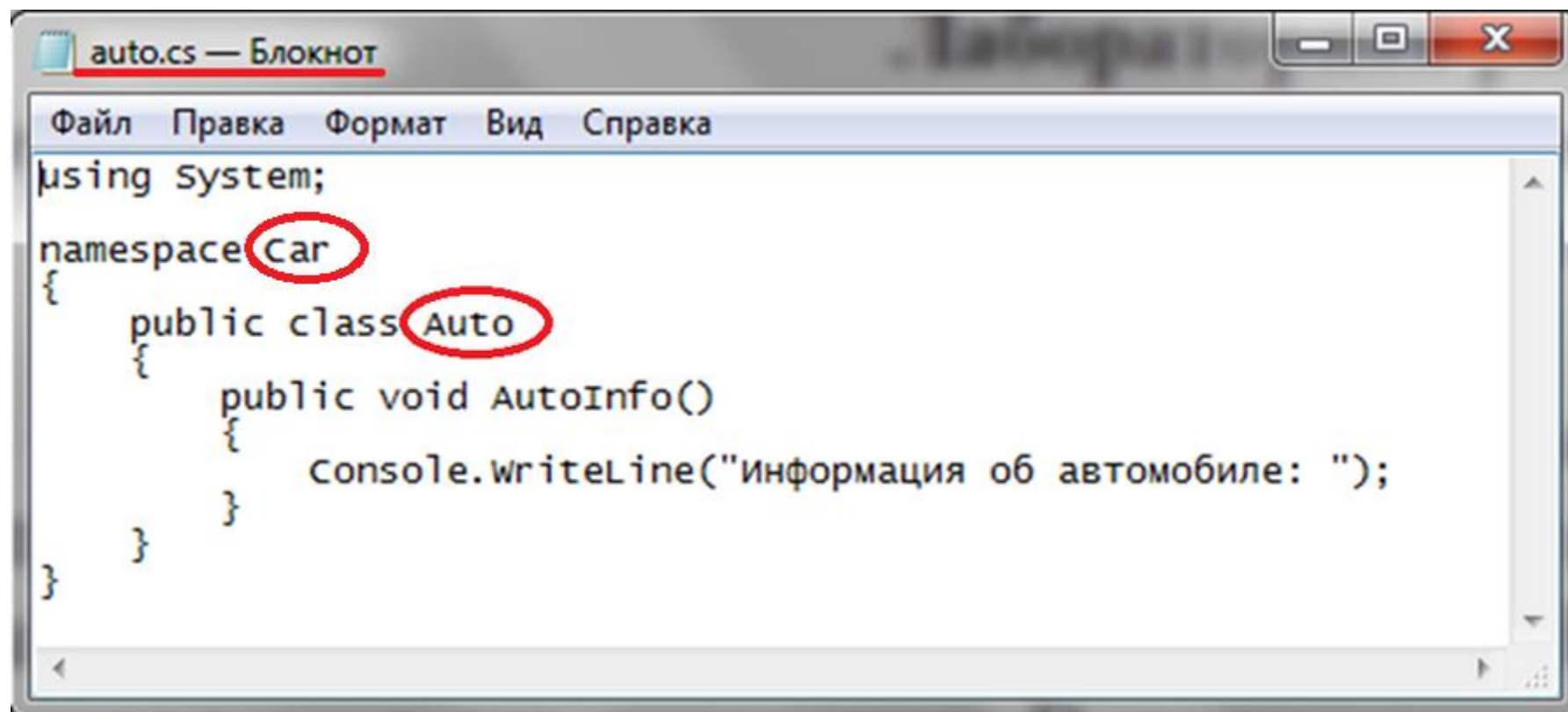
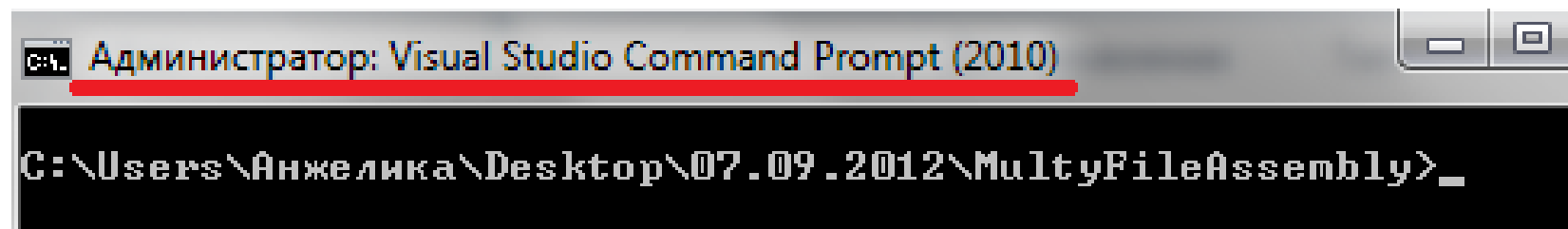


