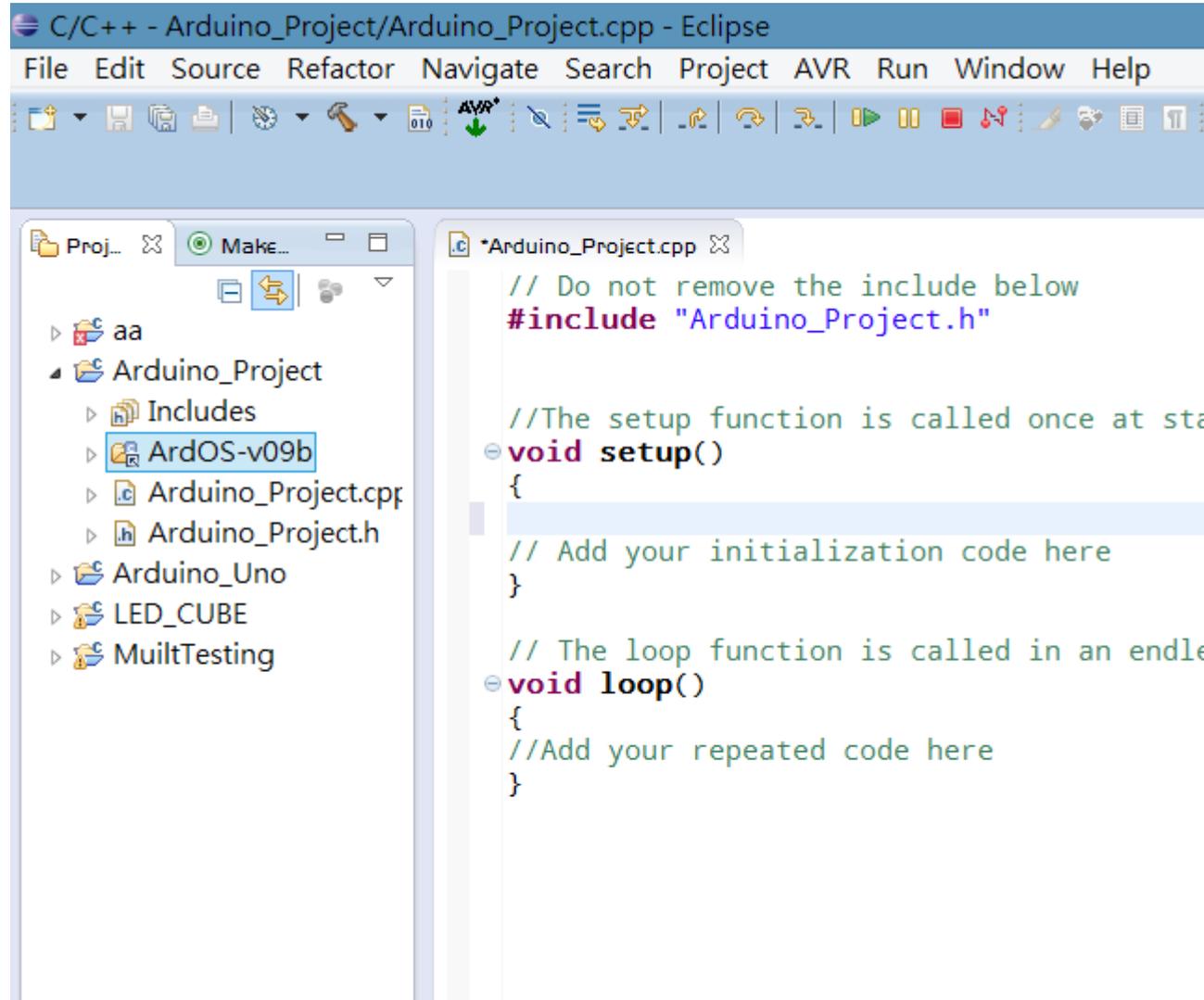
# 建立專案

- 選擇要新增的
- (\*PS: 之前有交過在網路上下載的libraries要丟在arduino/libraries 裡)
- 接著 finish



# 建立專案

- 就會看到它新增進去了
- 接著在到  
cpp 檔  
include 進  
去及可



```
C/C++ - Arduino_Project/Arduino_Project.cpp - Eclipse
File Edit Source Refactor Navigate Search Project AVR Run Window Help

Proj... Make...
aa
  Arduino_Project
    Includes
      ArdOS-v09b
      Arduino_Project.cpp
