




Chapter 1

**Visual Studio &
Console Application Programming**

Download VS2017

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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 English version](#)

Visual Studio 2015 序號：

Visual Studio 2013 (僅限教職員下載使用)

You will need this licence code for further use



Console Application

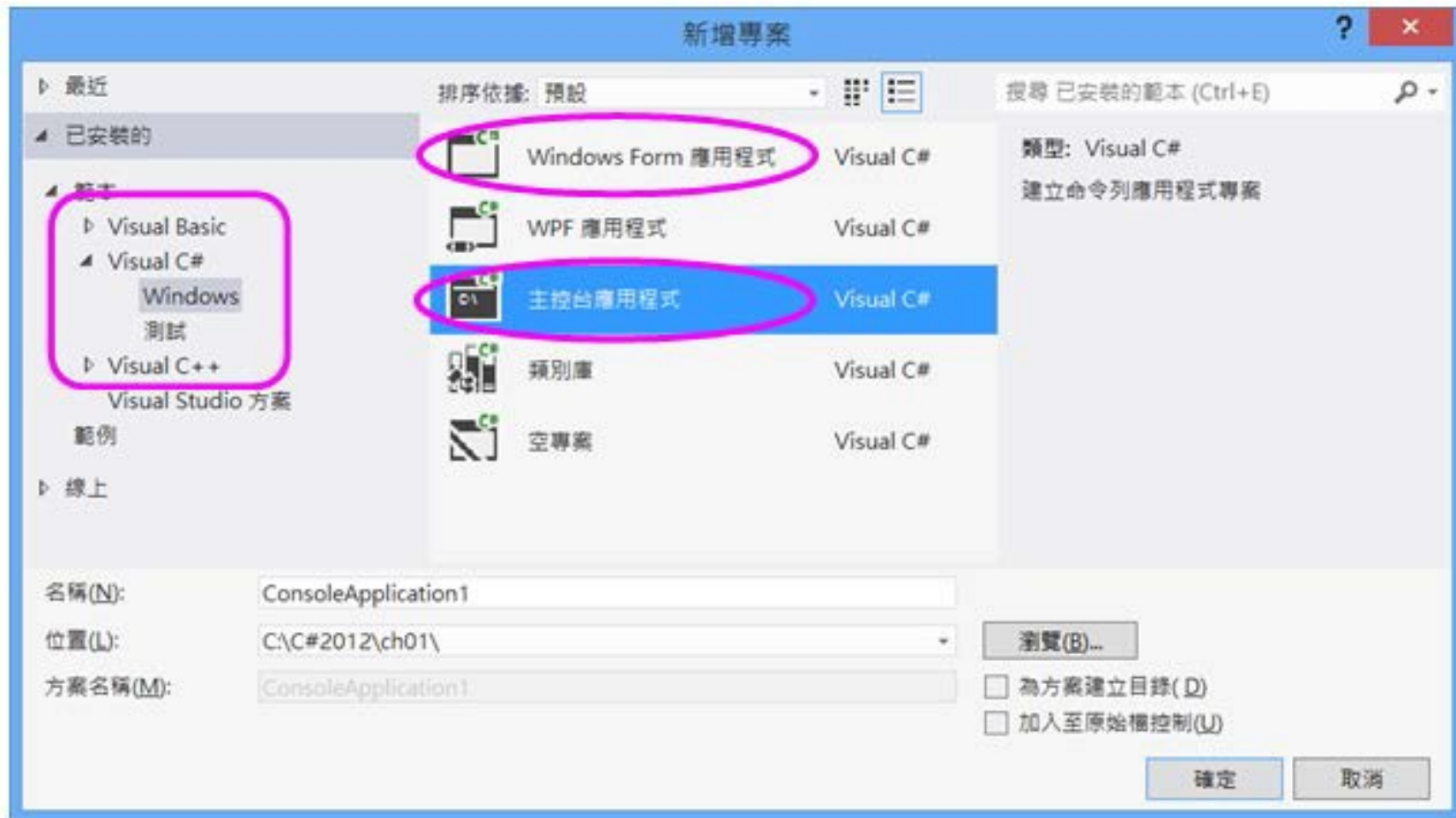
- **As executed**

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

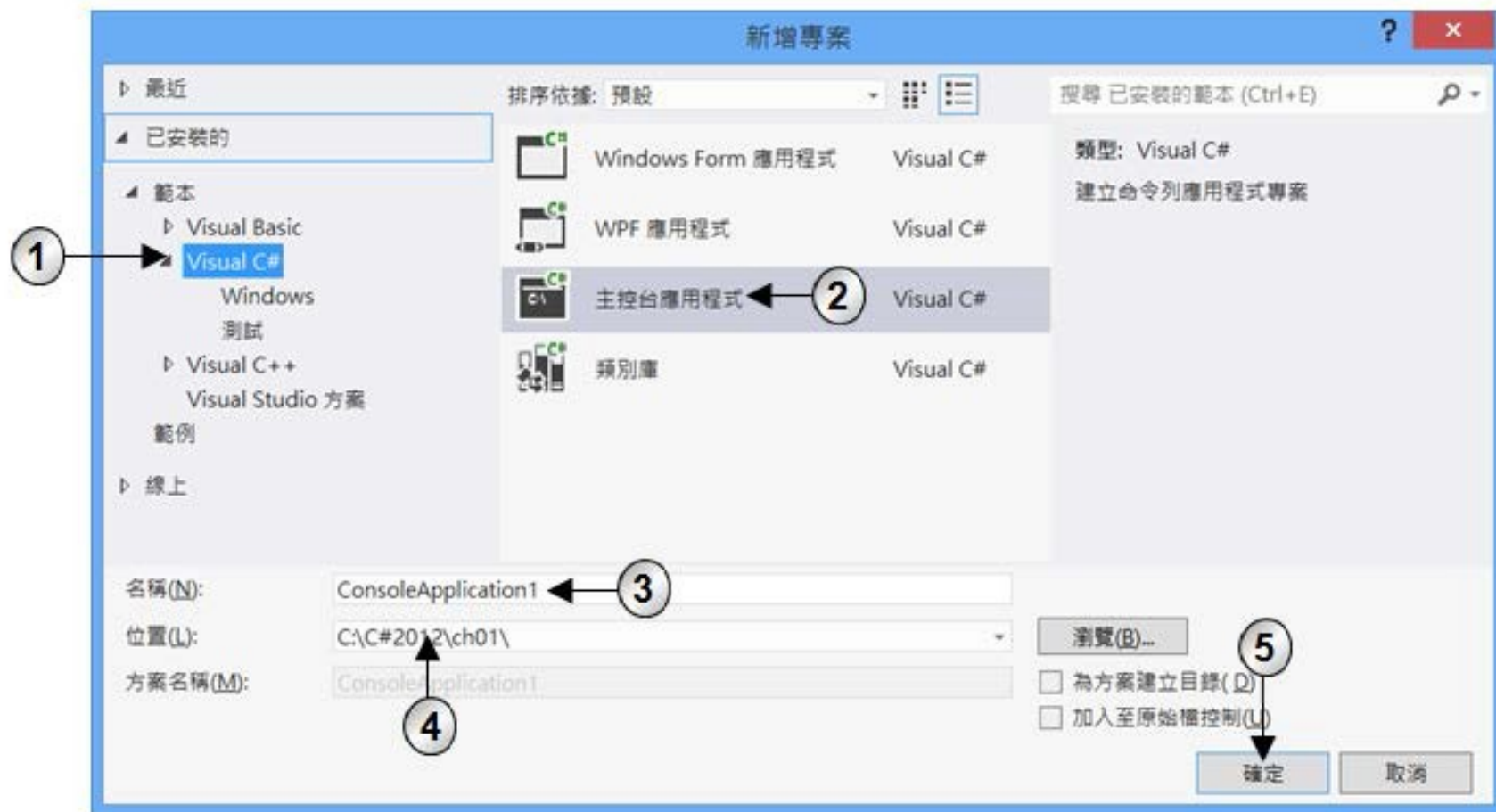
Applications

1.3 Introduction to Console Application

1.3.1 New project



