

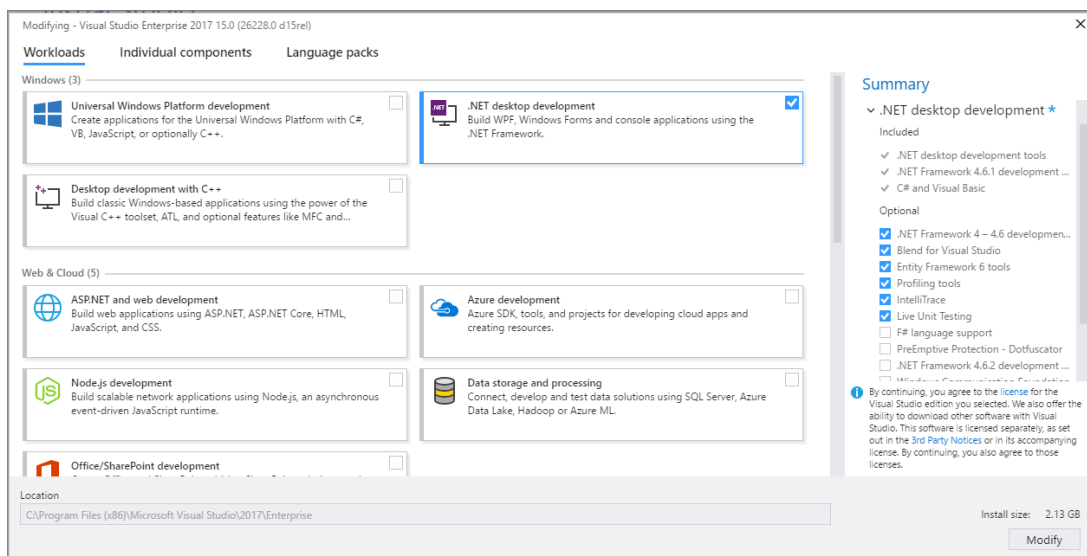
Integrated Development Environments

Using Visual Studio



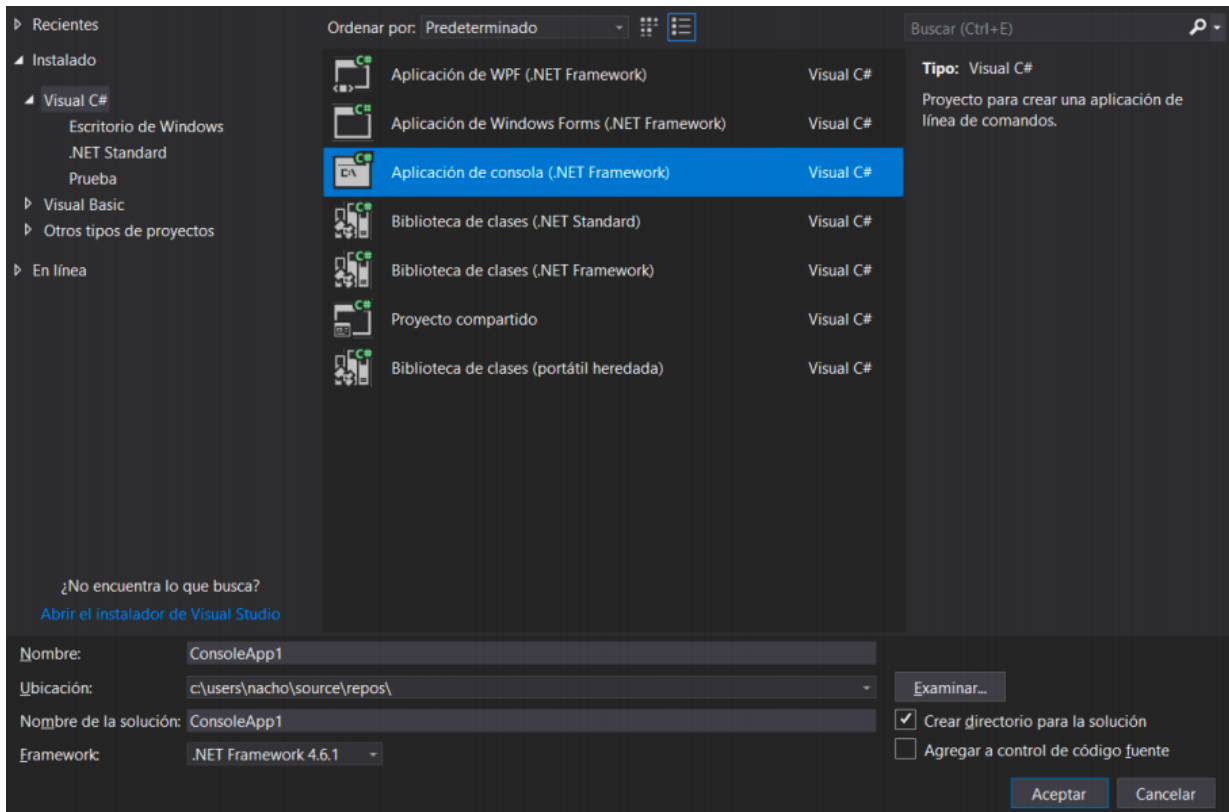
Visual Studio was an IDE created in 1997. It was initially created to develop C++ and Visual Basic applications under Windows, but it has evolved and now it includes some other languages, such as C#, ASP.NET... In general, you can develop any kind of application supported by the .NET platform, but there are also some other languages that are also supported, such as Java or Python, among others