      Arduino_Project.h
    Arduino_Uno
    LED_CUBE
    MuiltTesting

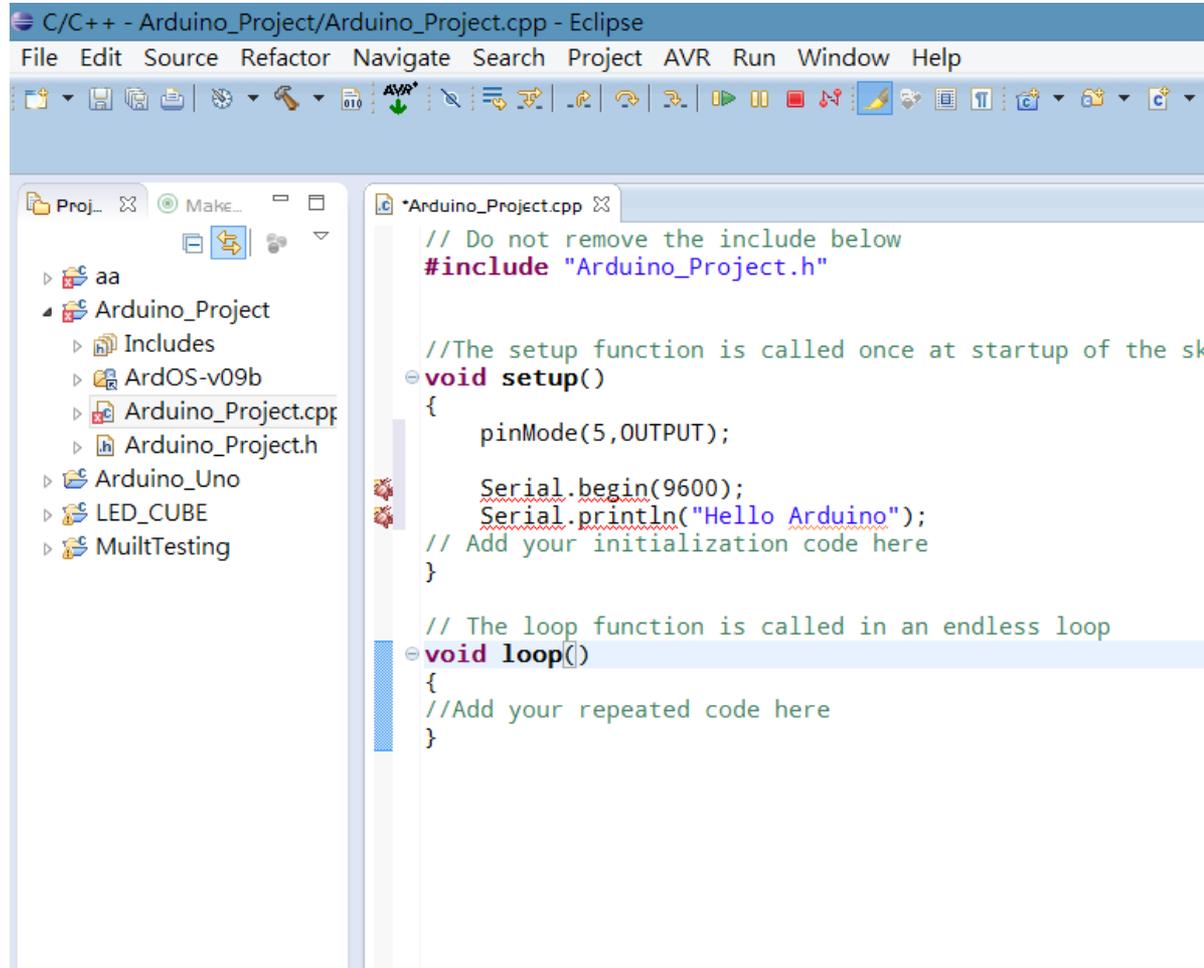
*Arduino_Project.cpp
// Do not remove the include below
#include "Arduino_Project.h"

//The setup function is called once at sta
void setup()
{
// Add your initialization code here
}

// The loop function is called in an endle
void loop()
{
//Add your repeated code here
}
```