# Многофайловые сборки

## Многофайловые сборки



```
auto.cs — Блокнот
Файл  Правка  Формат  Вид  Справка
using System;
namespace Car
{
    public class Auto
    {
        public void AutoInfo()
        {
            Console.WriteLine("информация об автомобиле: ");
        }
    }
}
```



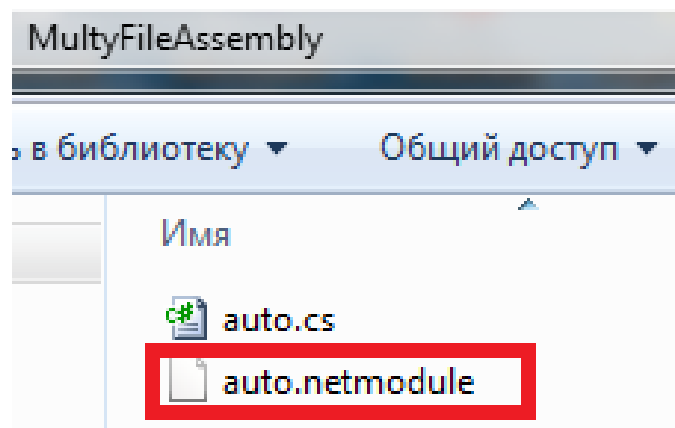
```
Администратор: Visual Studio Command Prompt (2010)
C:\Users\Ангелика\Desktop\07.09.2012\MultyFileAssembly>_
```

## Многофайловые сборки

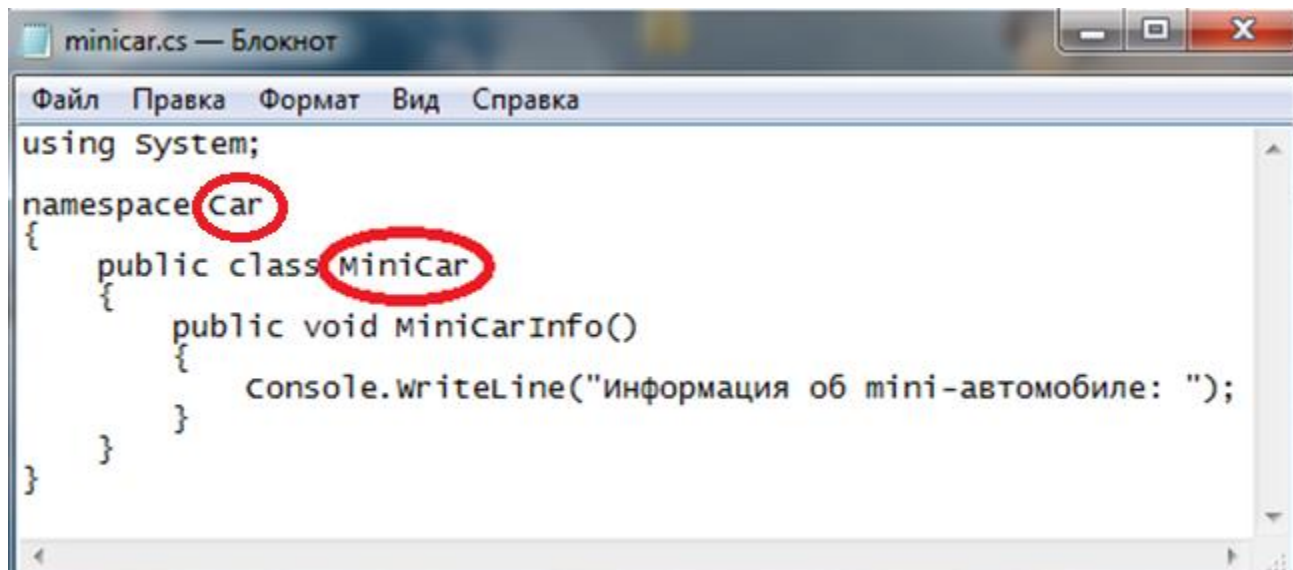
```
Администратор: Visual Studio Command Prompt (2010)

C:\Users\Анжелика\Desktop\07.09.2012\MultyFileAssembly>csc.exe /t:module auto.cs
Microsoft (R) Visual C# 2010 Compiler version 4.0.30319.1
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Анжелика\Desktop\07.09.2012\MultyFileAssembly>_
```