Create Console Application Project

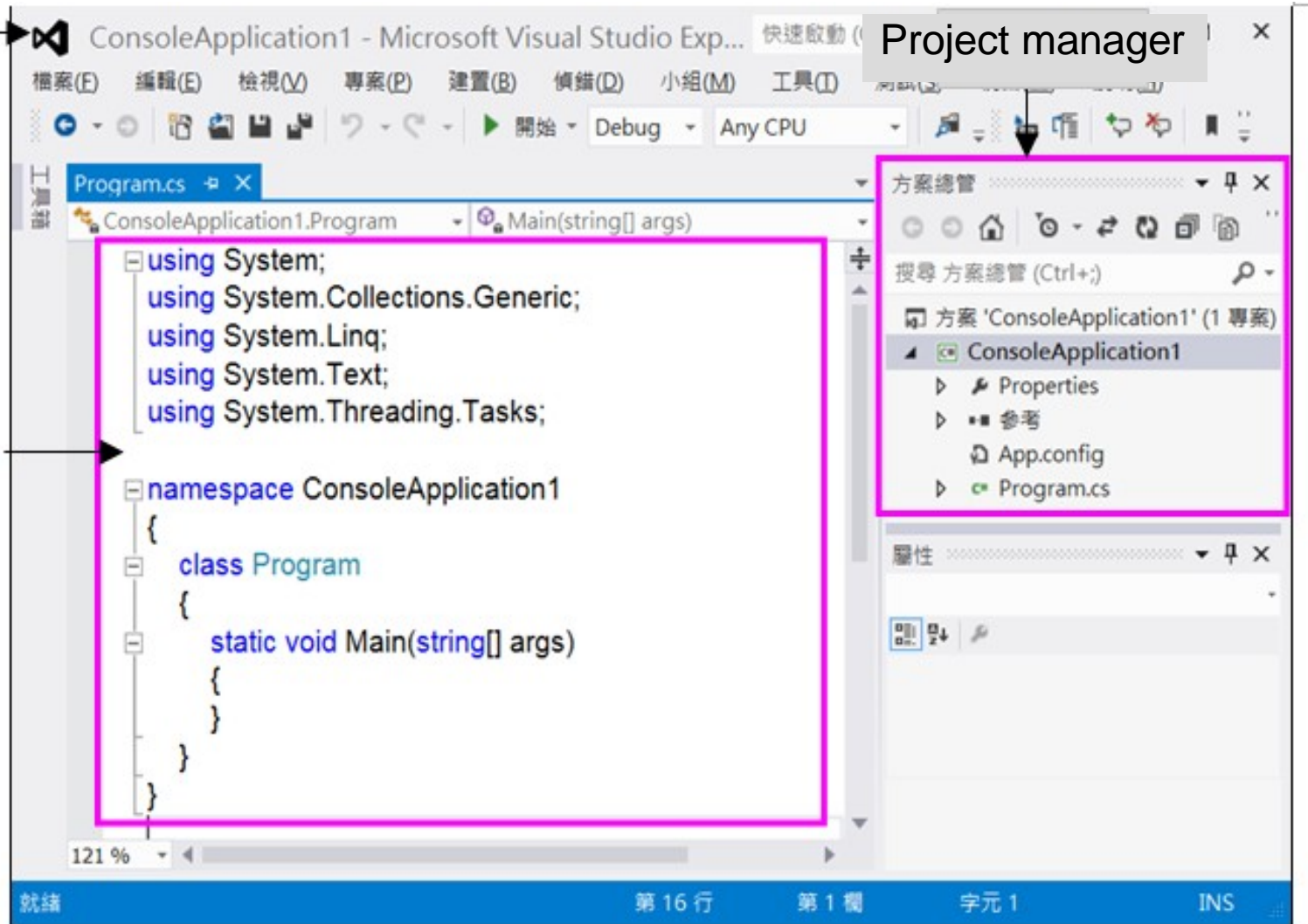


Default project path: C:\Users\<Yourname>\source\repos

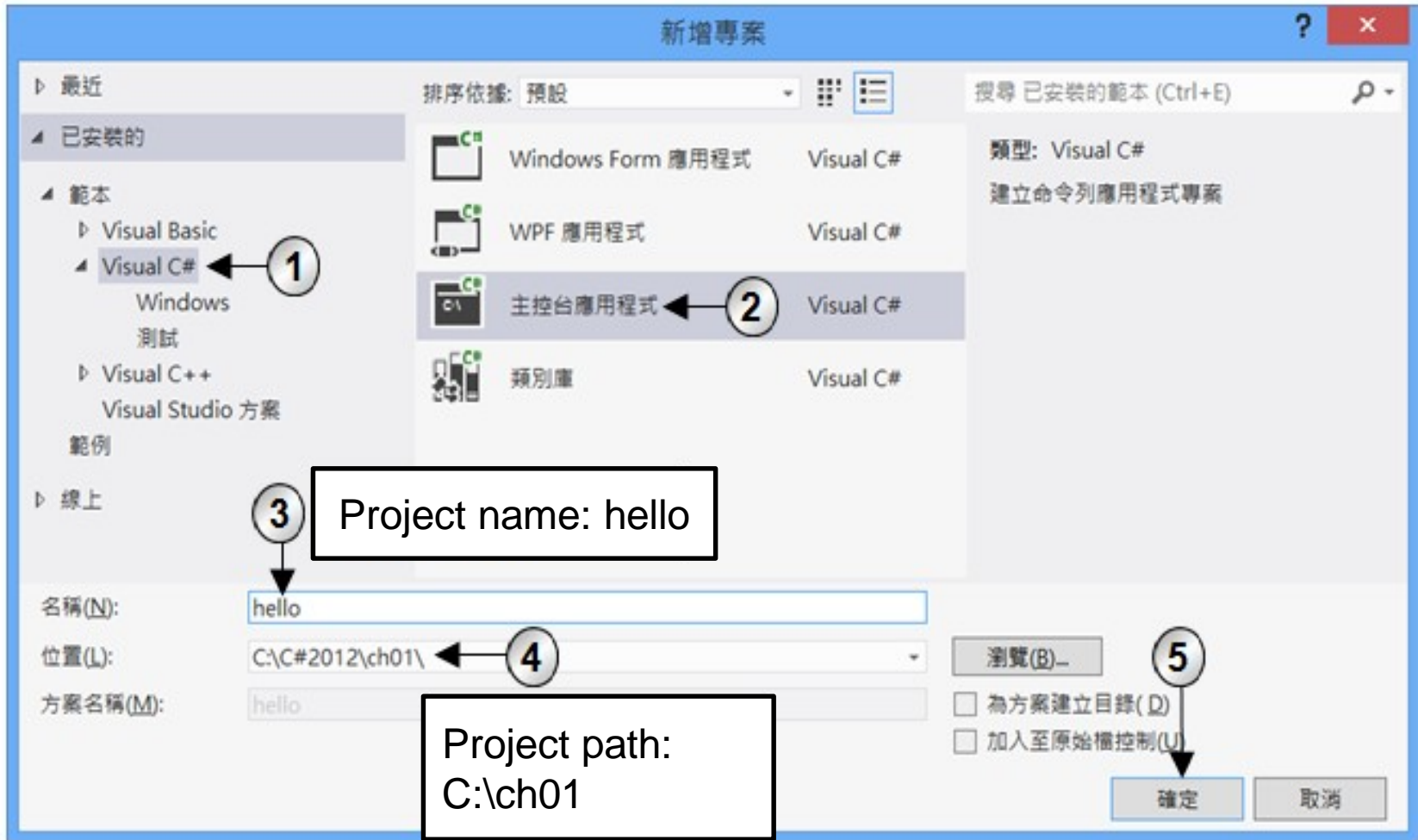
Console development IDE

Project name

Code editor



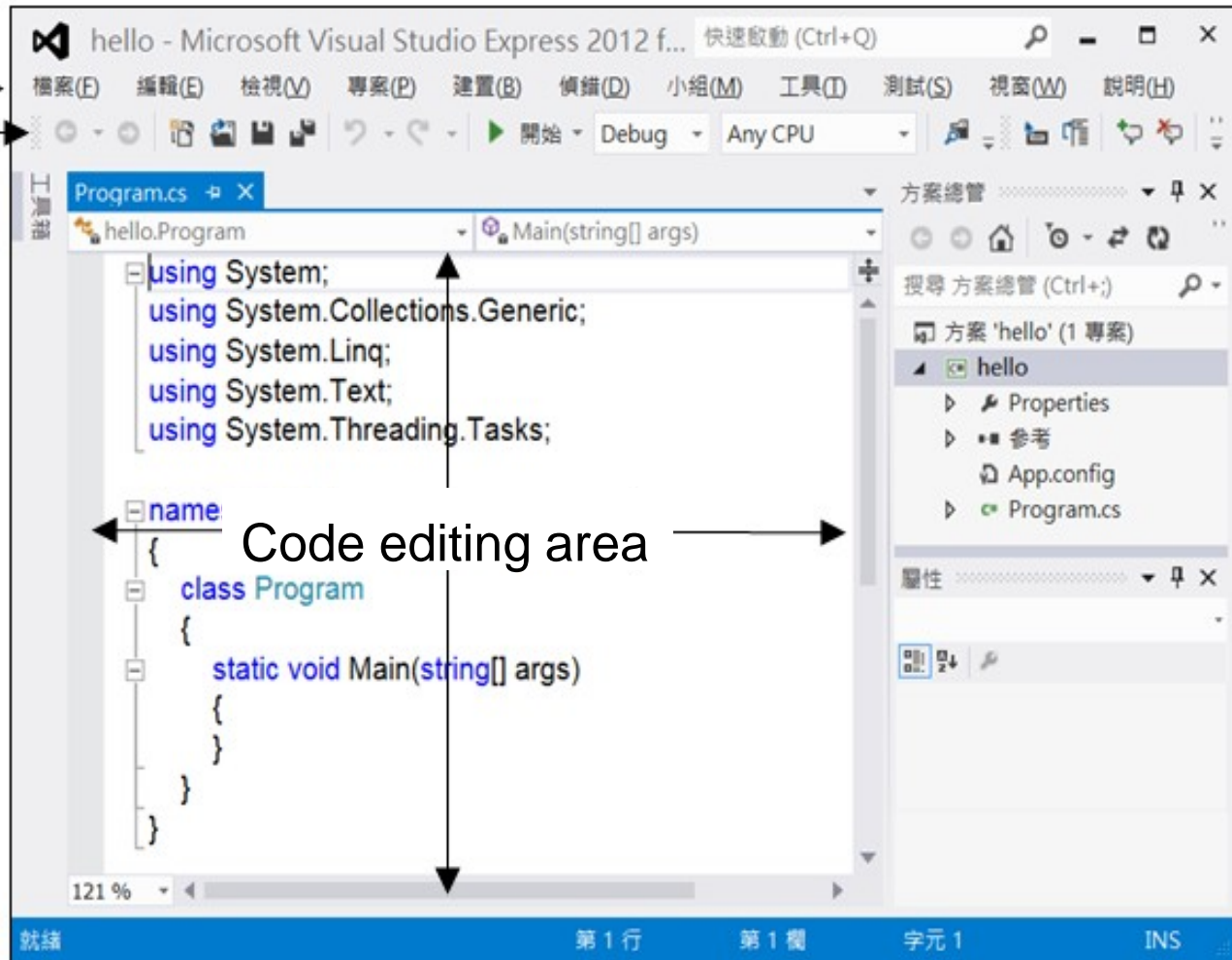
New project