# 建立專案

- 但是有一寫小bug，有些函示明明沒有打錯，但是卻一直畫紅線，這是bug，需要改一下專案設定!



```
C/C++ - Arduino_Project/Arduino_Project.cpp - Eclipse
File Edit Source Refactor Navigate Search Project AVR Run Window Help

*Arduino_Project.cpp
// Do not remove the include below
#include "Arduino_Project.h"

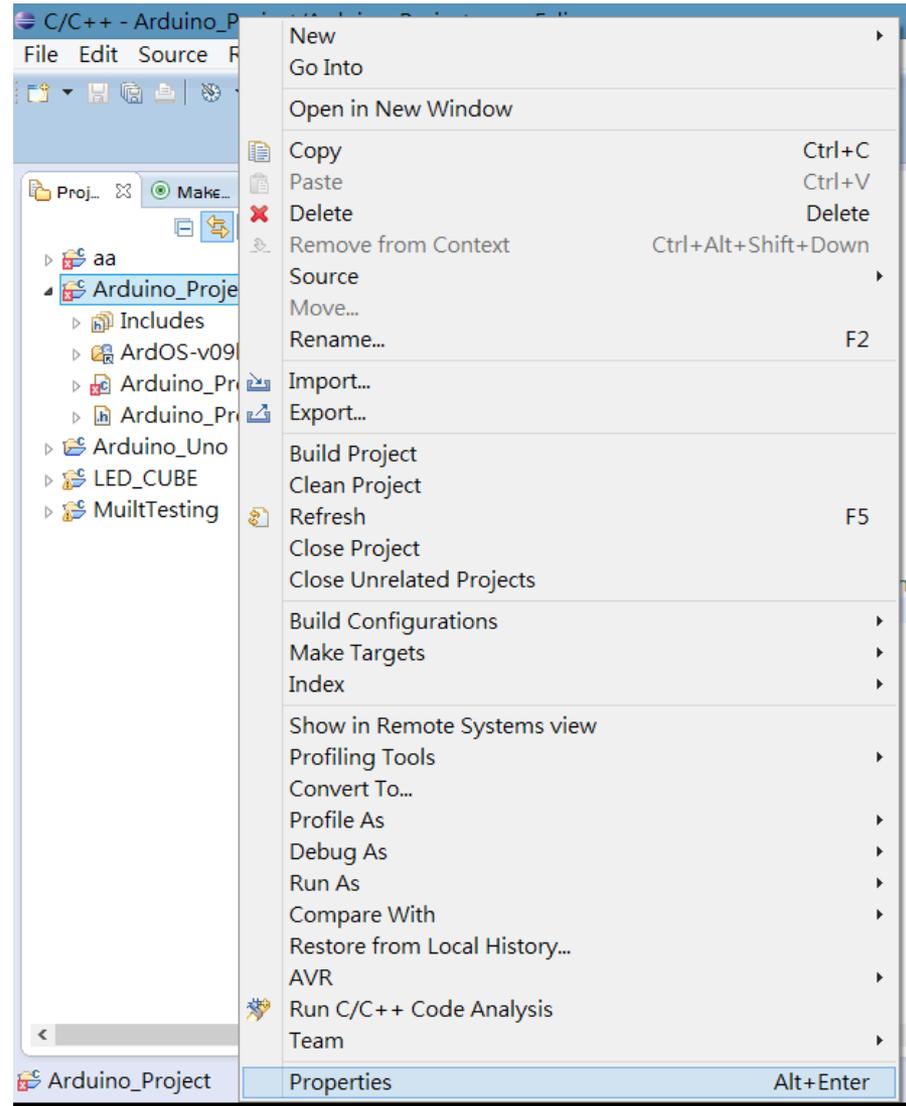
//The setup function is called once at startup of the sk
void setup()
{
    pinMode(5,OUTPUT);

    Serial.begin(9600);
    Serial.println("Hello Arduino");
    // Add your initialization code here
}

// The loop function is called in an endless loop
void loop()
{
    //Add your repeated code here
}
```

