



Syllabus

- Attendance: 5%
- Homework: 25%
- Midterm Exam: 30%
- Group project: 40%
 - 2 students in one group
 - Uploading PPT, source code and job assignment is necessary
- 11th week(4/26) for Midterm exam
- 11th week(5/10) for project title and group members
- 13th week(5/24) for project proposal (3~4 pages)
- 18th week(6/28) for presentation and demo



Chapter 1

**Visual Studio &
Console Application Programming**



1.1 Introduction to Visual C#

- **Use C/C++ to develop business software**
 - ⇒ **High cost**
- **Upcoming Internet age, the ideal programming language**
 - ⇒ **Rapid development**
 - ⇒ **Synchronize with new Web standard, cross-platform**
 - ⇒ **ability to design mobile application**
 - ⇒ **easy to combine with existing application**
- **Visual C# are born**



1.1 Introduction to Visual C#

Continue...

- C# is read as C Sharp
- Designed for .NET Framework
- As powerful as C&C++ and as easy-to-use as VB
- The first component-based programming language
- 95% compatible with C++ and more similar with Java
- Customized for C++ programmer

Attribute of C#

Continue...

- **Be able to build**
 - ① **Traditional Windows client application**
 - ⑥ **Distributed components**
 - ⑦ **Client-server application**
 - ⑧ **Database application and more**

Attribute of C#

Continue...

- **C# offers advanced**
 - ① **Source code editor**
 - ② **User interface design tool**
 - ③ **Integrated debugging tool and other tools**
- **Easy to realize C# grammar and start working with knowing C, C++ or Java well**

Download VS2015

<http://www.cc.ncku.edu.tw/download/>

最新消息

軟體下載

連絡我們

注意事項

登出

軟體下載

Windows作業系統

Office

Visual Studio

MATLAB

SAS

SPSS

Acrobat

Autodesk

ArcGIS


SolidWorks

VMware


防毒軟體

Visual Studio

Visual Studio 2017(僅限教職員下載使用)

說明:
1. Visual Studio 2017 需要 .NET framework 4.5 才能安裝。
2. 安裝過程中會自己升級到NET Framework 4.6.1。
3. 安裝過程中請勾選要裝的套件，不然預設只會安裝700多mb的平台而已。
[Visual_Studio_2017前導安裝檔](#)
Visual Studio 2017 序號: 

Visual Studio 2015(僅限教職員下載使用)

[Visual Studio 2015 中文專業版](#)
[Visual Studio 2015 英文專業版](#)
Visual Studio 2015 序號: 

Visual Studio 2013(僅限教職員下載使用)

note: you will need this licence code for further use

[Visual Studio 2013 中文專業版](#)