Code editor window

Menu bar

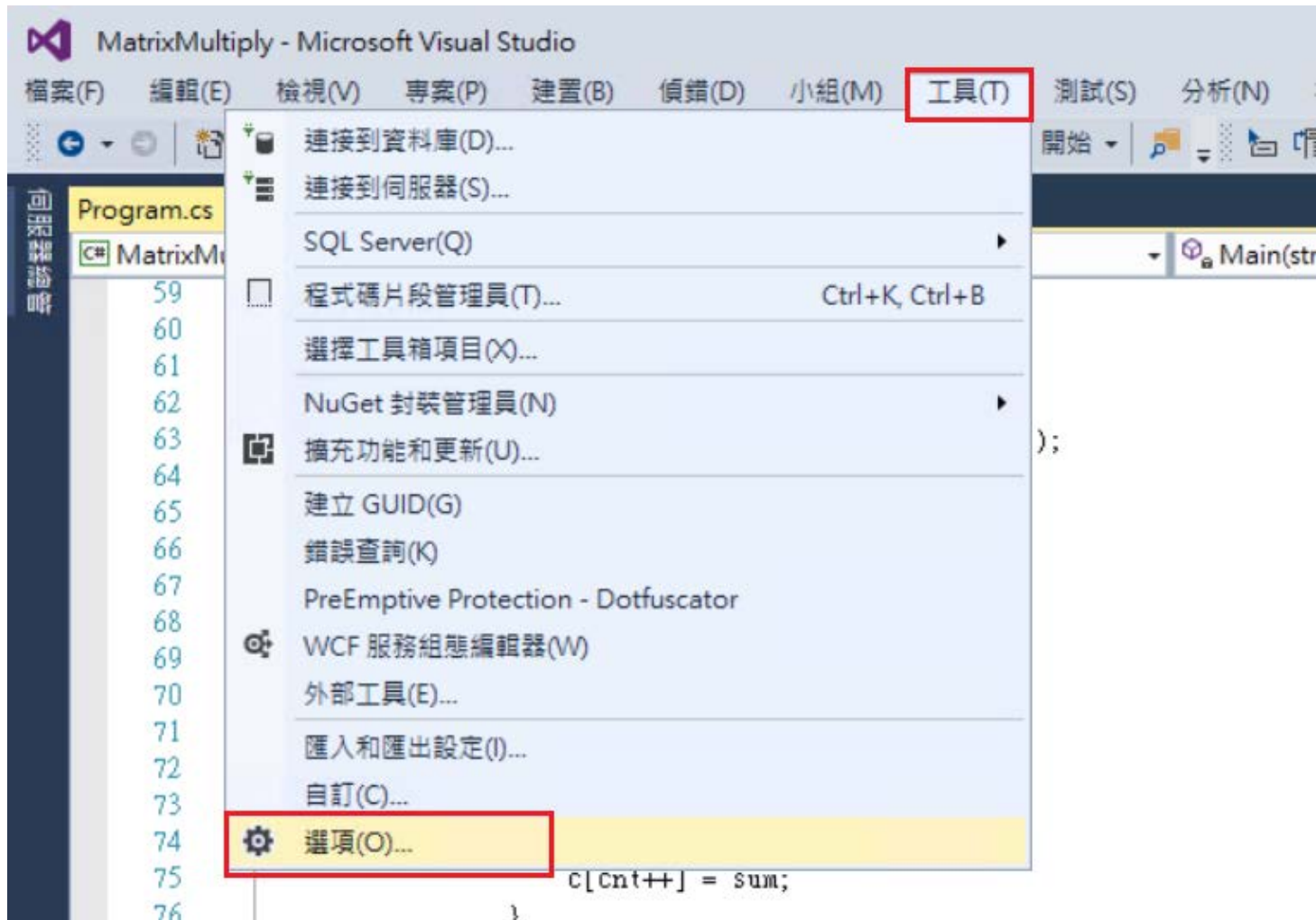
Standard toolbar



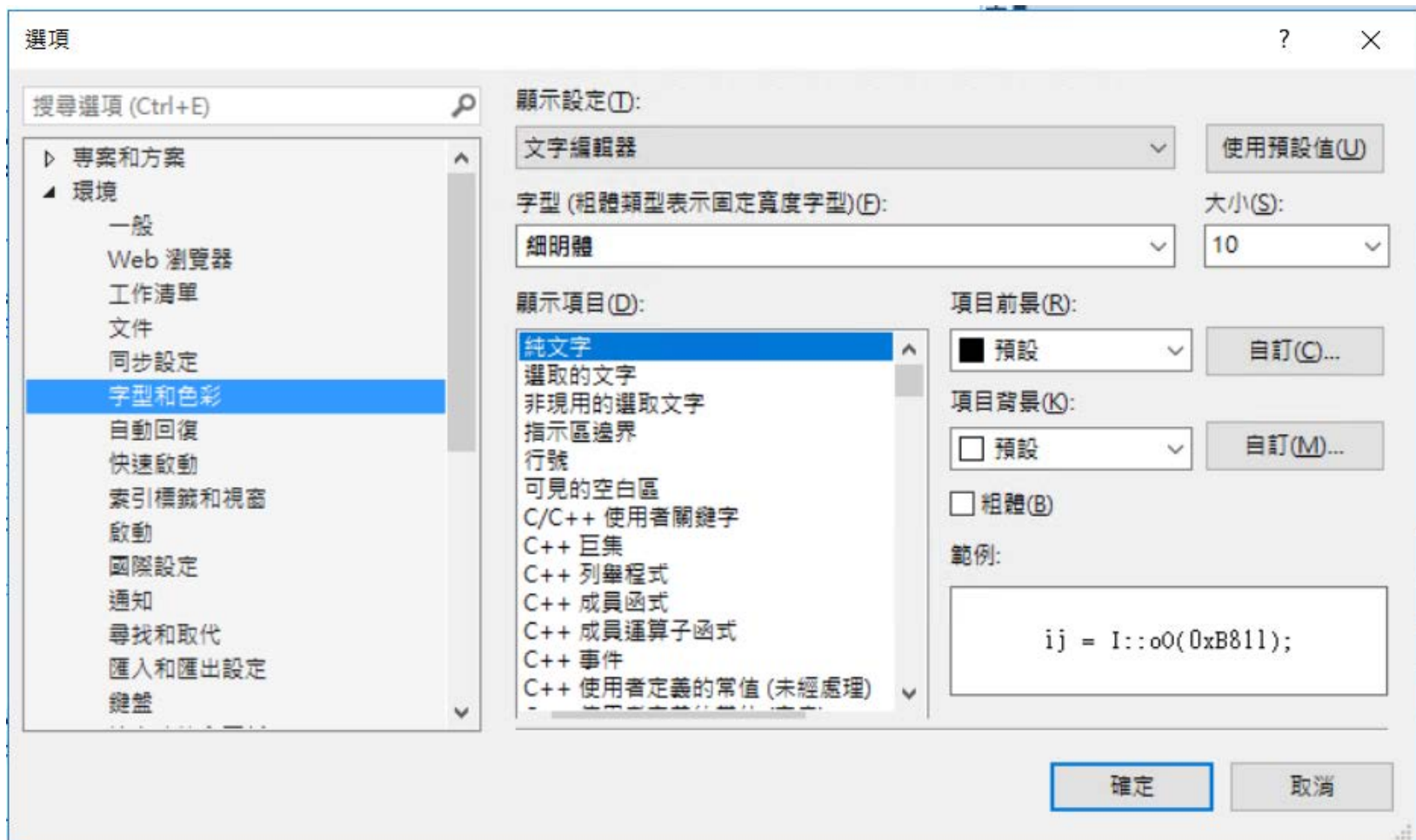
Project manager

Property window

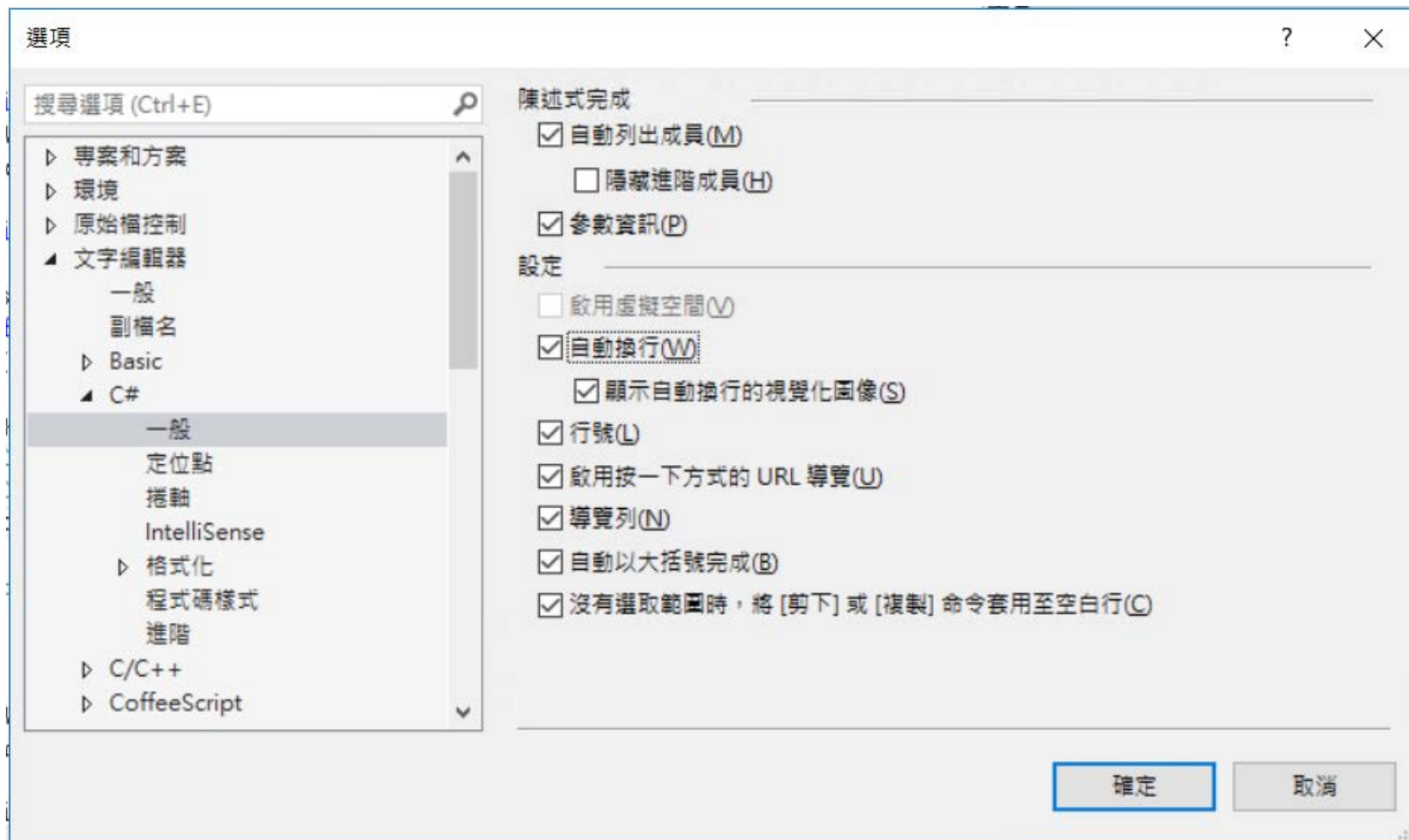
Visual Studio A preliminary adjustment to Visual Studio development tools