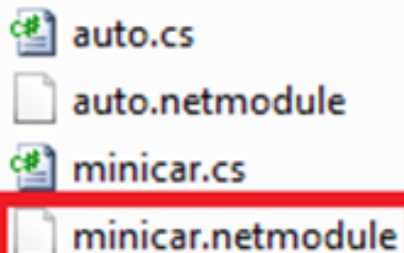


## Многофайловые сборки



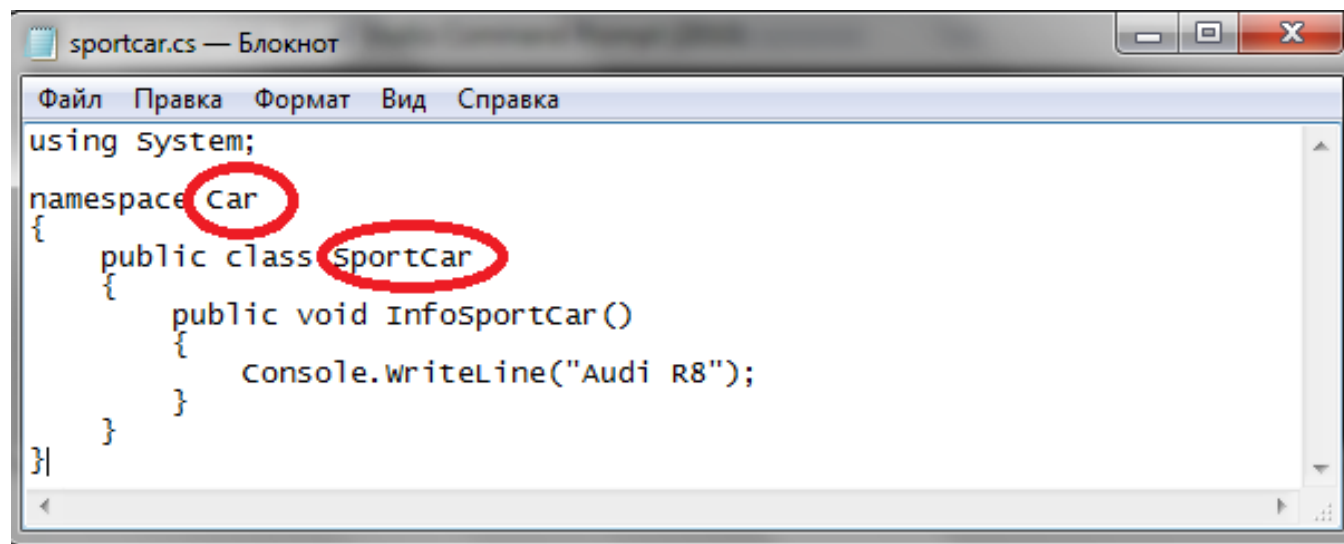
```
minicar.cs — Блокнот
Файл  Правка  Формат  Вид  Справка
using System;
namespace Car
{
    public class MiniCar
    {
        public void MinicarInfo()
        {
            Console.WriteLine("информация об mini-автомобиле: ");
        }
    }
}
```

```
C:\Users\Ангелика\Desktop\07.09.2012\MultyFileAssembly>csc.exe /t:module minicar
.cs
Microsoft (R) Visual C# 2010 Compiler version 4.0.30319.1
Copyright (C) Microsoft Corporation. All rights reserved.
```