Console Application

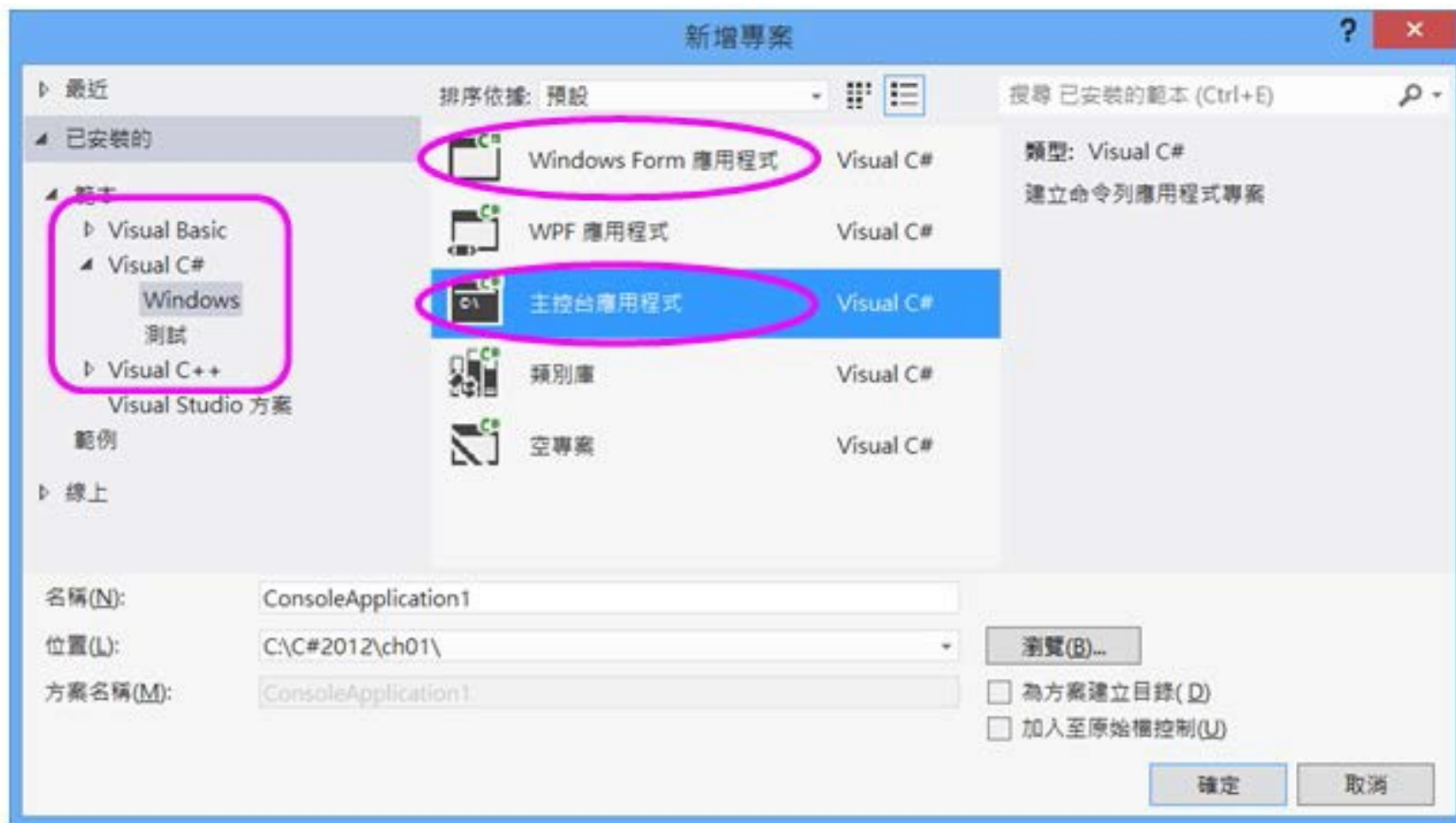
- **As executed**

- ⇒ **Traditional DOS text-only command line environment**
- ⇒ **Only develop programs which output text information**
- ⇒ **Low resources used**
 - ⇒ **Higher performance than Windows Form**

Applications

1.3 Introduction to Console Application

1.3.1 New project

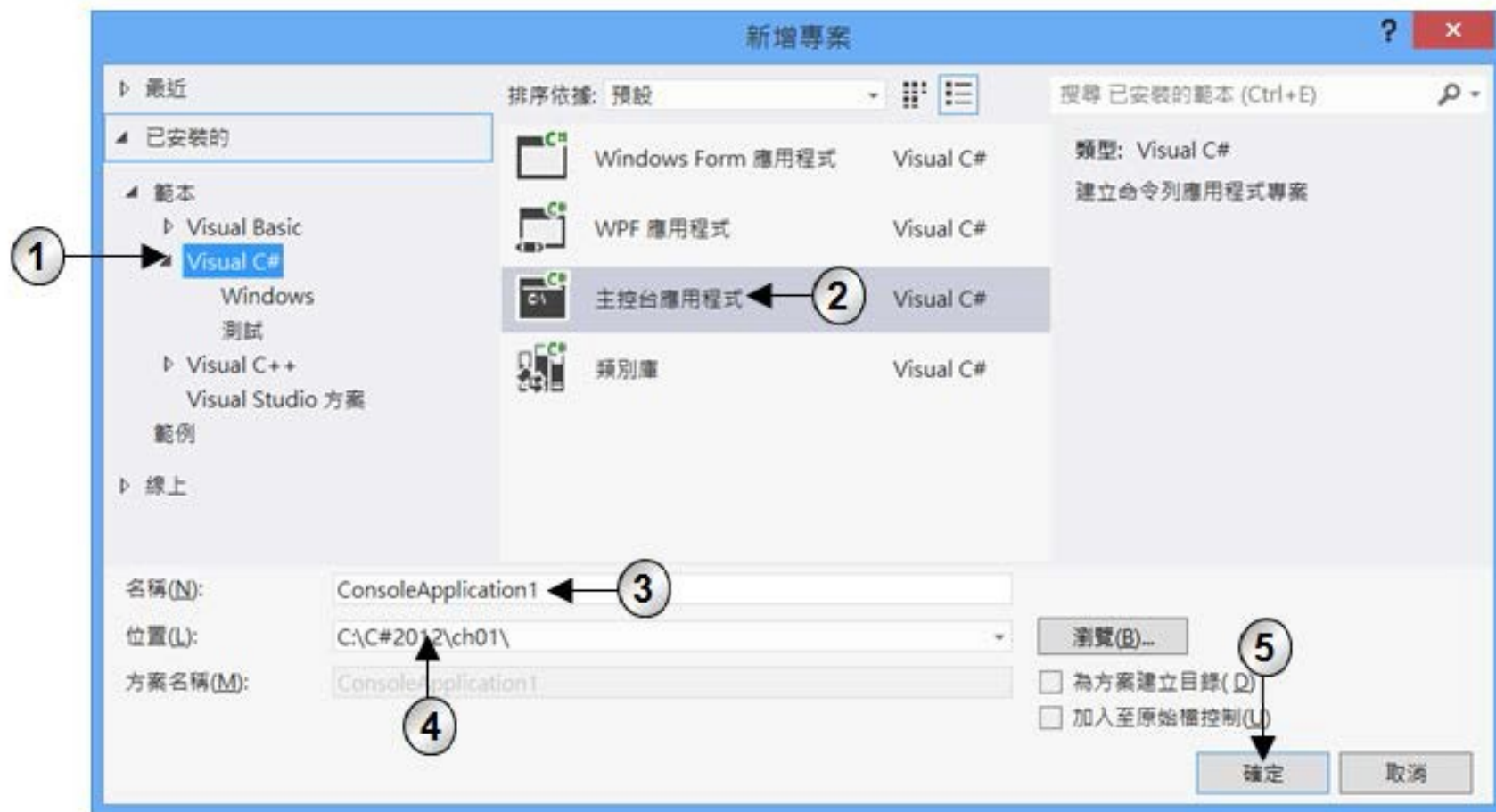




New project

- **Console Application**
The program for Console mode, in other words, the program run in the tradition DOS
- **Windows Form Application**
The program for Windows environment