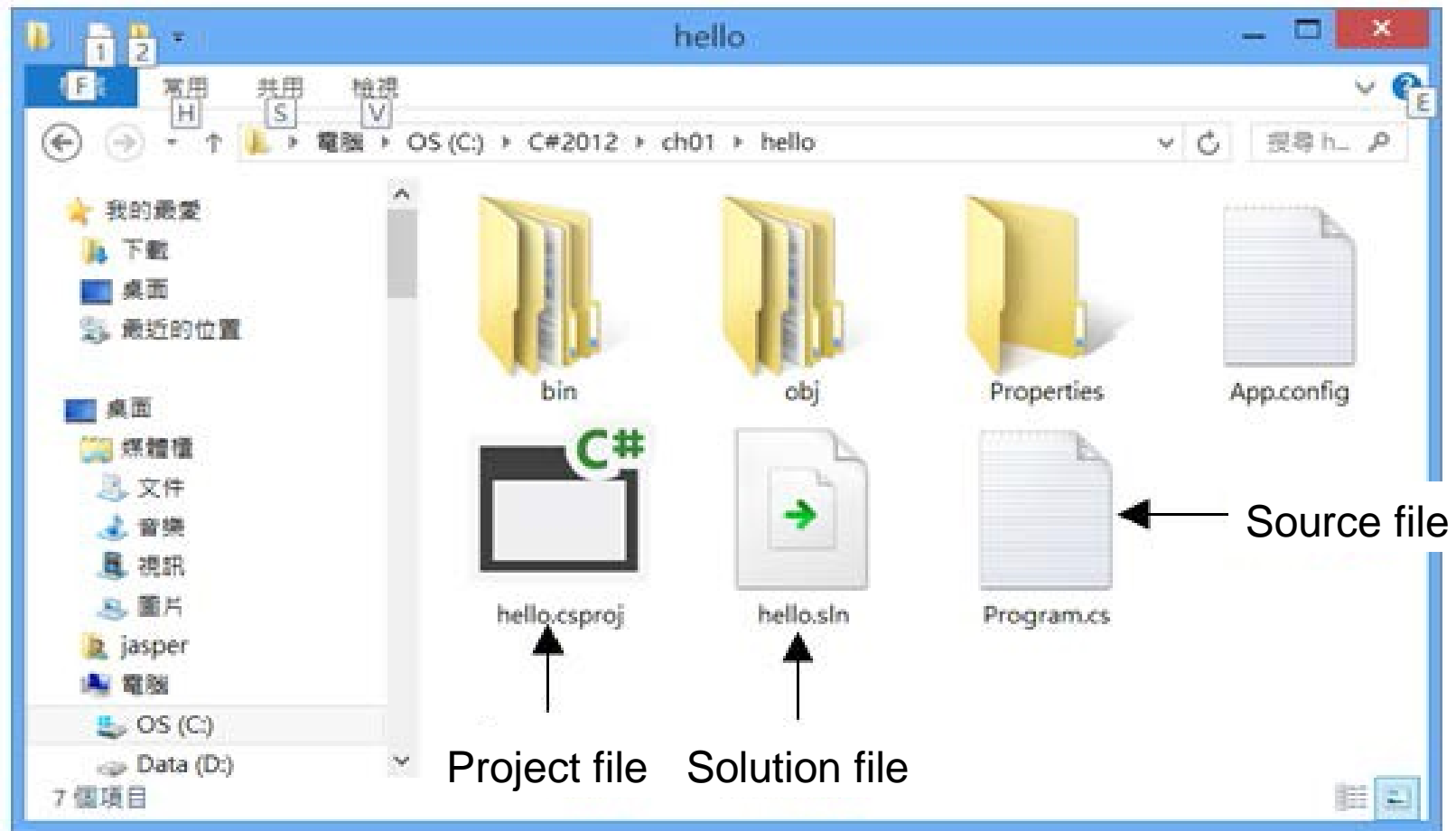
Font and color



Line number of the text editor



Important files



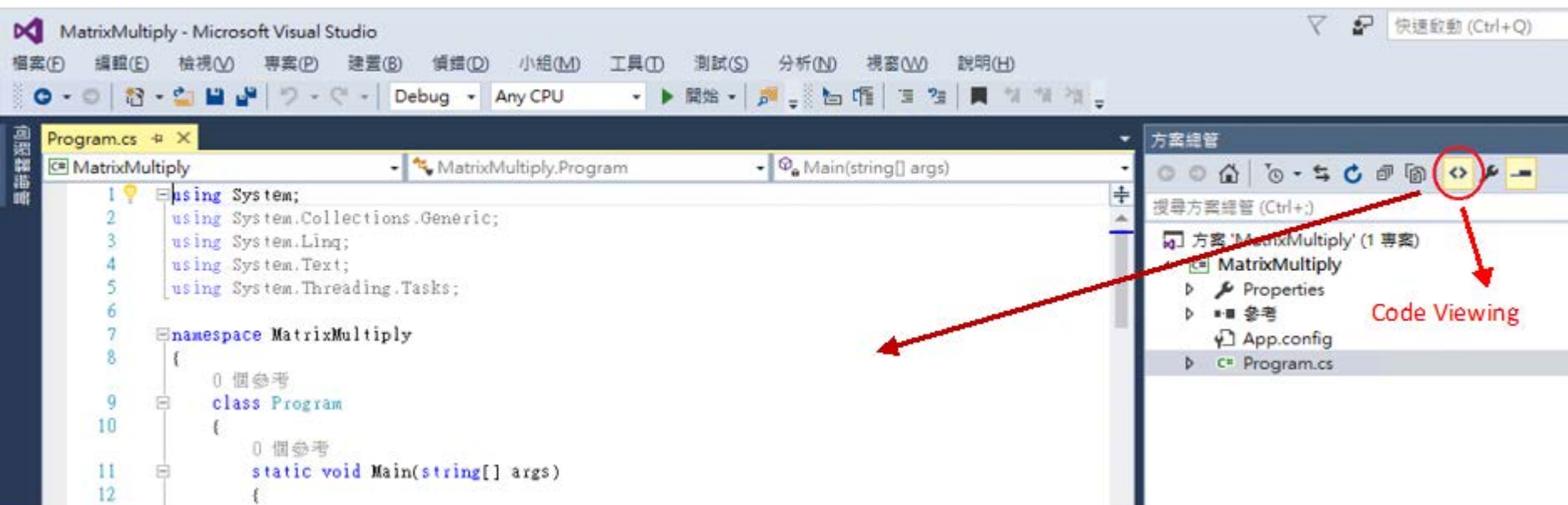
Writing Codes

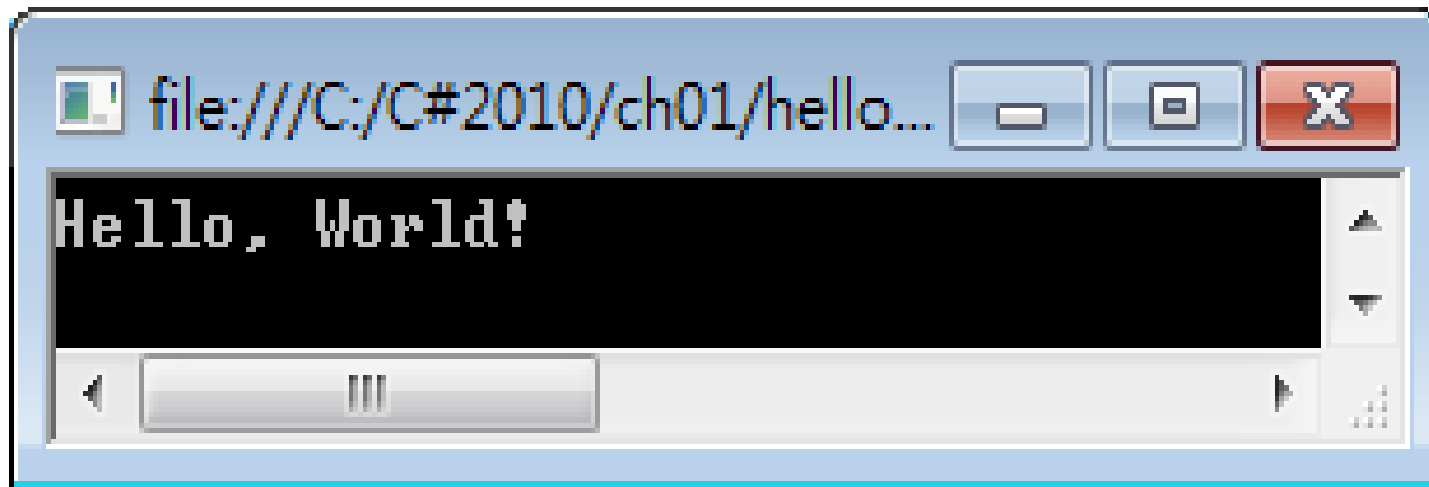
The image shows a screenshot of a C# code editor with a file named 'Program.cs'. The code is for a 'hello.Program' project and contains the following structure:

- using statements:** A block containing `using System;`, `using System.Collections.Generic;`, `using System.Linq;`, `using System.Text;`, and `using System.Threading.Tasks;`. An annotation points to this block with the text: "Include relative namespace".
- namespace declaration:** `namespace hello`. An annotation points to this line with the text: "hello namespace, Also as the project name".
- class declaration:** `class Program`.
- Main function:** A `static void Main(string[] args)` method containing:
 - A comment: `// This is a test Program`
 - A `Console.WriteLine("Hello, World!");` statement.
 - A `Console.Read();` statement followed by a comment: `//等待使用者輸入一個字元`.An annotation points to the code inside the `Main` function with the text: "Insert these statement in **Main** function".

The editor interface includes a tab for 'Program.cs*', a solution explorer on the left showing 'hello.Program', and a status bar at the bottom indicating '121 %' zoom.