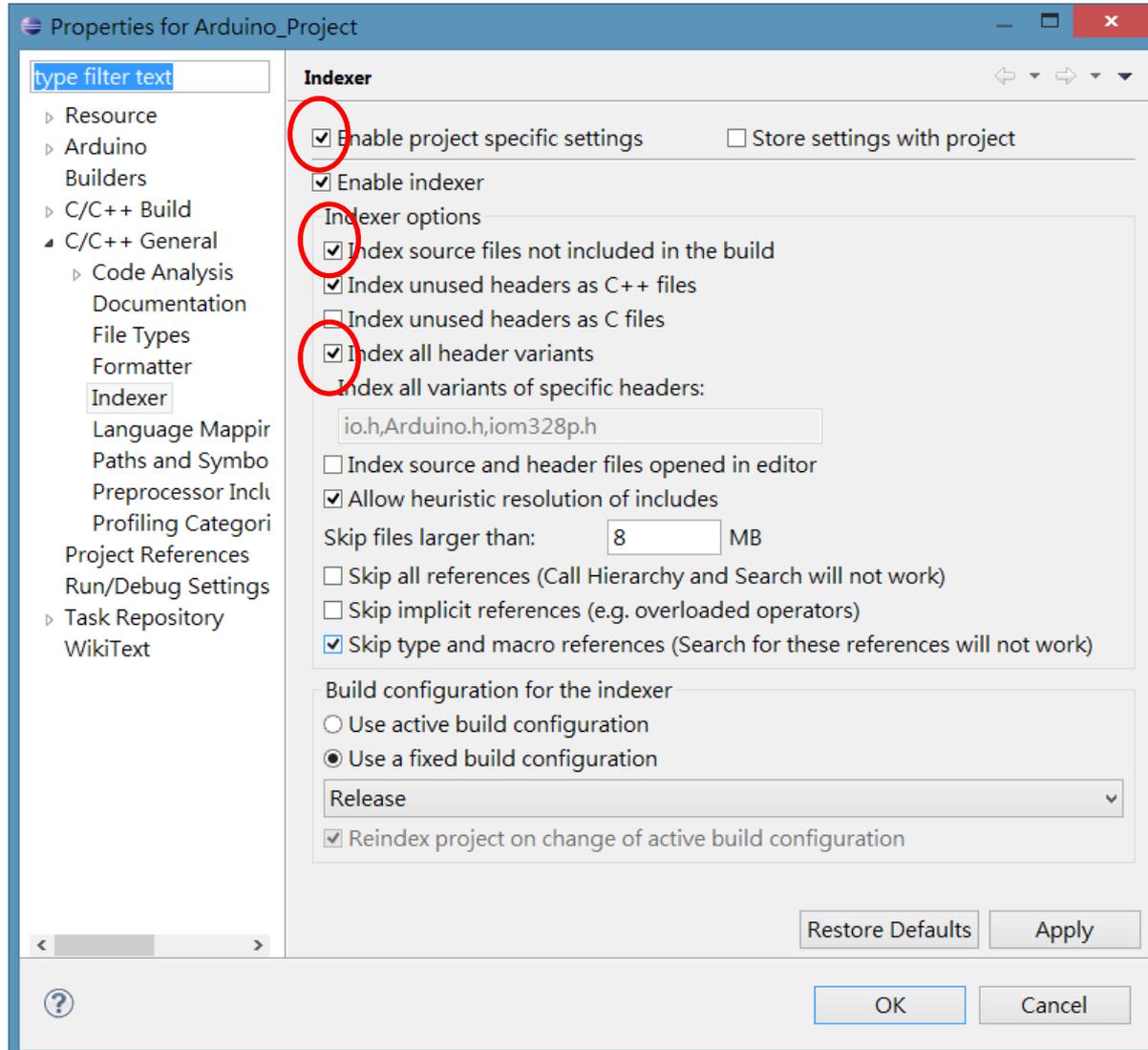
# 建立專案

專案->properties



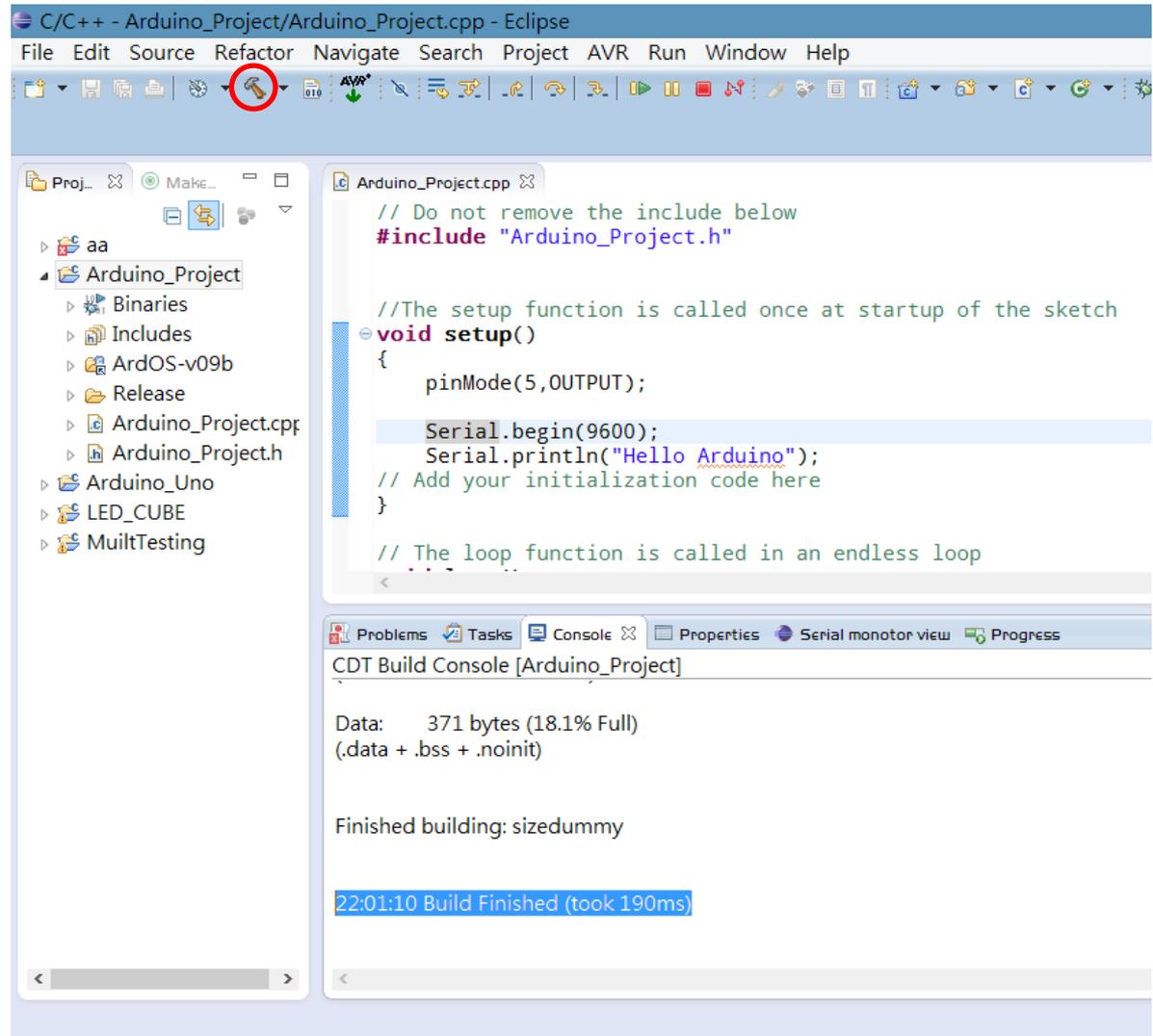
# 建立專案

C/C++ General->  
Indexer  
將紅圈的地方打  
勾



# 編譯與上傳 執行

- 接著按鐵鎚 (編譯器)
- 完成後會寫 build finished



The screenshot shows the Eclipse IDE interface for a C/C++ project named 'Arduino\_Project'. The top menu bar includes 'File', 'Edit', 'Source', 'Refactor', 'Navigate', 'Search', 'Project', 'AVR', 'Run', 'Window', and 'Help'. The toolbar contains various icons, with the 'Build' icon (a hammer) circled in red. The left sidebar shows a project tree with folders like 'Binaries', 'Includes', 'Release', and files like 'Arduino\_Project.cpp' and 'Arduino\_Project.h'. The main editor window displays the code for 'Arduino\_Project.cpp', which includes an include statement and a 'void setup()' function. The 'Console' view at the bottom shows the output of the build process, including the message 'Finished building: sizedummy' and a timestamp '22:01:10 Build Finished (took 190ms)'.

```
C/C++ - Arduino_Project/Arduino_Project.cpp - Eclipse
File Edit Source Refactor Navigate Search Project AVR Run Window Help