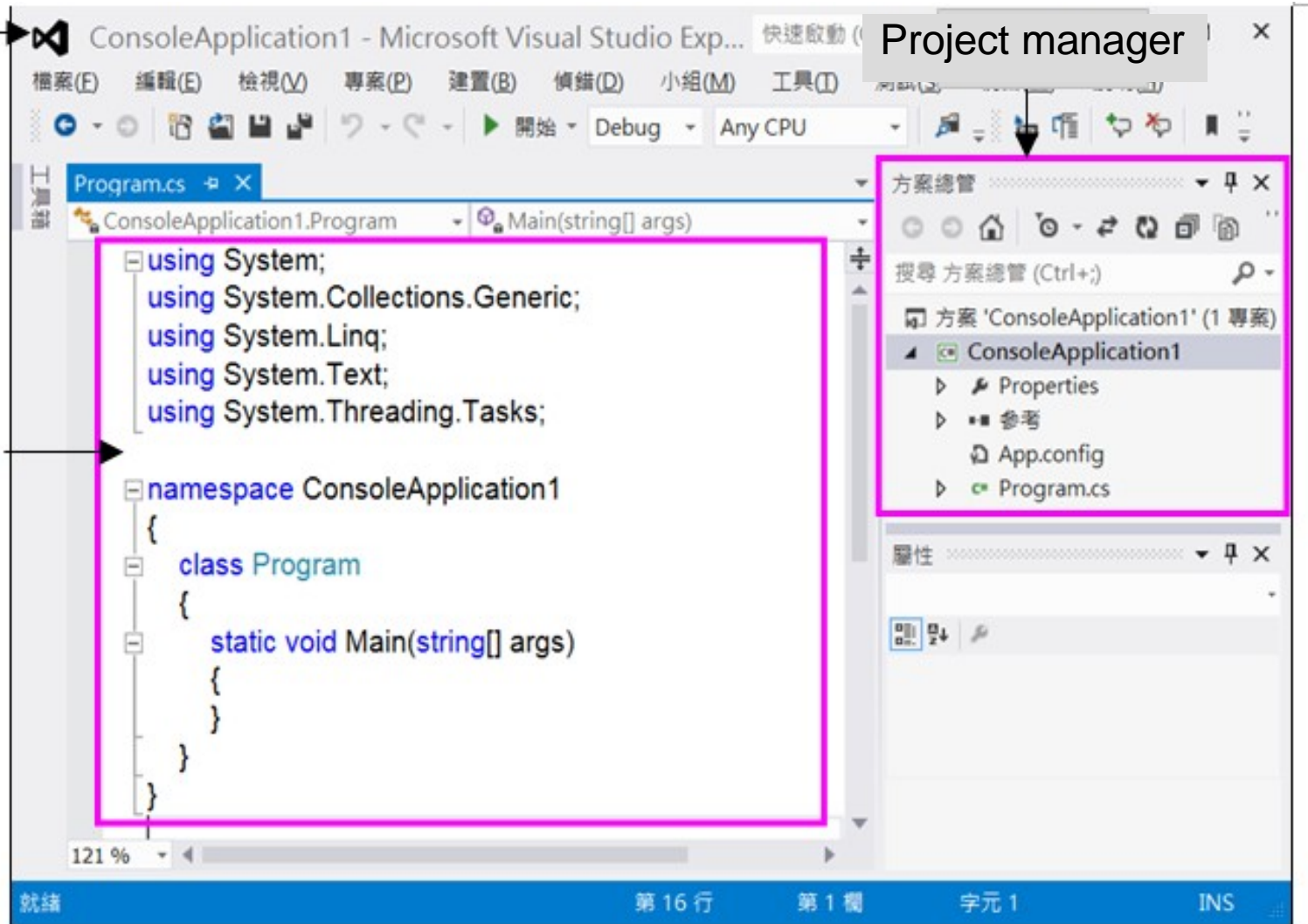
Create Console Application Project



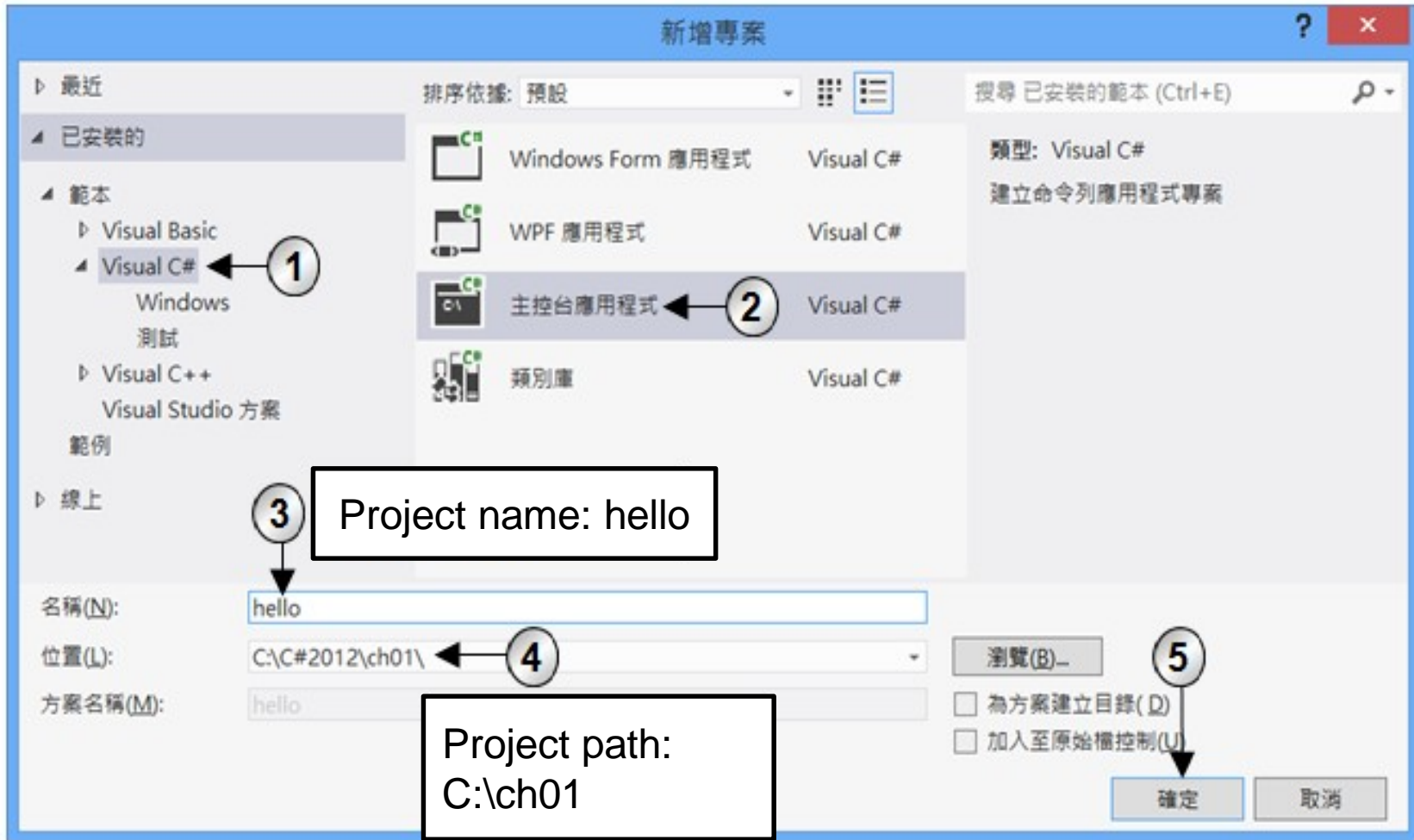
Console development IDE

Project name

Code editor



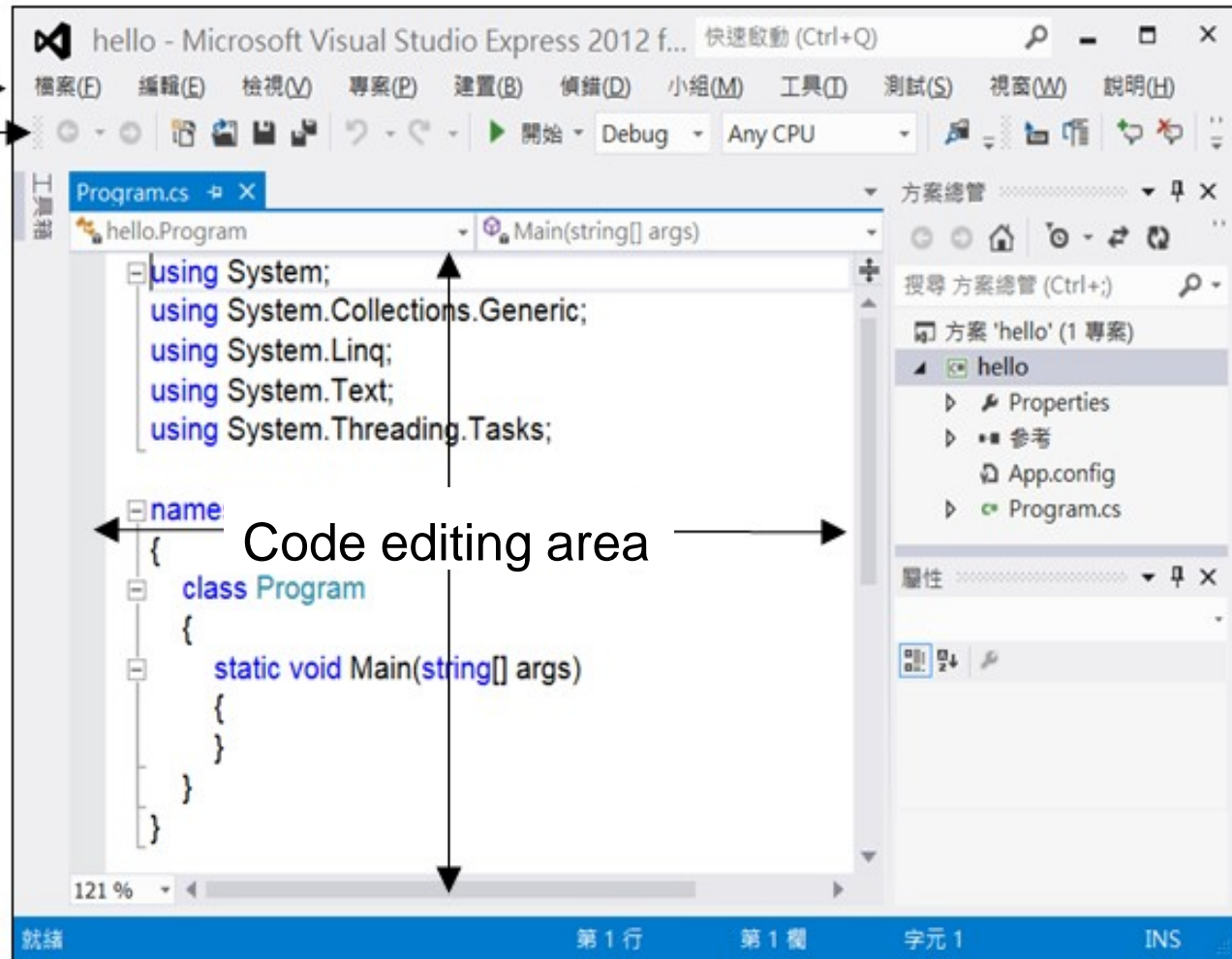
New project