Code viewing



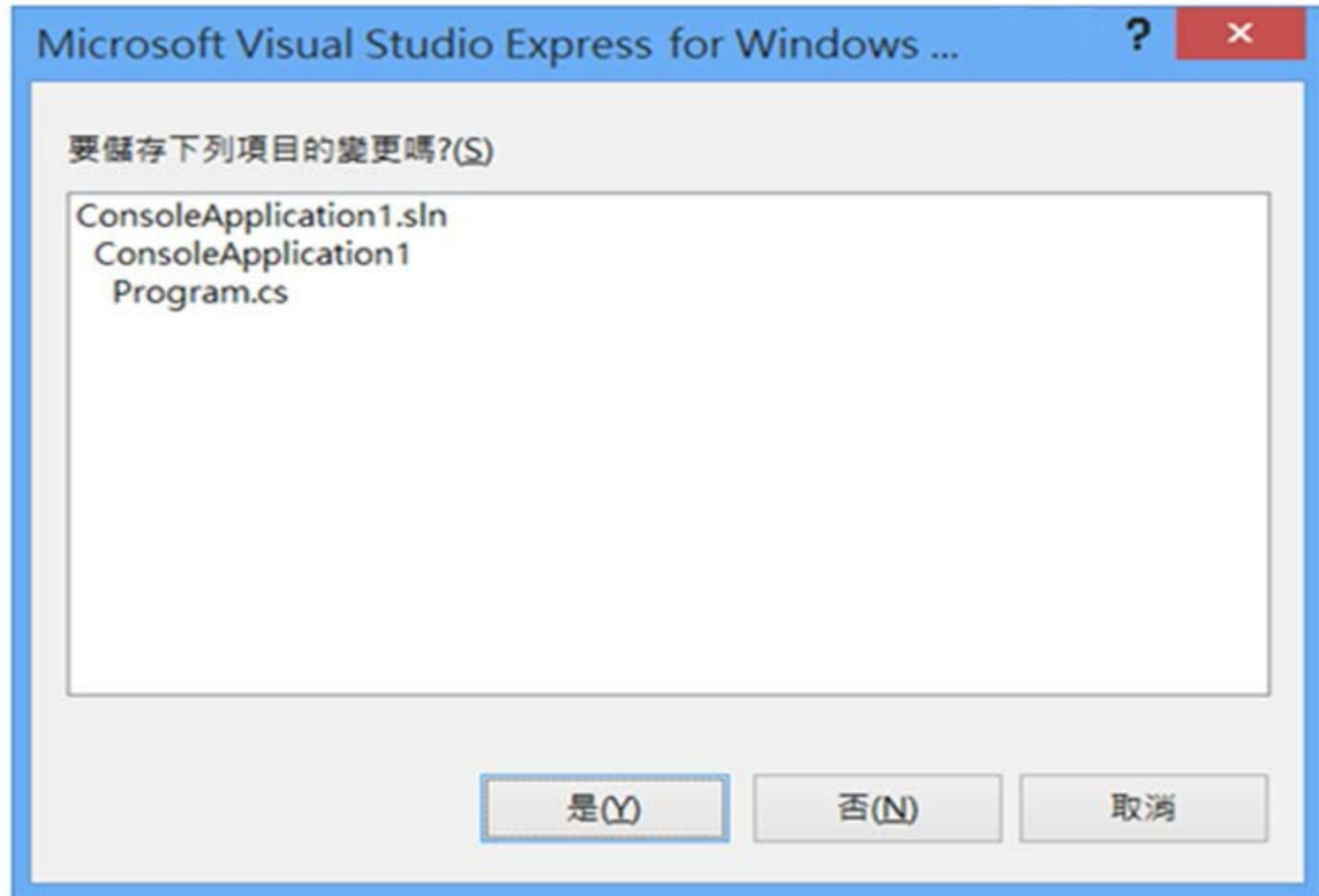


1.4 First Console Application

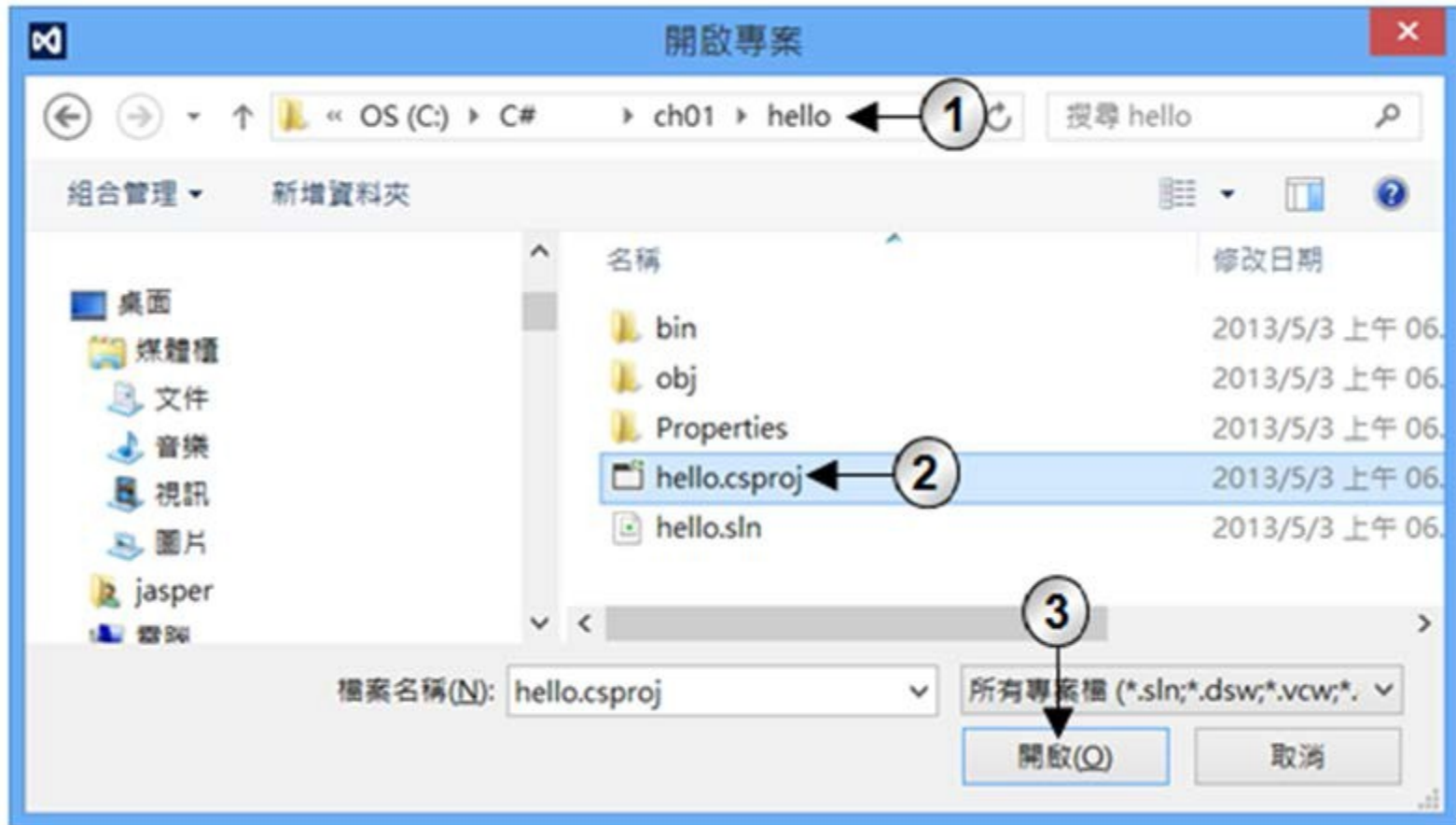
Use the steps of console application design above to write a simple program.
To display “Hello, World!” on the screen