There are different distributions for Visual Studio: Community, Professional or Enterprise. The first one is free, and you can download it [here](#). It is available for Windows and MacOSX systems. Once you run the installer, you need to choose your workload. For instance, if you are planning to develop desktop or console applications with C# and Windows Forms, you can just choose *.NET desktop development*.

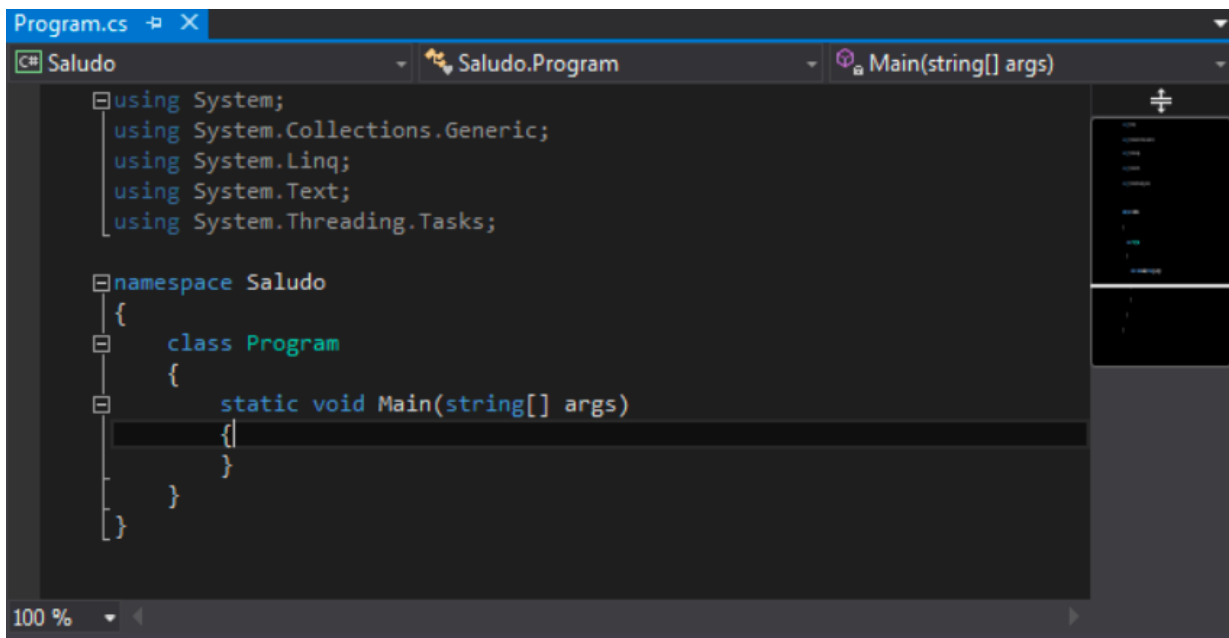


1. Creating projects

If we want to create a new project, we go to *File > New project* menu. Then, we usually choose a C# console application:



In the bottom form, we must specify the project name and location (we can just leave the default location). Then, a new project will be shown, with a default, initial source file called `Program.cs`, with some default code already written in it:



In order to run the program, we just click on the *Start* button at the toolbar, or press `F5`, or `Ctrl + F5` if you want the program to stop after finishing, before closing the terminal.

2. Keybindings

In the following tables you can see some of the most common Visual Studio shortcuts or keybindings (under Windows).

Shortcut	Action
Ctrl + Shift + N	Create a new project.
Ctrl + N	Create a new file.
Ctrl + S	Save current file.
Ctrl + Shift + S	Save every open file.
Ctrl + C / V / X	Copy, paste and cut text.
Ctrl + Z	Undo last action.
Ctrl + Y	Redo last undone action.
Ctrl + F	Show search dialog.
Ctrl + H	Show replace dialog.

Shortcut	Action
Ctrl + L	Remove line.
Ctrl + R	Rename selected element.
F5 / Ctrl + F5	Run application with/without debugging.
Ctrl + Shift + B	Rebuild the project.
F11 / F10	Step into function / next step (in <i>debug</i> mode).
Shift + F11	Exit function (in <i>debug</i> mode).

Regarding MacOSX, you must replace `Ctrl` key with `Cmd` key.

3. Other features

There are other settings that can be set up from *Tools > Options* menu. For instance, we can show/hide the line numbers from the *Text editor* subsection, for each specific language (C#, Basic...), or the indentation vertical lines to easily see the boundaries of an `if` or `for` statement...