// Do not remove the include below
#include "Arduino_Project.h"

//The setup function is called once at startup of the sketch
void setup()
{
    pinMode(5,OUTPUT);
    Serial.begin(9600);
    Serial.println("Hello Arduino");
    // Add your initialization code here
}

// The loop function is called in an endless loop

CDT Build Console [Arduino_Project]
Data: 371 bytes (18.1% Full)
(.data + .bss + .noinit)

Finished building: sizedummy

22:01:10 Build Finished (took 190ms)
```

# 編譯與上傳 執行

- 如果有錯誤 就會顯示錯誤訊息!

C/C++ - Arduino\_Project/Arduino\_Project.cpp - Eclipse

File Edit Source Refactor Navigate Search Project AVR Run Window Help

Proj... Make...

aa

- Arduino\_Project
  - Binaries
  - Includes
  - ArdOS-v09b
  - Release
  - Arduino\_Project.cpp
  - Arduino\_Project.h
- Arduino\_Uno
- LED\_CUBE
- MuiltTesting

```
// Do not remove the include below
#include "Arduino_Project.h"

//The setup function is called once at startup of the s
void setup()
{aa
  pinMode(5,OUTPUT);

  Serial.begin(9600);
  Serial.println("Hello Arduiaaano");
  // Add your initialization code here
}

// The loop function is called in an endless loop
```