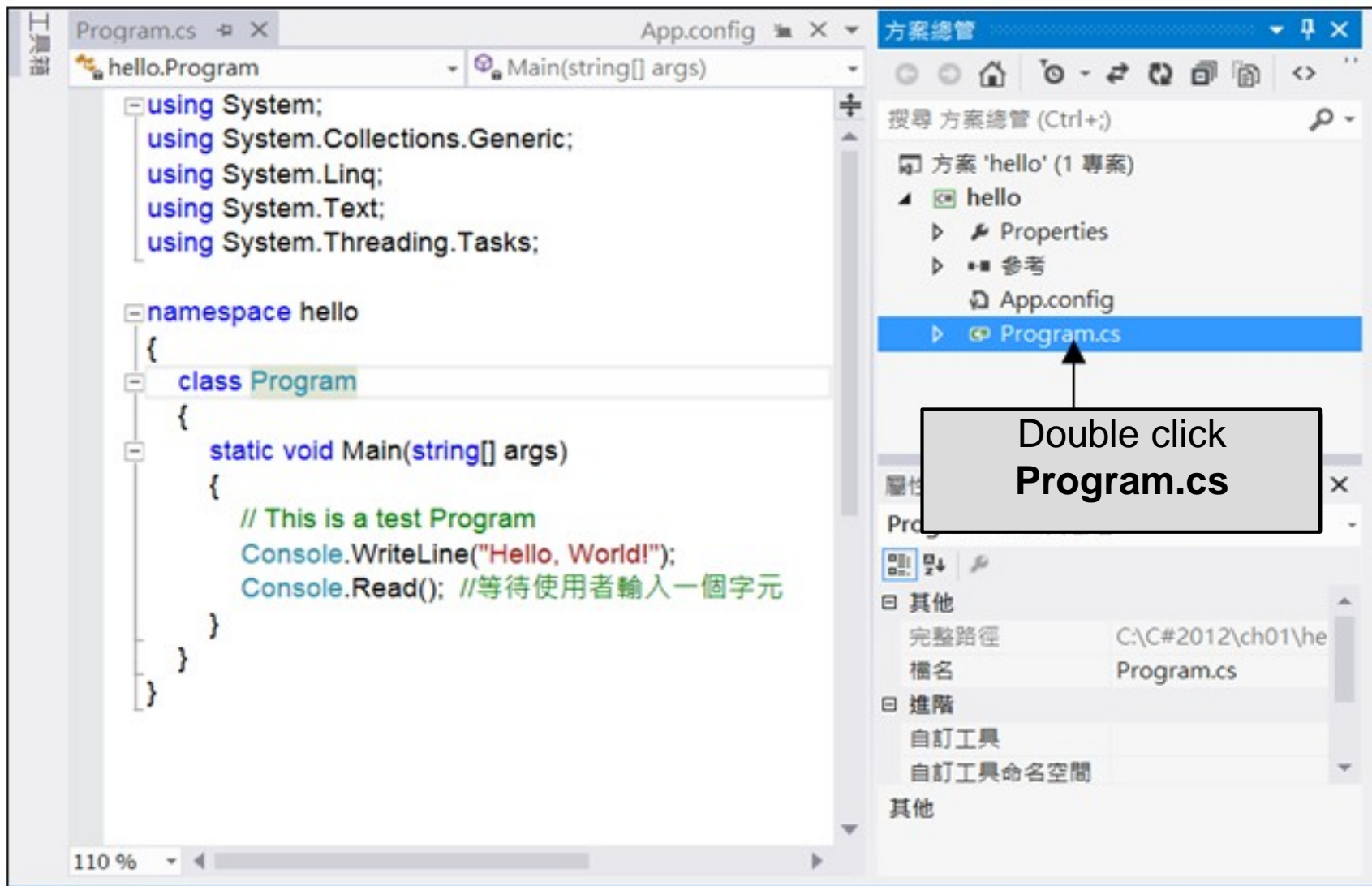


Close Project



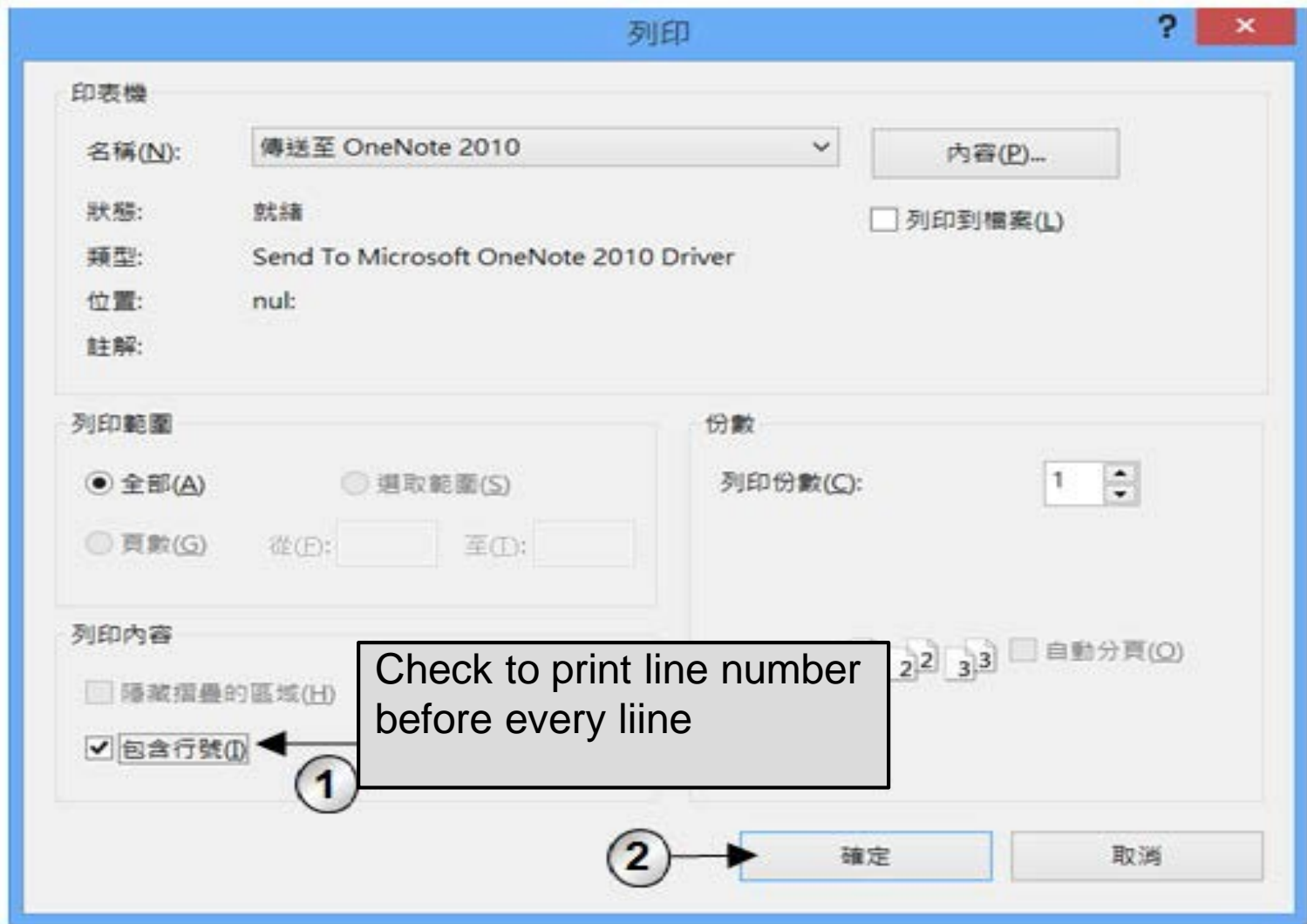
Open Project





`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

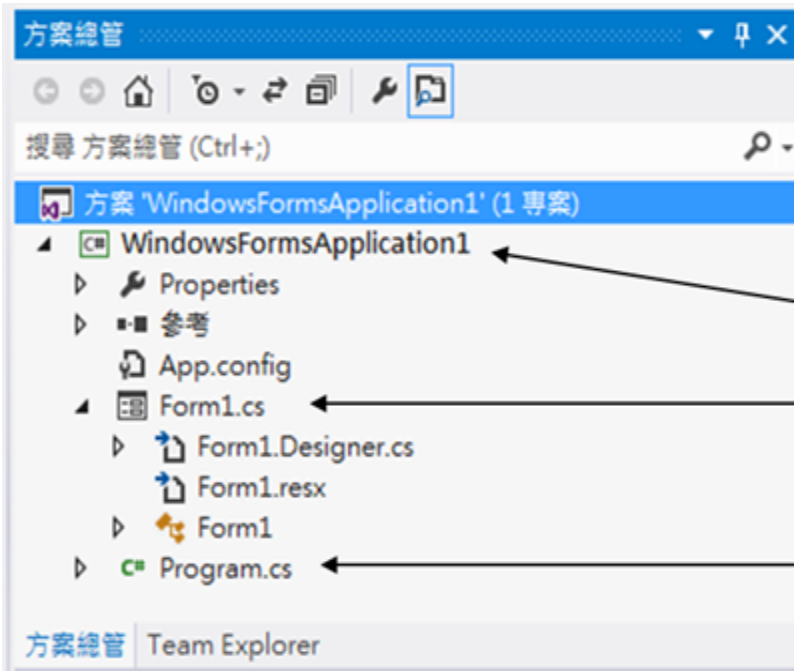
- **Solution and project file is the necessities of efficient developing management in VS**
- **Ex: reference, data link, directory and file**
 - ⇒ **The user interface to view and manage these container and related items**
 - ⇒ **Provide Project Manager window in IDE**