- auto.cs
- auto.netmodule
- minicar.cs
- minicar.netmodule

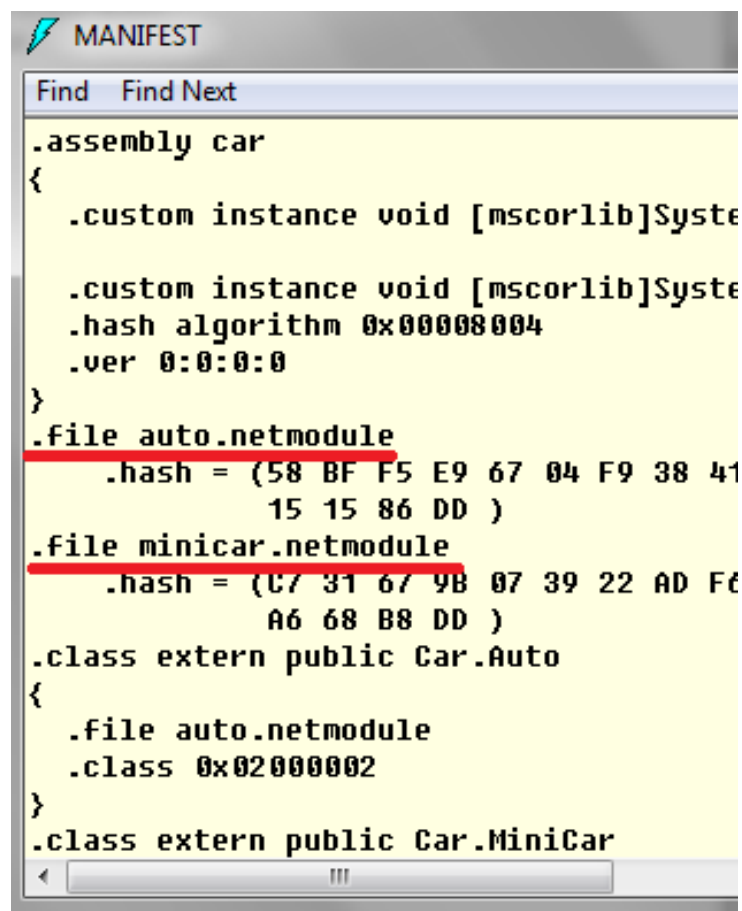
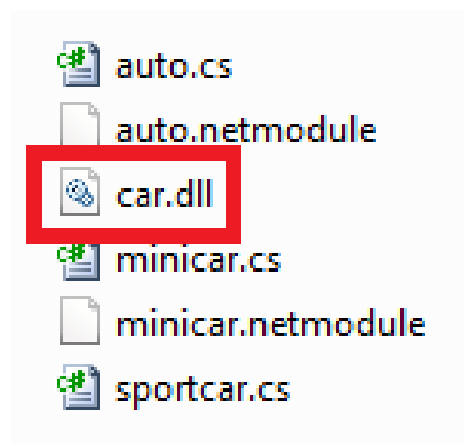
## Многофайловые сборки