Problems Tasks Console Properties Serial monitor view Progress

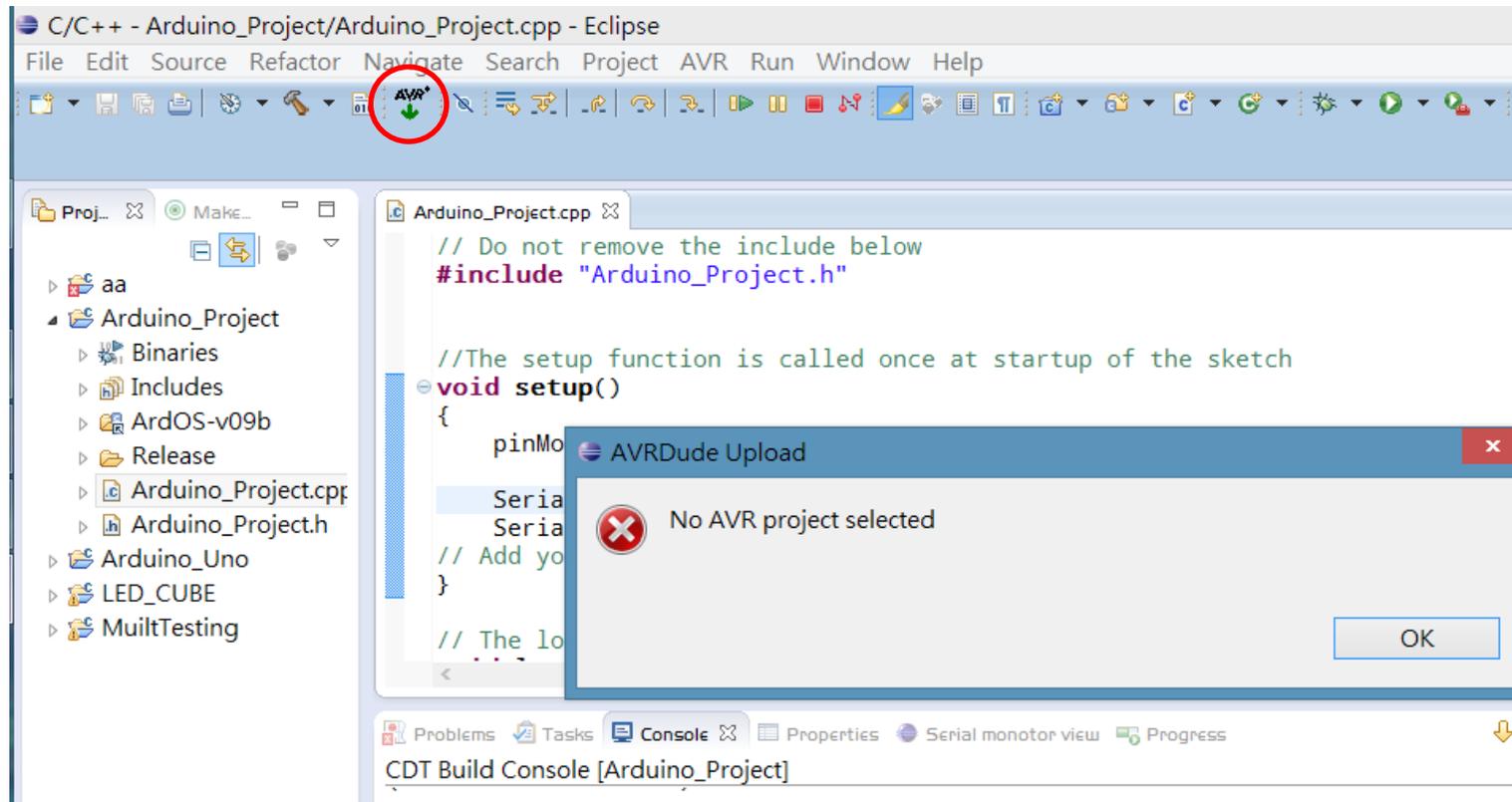
CDT Build Console [Arduino\_Project]

Building file: ../Arduino\_Project.cpp  
Invoking: AVR C++ Compiler  
avr-g++ -I"E:\arduino-1.0.1\hardware\arduino\cores\arduino" -I"E:\arduino  
../Arduino\_Project.cpp: In function 'void setup()':  
../Arduino\_Project.cpp:7: error: 'aa' was not declared in this scope  
../Arduino\_Project.cpp:8: error: expected `;' before 'pinMode'  
make: \*\*\* [Arduino\_Project.o] Error 1

22:02:51 Build Finished (took 339ms)

# 編譯與上傳 執行

- 編譯成功後就按上傳吧:->(PS:不能直接上傳! 它會上傳上一次編譯成功的檔案!)