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**
 - ⇒ Putting all related files which includes system files, images, data and sounds in the same directory is recommended for duplication and management

Solution manager



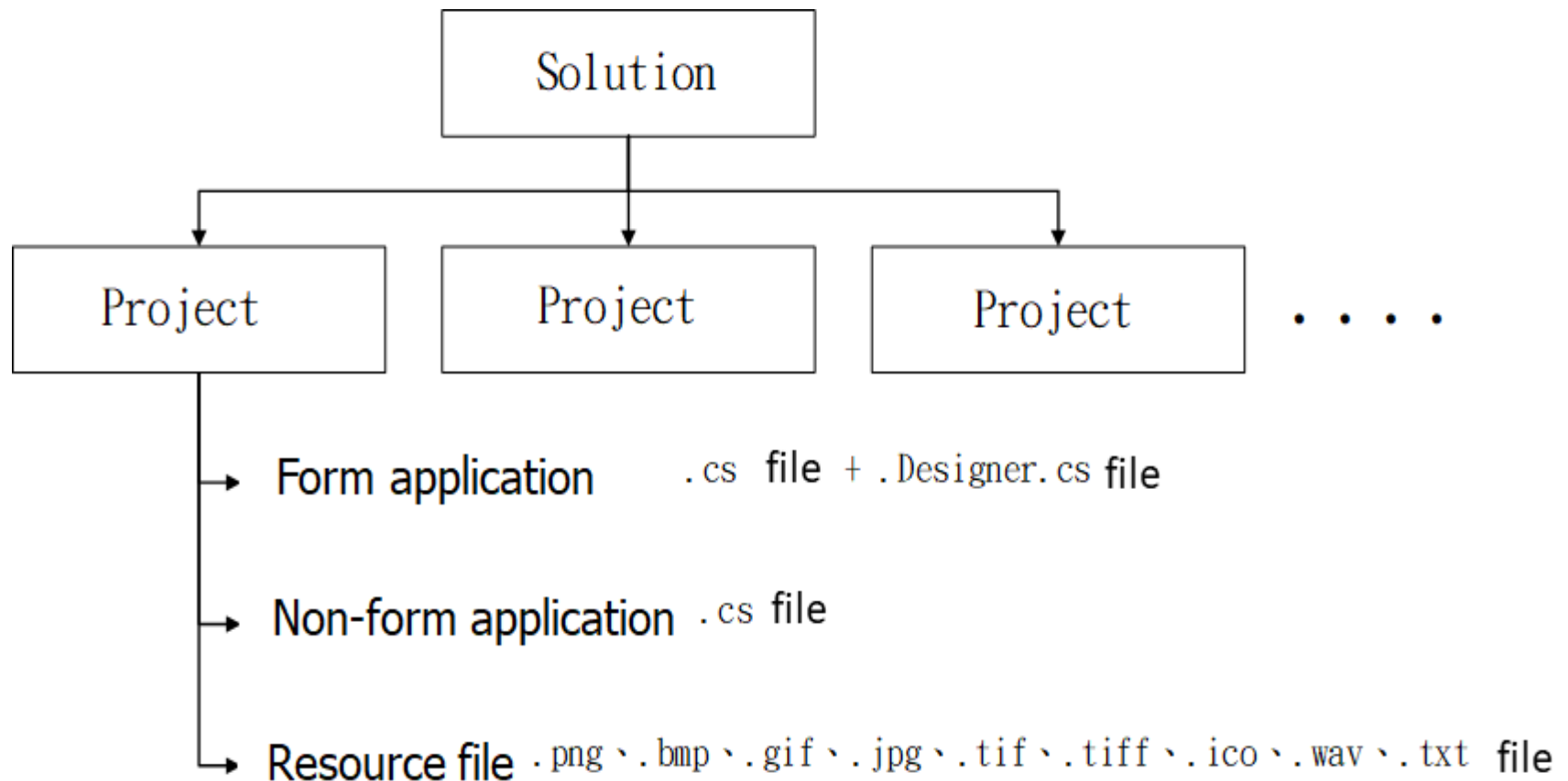
Solution

Project

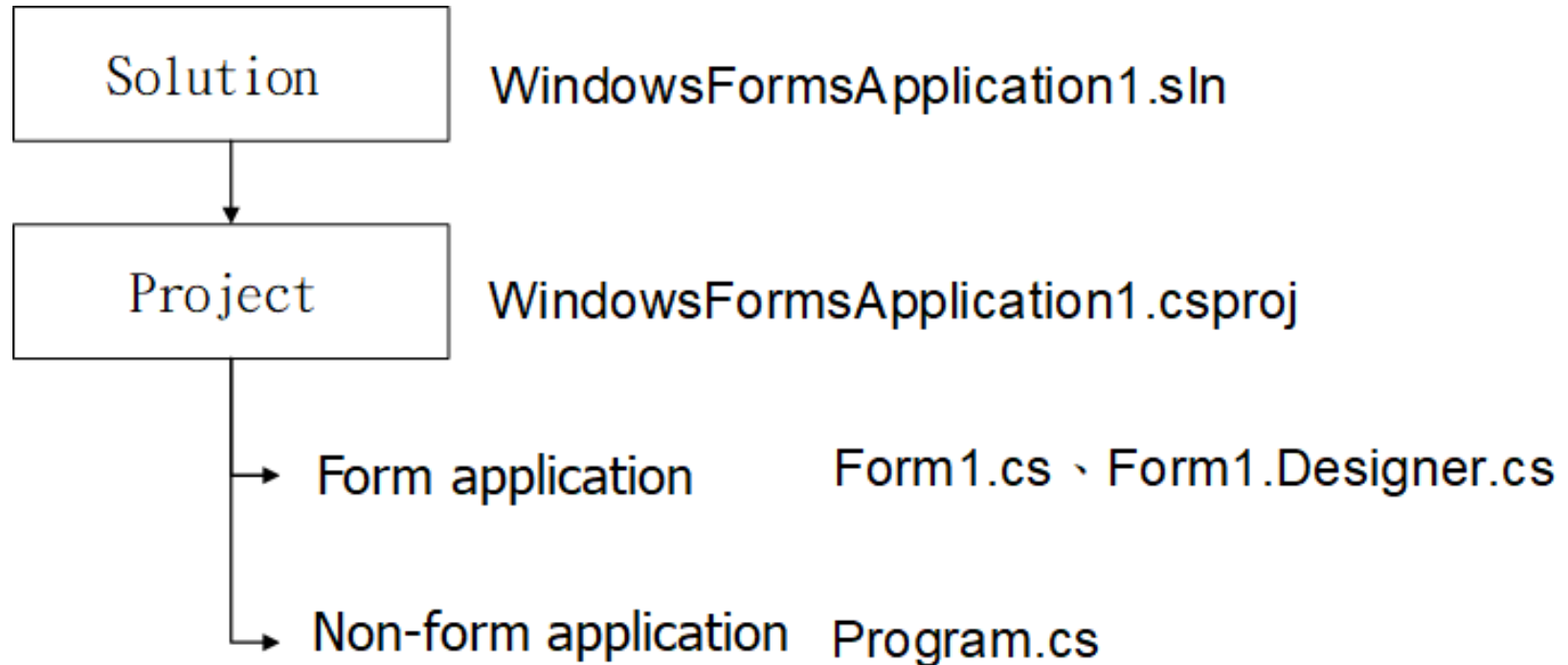
Form application

Non-form application

One Solution



One Solution





Thank you