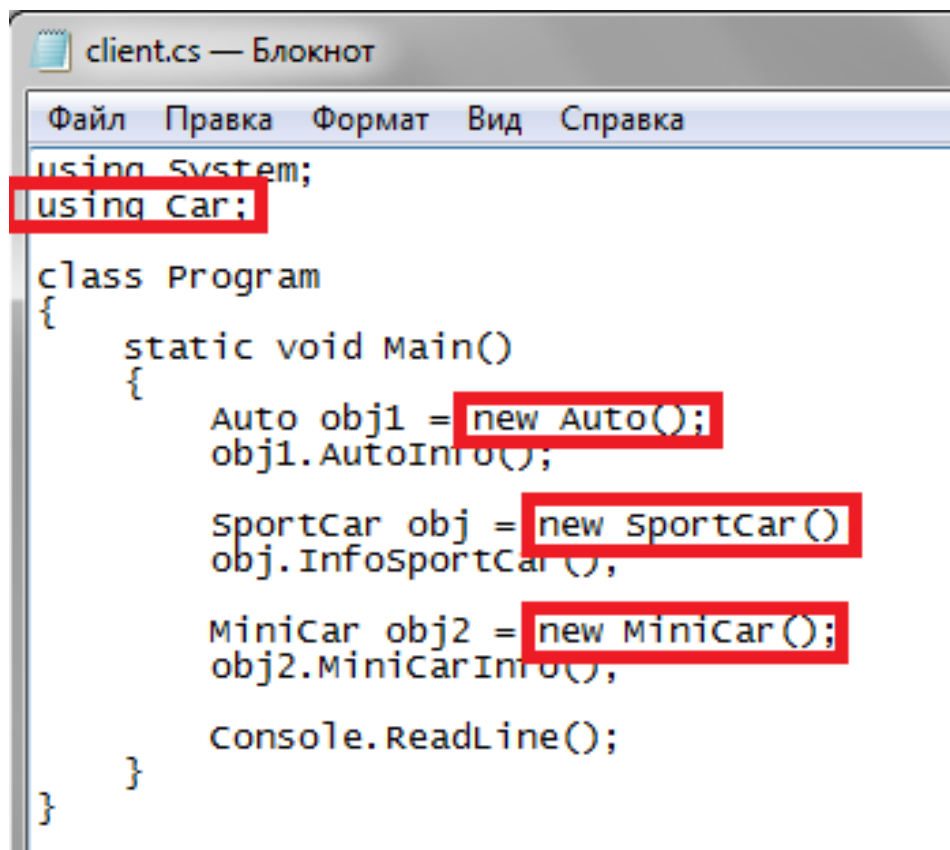
```
sportcar.cs — Блокнот
Файл  Правка  Формат  Вид  Справка
using System;
namespace Car
{
    public class SportCar
    {
        public void InfoSportCar()
        {
            Console.WriteLine("Audi R8");
        }
    }
}
```

```
C:\Users\Анжелика\Desktop\07.09.2012\MultyFileAssembly>csc /t:library /addmodule
:auto.netmodule /out:car.dll sportcar.cs
Microsoft (R) Visual C# 2010 Compiler version 4.0.30319.1
Copyright (C) Microsoft Corporation. All rights reserved.
```

## Многофайловые сборки



## Многофайловые сборки



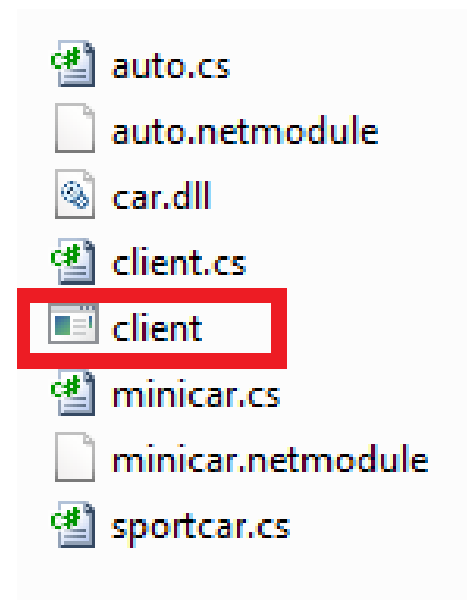
```
client.cs — Блокнот
Файл  Правка  Формат  Вид  Справка
using System;
using Car;

class Program
{
    static void Main()
    {
        Auto obj1 = new Auto();
        obj1.AutoIntro();

        SportCar obj = new SportCar();
        obj.InfoSportCar();

        Minicar obj2 = new Minicar();
        obj2.MinicarIntro();

        Console.ReadLine();
    }
}
```



```
C:\Users\Анжелика\Desktop\07.09.2012\MultyFileAssembly>csc /r:car.dll client.cs
Microsoft (R) Visual C# 2010 Compiler version 4.0.30319.1
Copyright (C) Microsoft Corporation. All rights reserved.
```

## Многофайловые сборки

```
C:\Users\Ангелика\Desktop\07.09.2012\MultyFileAssembly>client.exe
Информация об автомобиле:
Audi R8
Информация об mini-автомобиле:
```