Code editor window

Menu bar

Standard toolbar

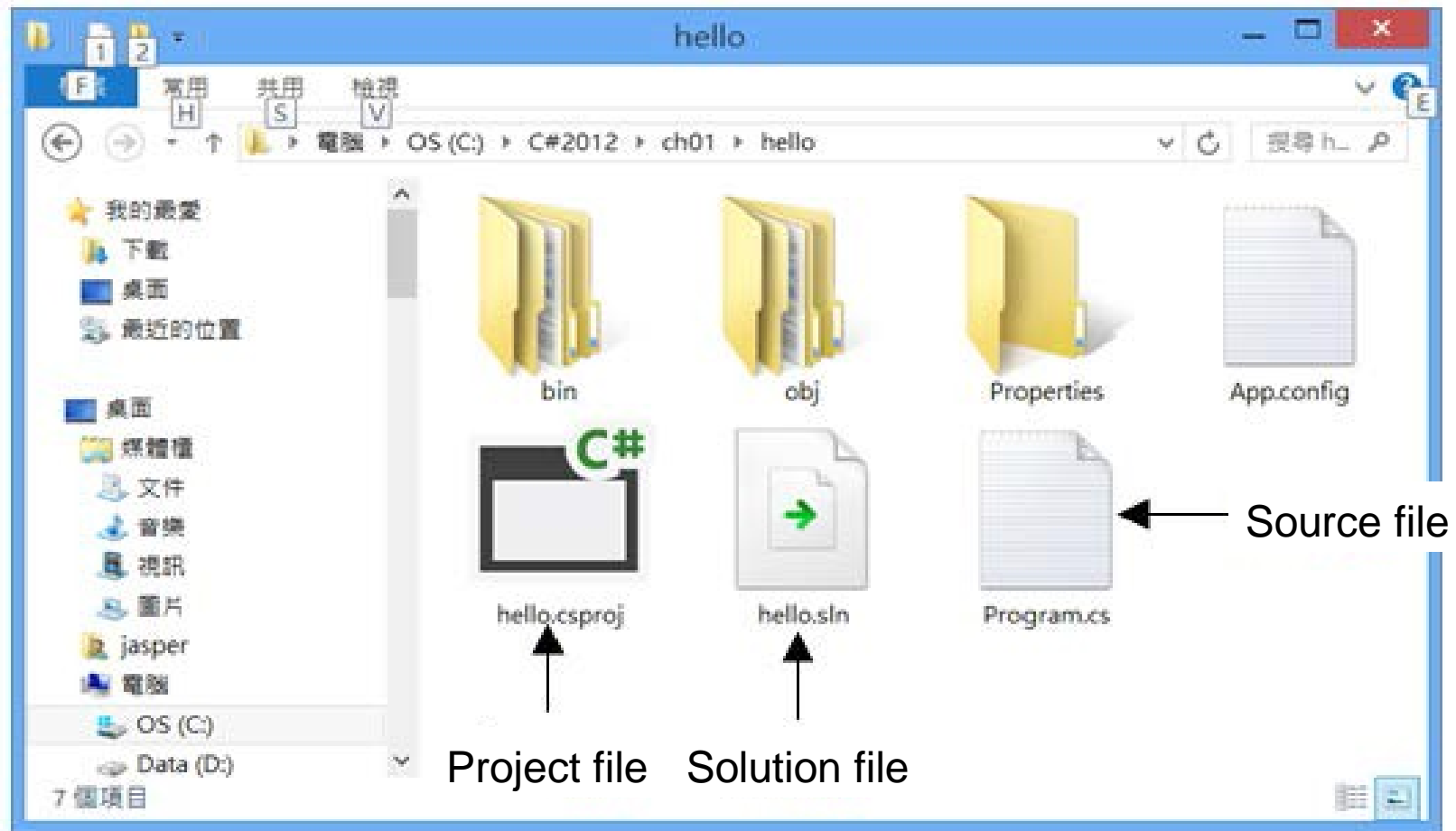


Project manager

Property window

Code editing area

Important files



Writing Codes

The image shows a screenshot of a C# code editor with a file named `Program.cs` open. The code is for a class `Program` in the `hello` namespace, with a `Main` method. Three specific parts of the code are highlighted with pink boxes, and arrows point from these boxes to explanatory text boxes on the right.