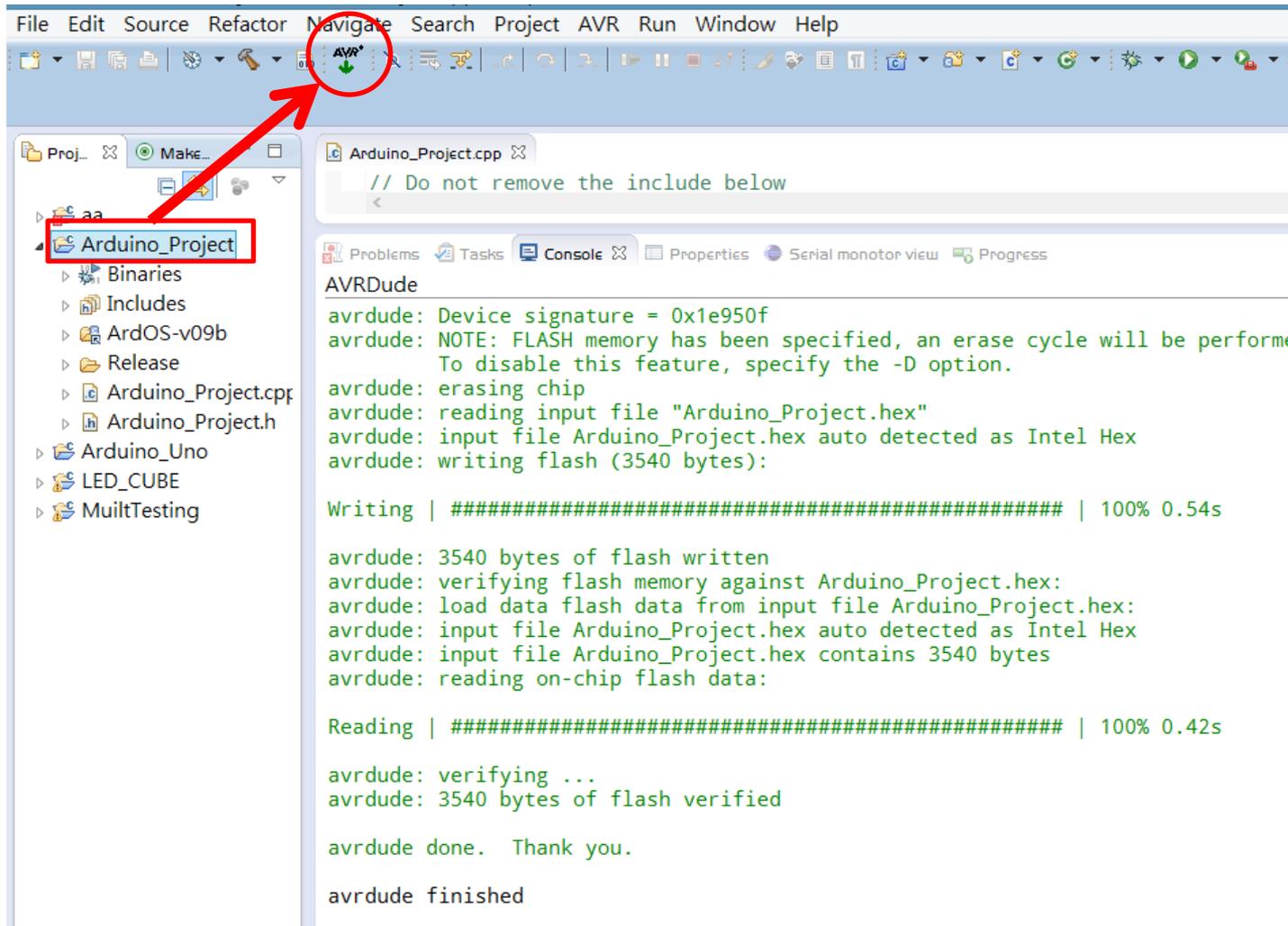


# 編譯與上傳 執行

- 上圖是表示沒有選擇上傳的專案編譯檔(有時候就會一直跳出來 很煩)