Сборки со строгим  
именем

## Сборки со строгим именем

The image shows two screenshots of the Visual Studio IDE. The top screenshot displays the `Program.cs` file in the `ConsoleApplicationDemo` project. The `using` statements for `System` and `ClassLibraryDemo` are highlighted with red boxes. The `Book` class is instantiated in the `Main` method, also highlighted with a red box. The bottom screenshot shows the `Book.cs` file in the `ClassLibraryDemo` project. The `namespace ClassLibraryDemo` and the `public class Book` are highlighted with red boxes. To the right, the Solution Explorer for 'SolutionDemoLibrary' (3 projects) shows the `ClassLibraryDemo` project under the `References` folder, highlighted with a red box. Below this, the Solution Explorer for 'ClassLibraryDemo' (2 projects) shows the `Book.cs` file. At the bottom, the `SolutionDemoLibrary > ConsoleApplicationDemo > bin > Debug` path is highlighted with a red box, and the `ClassLibraryDemo.dll` file is highlighted in the file list.

```
Program.cs
using System;
using ClassLibraryDemo;

namespace ConsoleApplicationDemo
{
    class Program
    {
        static void Main(string[] args)
        {
            var book = new Book("Title1", "Author1");
            Console.WriteLine(book.ToString());
        }
    }
}
```

```
Book.cs
namespace ClassLibraryDemo
{
    public class Book
    {
        public int ID { get; set; }
        public string Title { get; set; }
        public string Author { get; set; }

        public Book(string title, string author)
        {
            Author = author;
            Title = title;
        }

        public override string ToString()
        {
            return string.Format("{0}, {1}", Title, Author);
        }
    }
}
```

Solution Explorer (Solution 'SolutionDemoLibrary' (3 projects))

- ConsoleApplicationDemo
  - References
    - ClassLibraryDemo
    - Microsoft.CSharp
    - System
    - System.Core
    - System.Data
    - System.Data.DataSetExtensions

Solution Explorer (Solution 'ClassLibraryDemo' (2 projects))

- ClassLibraryDemo
  - Book.cs

Solution Demo Library > ConsoleApplicationDemo > bin > Debug

Имя
ClassLibraryDemo.dll
ClassLibraryDemo
ConsoleApplicationDemo
ConsoleApplicationDemo.vshost
ConsoleApplicationDemo.vshost.exe.ma...

## Сборки со строгим именем

```
C:\Users\Анжелика\Desktop\07.09.2012\MultyFileAssembly>sn.exe -k keypair.snk
```

```
Microsoft (R) .NET Framework Strong Name Utility  Version 4.0.30319.1  
Copyright (c) Microsoft Corporation.  All rights reserved.
```

Key pair written to keypair.snk

The screenshot shows the Visual Studio IDE with the 'ClassLibraryDemoStrongName' project selected. The 'Signing' tab is active in the Properties window, showing the 'Sign the assembly' checkbox checked. The 'Choose a strong name key file:' field is empty, and the '<Browse...>' button is highlighted with a red box. A context menu is open over the 'keypair.snk' file in the Solution Explorer, with the file name highlighted by a red box. The menu includes options like 'Add Reference...', 'View Class Diagram', 'Set as StartUp Project', 'Debug', 'Add Solution', 'Cut', 'Paste', 'Remove', 'Rename', 'Unload Project', 'Find Code Issues', 'Find Symbols External to Scope', 'Find Code Dependent on Module', 'Optimize references...', 'Project Hierarchy', 'Refactor', 'Cleanup Code...', 'Open Folder in Windows Explorer', 'Run Unit Tests', 'Debug Unit Tests', and 'Collapse All'. The 'Properties' option at the bottom is also highlighted with a red box.

ClassLibraryDemoStrongName

Application

Build

Build Events

Debug

Resources

Services

Settings

Reference Paths

Signing

Configuration: N/A Platform: N/A

☐ Sign the ClickOnce manifests

Certificate:

Issued To	(none)
Issued By	(none)
Intended Purpose	(none)
Expiration Date	(none)

Timestamp server URL:

☐ Sign the assembly

Choose a strong name key file:

<New...>  
<Browse...>

When delay signed, the project will not run or be debuggable.