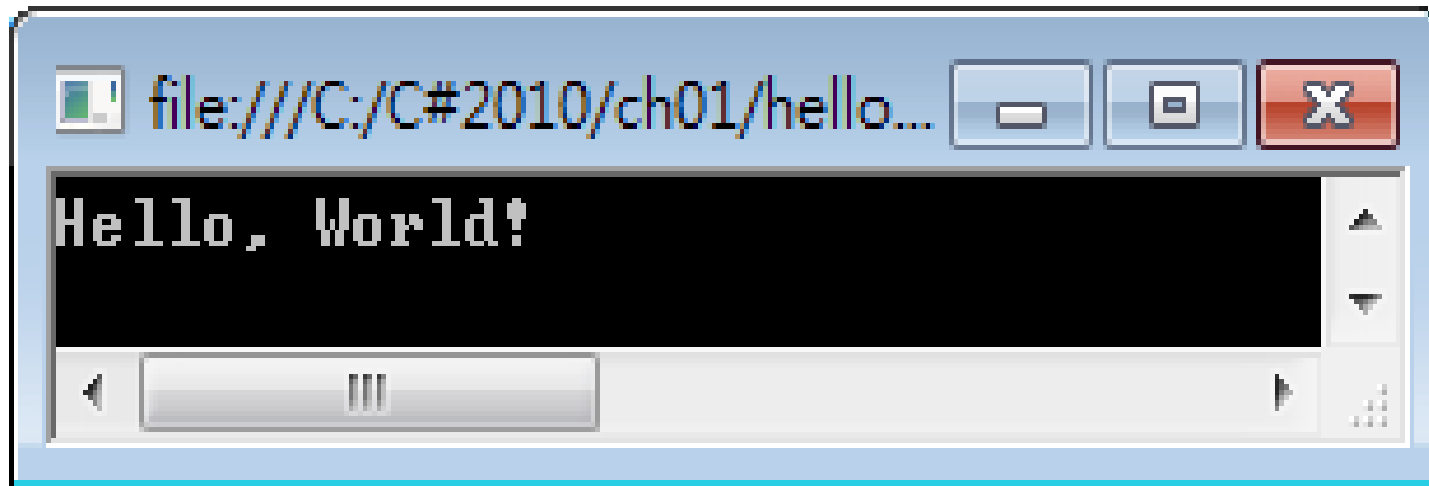
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace hello
{
    class Program
    {
        static void Main(string[] args)
        {
            // This is a test Program
            Console.WriteLine("Hello, World!");
            Console.Read(); //等待使用者輸入一個字元
        }
    }
}
```

Include relative namespace

hello namespace, Also as the project name

Insert these statement in **Main function**

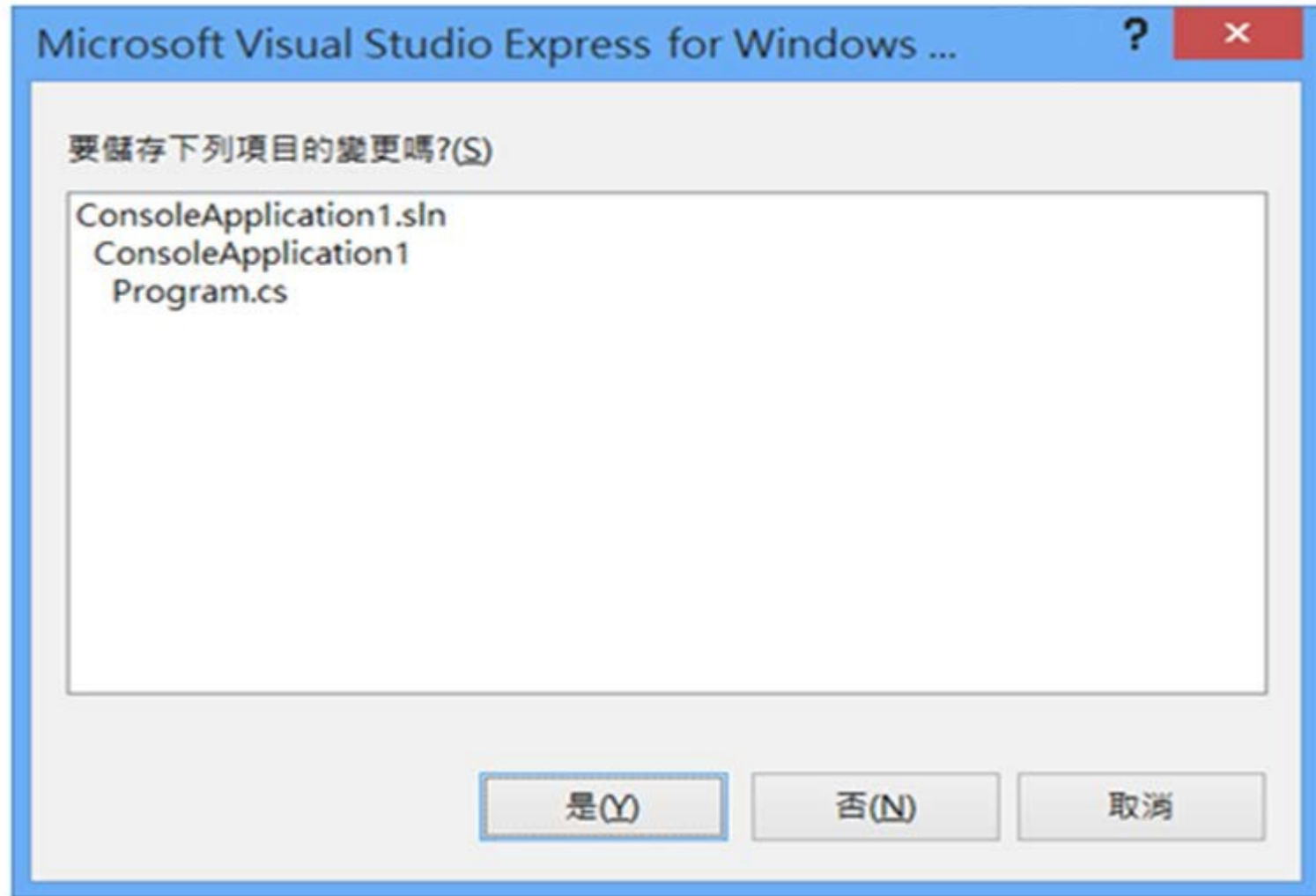


1.4 First Console Application

Use the steps of console application design above to write a simple program.
To display “Hello, World!” on the screen

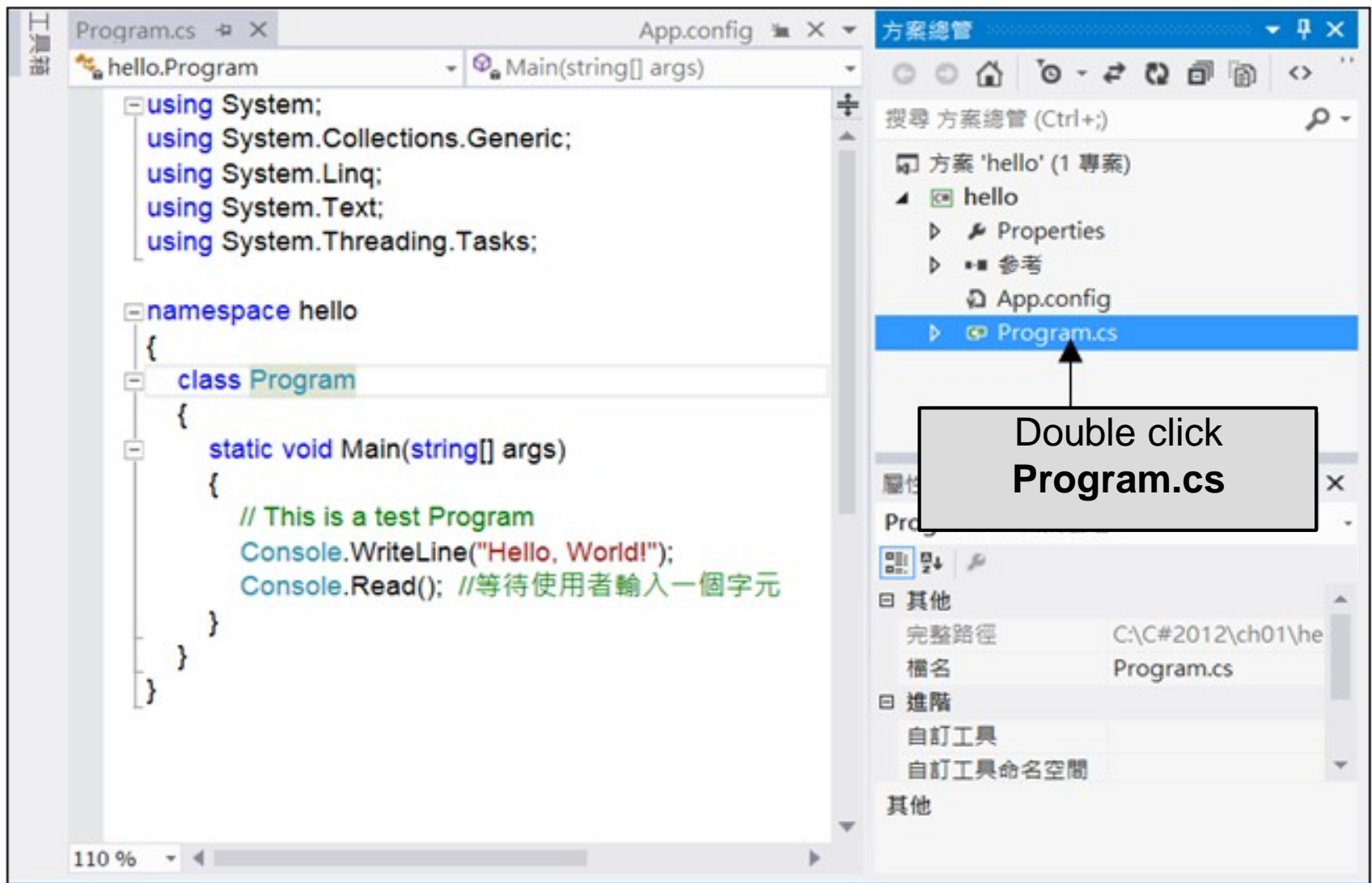


Close Project



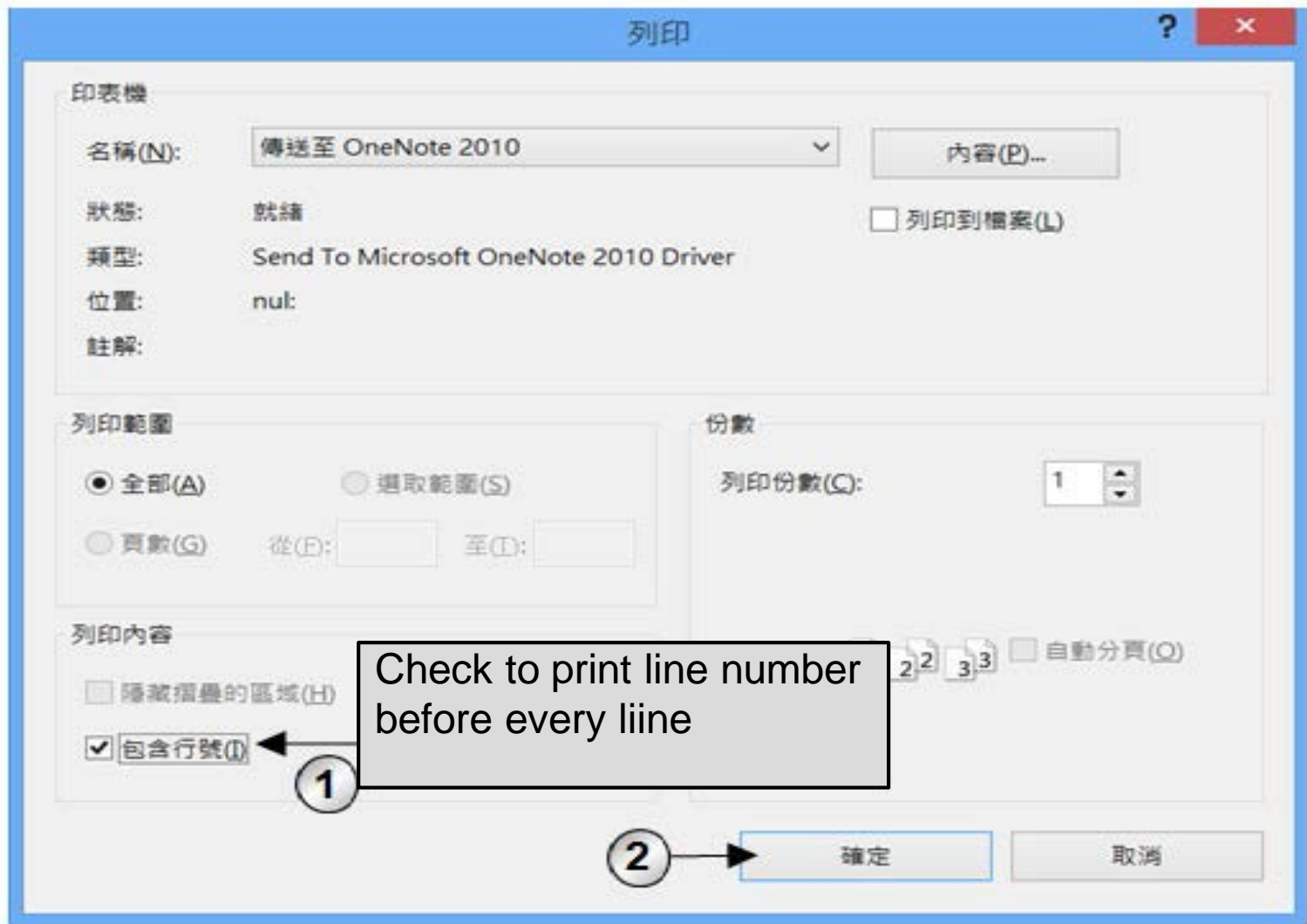
Open Project





`Console.WriteLine("hello,world!");`
`Console.Read();`

Print Source Code



Program.cs

```
-----  
01 using System;  
02 using System.Collections.Generic;  
03 using System.Linq;  
04 using System.Text;  
05  
06 namespace hello  
07 {  
08     class Program  
09     {  
10         static void Main(string[] args)  
11         {  
12             // This is a test Program  
13             Console.WriteLine("Hello, World!");  
14             Console.Read();  
15         }  
16     }  
17 }
```

1.5 Solution and Project

- **Solution and project file is the necessities of efficient developing management in VS**
- **Ex: reference, data link, directory and file**
 - ⇒ **The user interface to view and manage these container and related items**
 - ⇒ **Provide Project Manager window in IDE**

1.5 Solution and Project

Continue

- As the IDE create a new project:
 - ⇒ Project extension is *.csproj
 - ⇒ Automatically create a solution file with the same name as the project, extension is *.sln
- A solution can include one or more projects
 - ⇒ The system automatically takes the first created project as the **initial project**
- A solution include one or more projects and the files and meta-data to define projects
 - ⇒ Putting all related files which includes system files, images, data and sounds in the same directory is recommended for duplication and management



Thank you

Take a Break.....