


# CSharp C# programming, under Visual Studio .NET,

## by Eric Piehl.

Based on [GRCC](#) CO129 C# starting 2008-01-04. Last updated 2021-11-19.  
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This file describes information I have found useful on this subject. For information on  green or `</>` other programming subjects, please see a list of [this document's sister docs](#).

Head First books

## Ideas

**Objects** have:

- |  |  |
|--|--|
| • <b>Properties</b> (UC) — settings.   | Yellow hand and paper.                           |
| • <b>Attribute</b> (lc) — settings.  | Yellow hand and paper.                           |
| • <b>Methods</b> — member functions or routines<br>— action you tell the object to do. | Purple fuchsia blocks.<br>Purple fuchsia blocks. |
| • <b>Events</b> — something that happens to an object.                                 | Lightning bolts.                                 |
| • <b>Control</b>   | Blue box.  |

Reference = pointer.

To inherit, type " : parent" in the class definition.

```
public override string ToString() { return String.Format("{0} (Student)", base.ToString()); }
```

To make no one able to create an object of your class, without inheriting from it in another class, say abstract class Person.

*TODO: see if should copy here any material from same section of [Java.doc](#).*

## Install Visual Studio

*TODO: expand on this.*

## Run Visual Studio

Click a .sln file, or "C:\Program Files\Microsoft Visual Studio 8\Common7\IDE\devenv.exe".

Docking weird.

View Toolbars Standard, Text Editor.

Layout (use pin or unpin):

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	source tabs	
Toolbox		Solution Explorer
		Class View
		Properties
Error List	Output	Command Window
		Code Definition Window
		Find Results

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## [Piehl-2](#)

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To get tabs for multiple source files, Tools > Options > General > Tabbed Documents.

To get Dreamweaver-like WYSIWYG form over code, click Window > New Horizontal Tab Group.

Create Forms on Toolbox tab.

Namespace (System) is a collection of classes.

Class (Console) is

Method (Read) is a

System.Console.Read(

System.Math.PI

“using” for Visual Basic.

“import” for C#.

objects:

- Properties--settings of the object.

- Methods--actions you tell the object to do.

- Events--something that happens to an object.

Project > Properties > can set Startup Object, if not set, will use Main.

## **Create a new C# Solution (with one or more Projects)**

File > New > Project > Visual C# > Console Application or Windows Application.

App name CO129PiehlAssignment4 in flash-drive/jumpdrive/**thumbdrive**/USB-drive/USB-key/USB-stick G:\GRCCCO129, or %USERPROFILE%\[My]Documents\GRCCCO129.

If you are going to put multiple solutions in the same Project folder, check the “Create directory for solution” checkbox.

Else you only want this one Solution in this Project folder, uncheck the “Create directory for solution” checkbox.

Do not include the SolutionName in the path you give it.

OK.

## **To create a Class**

Click Project > Add Class...

- OR -

In the Solution Explorer, right-click your soln > Add > Class....

Name *UpperCammel.cs*.

“Add” button.

## [Piehl-3](#)

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To rename file as well as Class, right-click Rename the file separate in the Solution Explorer in upper right.

```
using System;  
using System.Collections.Generic;  
using System.Text;
```

## To create a Form

Click Project > Add Windows Form...

-OR-

In the Solution Explorer, right-click your soln > Add > Windows Form....

Name *UpperCammel.cs*.

"Add" button.

To rename file as well as Form, right-click Rename the file separately the Solution Explorer in upper right.

## To hack your source file

"." is the member operator.

To see methods, type "*object*."

*TODO: determine if object = object* makes the other pointer point to the **same** object.

Right-click Resolve certain errors, like lack of usings.

## Ctrl+space IntelliSense autocomplete.

<b>Tab</b>	autocomplete	
.	autocomplete	
(	autocomplete	
	<b>Objects</b> have:	
	<b>Properties</b> (UC) — settings.	Yellow hand and paper.
	<b>Attribute</b> (lc) — settings.	Yellow hand and paper.
	<b>Methods</b> — member functions or routines	Purple fuchsia blocks.
	— action you tell the object to do.	Purple fuchsia blocks.
	<b>Events</b> — something that happens to an object.	Lightning bolts.
	<b>Control</b>	Blue box.
<b>Ctrl-K, C</b>	block- <b>comment</b> , if on toolbar Text Editor, and Customize > Show > Show > OK.	
<b>Ctrl-K, U</b>	block- <b>uncomment</b> , if on toolbar Text Editor.	
<b>Ctrl-K, D</b>	<b>beautify doc</b> , or Edit > Advanced > Format Document.	

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SharpDevelop free IDE. [www.icsharpcode.net/OpenSource/SD](http://www.icsharpcode.net/OpenSource/SD)

To create getters and setters, right-click Refactor > something non-intuitive.

```
foreach (type integrator in this.Controls) { Integrator.Enabled = false; }
```

*TODO: Go over again* implied or specific conversion of decimal to strings, .ToString, etc.?

StringToNumber()? ParseInt32()?

Can use Convert.ToInt32(string)

## [Piehl-4](#)

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or `Int32.Parse(string)`.

Put cursor to the right control? `control.Focus()`;

Don't resize: set `FormBorderStyle = FixedSingle` or two down from that, but also set `MaximizeBox = False`.

```
HelperForm hf = new HelpForm();  
hf.Show();           //modeless  
hf.ShowDialog();    //modal.
```

To capture a double-click event in a listbox element, `control.MouseClick` or `DoubleClick`.

## To find Classes

Solution Explorer in your project > References > Web Reference > UDDI Servers on web.

*TODO: see if should copy here any material from same section of [Java.doc](#).*

## To compile or run your app

F5 (debug) or Ctrl+F5 (non-debug).

Dropdown in upper right to make it non-debug versus debug.

## To debug your app

F9 Breakpoint toggle

F10 Step Over

F11 Step Into

Drag current arrow: run here

More in [Tools](#) section Testing.

## To beautify — make it look pretty

**Ctrl-K, D** **beautify doc**, or Edit > Advanced > Format Document.

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SharpDevelop free IDE. <[www.icsharpcode.net/OpenSource/SD](http://www.icsharpcode.net/OpenSource/SD)>

## To publish: create a .zip file

Folder right-click Send To > Compressed (zipped) Folder.

To paranoia-check:

View with any zip utility, including the Windows compressed file or [7-Zip](#).

## [Piehl-5](#)

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My favorite:

1. Copy the .zip to your favorite trash folder.
2. Right-click > Extract to All... to somewhere in this trash folder.
3. Drill down this directory to see:
  - a. that the source and class files are all there, and
4. If in a trash folder, leave it, cleaning out the folder occasionally.

## **To submit to Instructor**

Submit to instructor with BB Assignments > Browse > Submit.

-30- [send comments to the author](#).