# 編譯與上傳 執行

這時就要點選專案然後再上傳一次，成功後會看到 avrdude finished

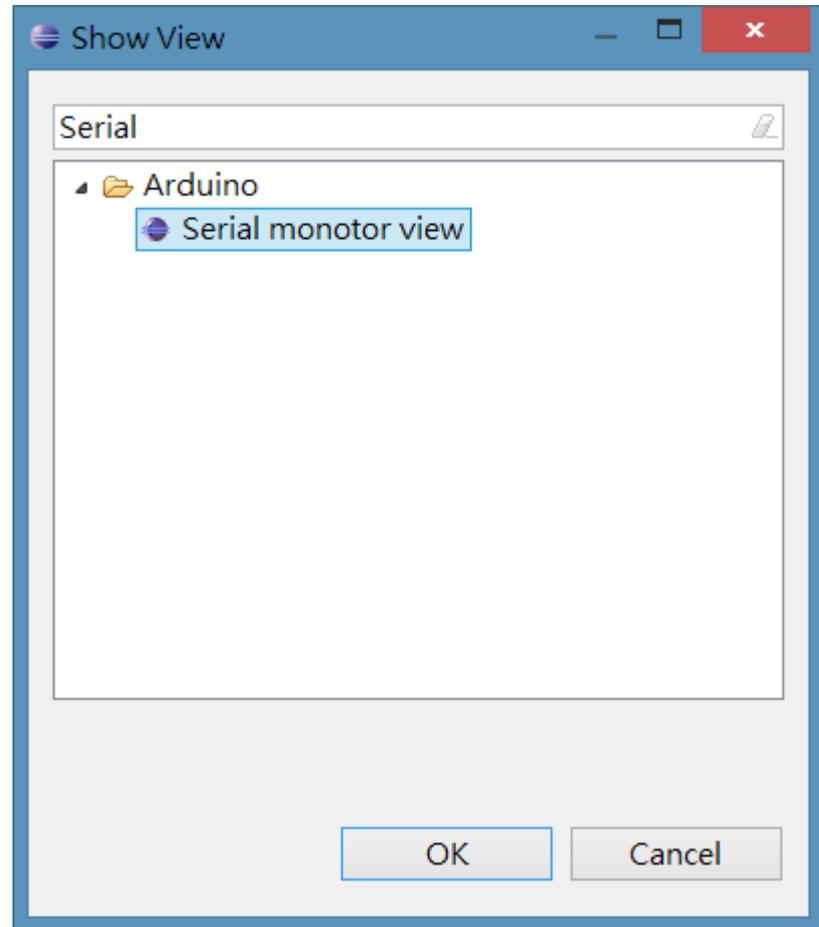


# 編譯與上傳 執行

- 來看看結果，剛剛是在 Serial 印出”hello Arduino”，所以這時要開一個 “Serial monotor view”
- Window->Show view->Other

# 編譯與上傳 執行

在上面輸入 Serial,  
就會看到!



# 編譯與上傳 執行

The screenshot displays the Eclipse IDE interface for an Arduino project. The main editor shows the following code in `Arduino_Project.cpp`:

```
// Do not remove the include below
#include "Arduino_Project.h"

//The setup function is called once at startup of the sketch
void setup()
{
    pinMode(5,OUTPUT);

    Serial.begin(9600);
    Serial.println("Hello Arduino");
    // Add your initialization code here
```

The Serial Monitor view is open, and a dialog box is displayed for configuring the connection. The dialog box contains the following fields and buttons:

- Serial port to connect to: COM3
- Select the baudrate: 9600
- Buttons: OK, Cancel

Red arrows point to the "+" icon in the Serial Monitor view's toolbar and the dialog box. The text "選擇com port及baudrate" (Select COM port and baudrate) is written in Chinese below the dialog box.

# 編譯與上傳 執行

The screenshot displays the Eclipse IDE interface for a C/C++ project named 'Arduino\_Project'. The main editor window shows the source code for 'Arduino\_Project.cpp'. The code includes a 'void setup()' function that initializes a pin and prints 'Hello Arduino' to the serial monitor. The IDE's interface includes a menu bar (File, Edit, Source, Refactor, Navigate, Search, Project, AVR, Run, Window, Help), a toolbar with various icons, and a left-hand project explorer showing the file structure. Below the editor, the 'Serial monitor view' is active, showing the output 'Connected to COM3 at 9600' and 'Hello Arduino'. The 'Send' button is highlighted in blue, indicating the code has been executed. A red box highlights the serial output text.

```
//The setup function is called once at startup of the sketch
void setup()
{
    pinMode(5,OUTPUT);

    Serial.begin(9600);
    Serial.println("Hello Arduino");
    // Add your initialization code here
}

// The loop function is called in an endless loop
```

COM3 | none | Send | Reset | Clear |  AutoScroll

Connected to COM3 at 9600  
Hello Arduino

Finish! All Done