ClassLibraryDemoStrongName

- Properties
- References
- Book.cs
- keypair.snk

Properties Alt+Enter

## Сборки со строгим именем

### .assembly ClassLibraryDemo

```
{
    .custom instance void [mscorlib]System.Reflection.AssemblyConfigurationAttribute::.ctor(string)
    .custom instance void [mscorlib]System.Reflection.AssemblyCompanyAttribute::.ctor(string)
    .custom instance void [mscorlib]System.Reflection.AssemblyProductAttribute::.ctor(string)

    .custom instance void [mscorlib]System.Runtime.CompilerServices.CompilationRelaxationsAttribute::.ctor(int)
    .custom instance void [mscorlib]System.Runtime.CompilerServices.RuntimeCompatibilityAttribute::.ctor()

    .custom instance void [mscorlib]System.Reflection.AssemblyCopyrightAttribute::.ctor(string)

    // --- The following custom attribute is added automatically, do not uncomment ---
    // .custom instance void [mscorlib]System.Diagnostics.DebuggableAttribute::.ctor(DebuggableAttribute.DebuggingModes)

    .custom instance void [mscorlib]System.Reflection.AssemblyTitleAttribute::.ctor(string)

    .custom instance void [mscorlib]System.Reflection.AssemblyDescriptionAttribute::.ctor(string)
    .custom instance void [mscorlib]System.Runtime.InteropServices.ComVisibleAttribute::.ctor(bool)
    .custom instance void [mscorlib]System.Reflection.AssemblyTrademarkAttribute::.ctor(string)
    .custom instance void [mscorlib]System.Runtime.InteropServices.GuidAttribute::.ctor(Guid)

    .custom instance void [mscorlib]System.Reflection.AssemblyFileVersionAttribute::.ctor(string)
    .custom instance void [mscorlib]System.Runtime.Versioning.TargetFrameworkAttribute::.ctor(string)

    .custom instance void [mscorlib]System.Reflection.AssemblyInformationalVersionAttribute::.ctor(string)

    .custom instance void [mscorlib]System.Reflection.AssemblyMetadataAttribute::.ctor(string, string)

    .hash algorithm 0x00008004
    .ver 1:0:0:0
}
```

### .assembly ClassLibraryDemoStrongName

```
{
    .custom instance void [mscorlib]System.Reflection.AssemblyConfigurationAttribute::.ctor(string)
    .custom instance void [mscorlib]System.Reflection.AssemblyCompanyAttribute::.ctor(string)
    .custom instance void [mscorlib]System.Reflection.AssemblyProductAttribute::.ctor(string)

    .custom instance void [mscorlib]System.Runtime.CompilerServices.CompilationRelaxationsAttribute::.ctor(int)
    .custom instance void [mscorlib]System.Runtime.CompilerServices.RuntimeCompatibilityAttribute::.ctor()

    .custom instance void [mscorlib]System.Reflection.AssemblyCopyrightAttribute::.ctor(string)

    // --- The following custom attribute is added automatically, do not uncomment ---
    // .custom instance void [mscorlib]System.Diagnostics.DebuggableAttribute::.ctor(DebuggableAttribute.DebuggingModes)

    .custom instance void [mscorlib]System.Reflection.AssemblyTitleAttribute::.ctor(string)

    .custom instance void [mscorlib]System.Reflection.AssemblyDescriptionAttribute::.ctor(string)
    .custom instance void [mscorlib]System.Runtime.InteropServices.ComVisibleAttribute::.ctor(bool)
    .custom instance void [mscorlib]System.Reflection.AssemblyTrademarkAttribute::.ctor(string)
    .custom instance void [mscorlib]System.Runtime.InteropServices.GuidAttribute::.ctor(Guid)

    .custom instance void [mscorlib]System.Reflection.AssemblyFileVersionAttribute::.ctor(string)
    .custom instance void [mscorlib]System.Runtime.Versioning.TargetFrameworkAttribute::.ctor(string)

    .custom instance void [mscorlib]System.Reflection.AssemblyInformationalVersionAttribute::.ctor(string)

    .custom instance void [mscorlib]System.Reflection.AssemblyMetadataAttribute::.ctor(string, string)

    .publickey = (00 24 00 00 04 80 00 00 94 00 00 00 06 02 00 00 // $.
                  00 24 00 00 52 53 41 31 00 04 00 00 01 00 01 00 // $.RSA1.
                  F9 50 83 BB C8 D4 75 92 4B A8 9F 38 16 2D DC 42 // .P...u.K..8.-.B
                  03 70 1A 8A D2 3B B7 EE C3 36 7A 88 BD 22 E9 96 // .p...;...6z..".
                  E6 CB AF 81 BF D5 A4 BE 2F 94 7B 87 0C 73 56 33 // ...../.{..sU3
                  42 85 39 D1 87 57 3D 30 02 4E 2A A9 99 C4 17 DF // B.9..W=0.N*....
                  9A 78 C7 E6 06 4F 55 43 61 3B 28 F2 C3 EE 7A 28 // .x...OUCa;(.z(
                  79 AD 3A BC ED 85 F7 B6 0F 55 C4 66 18 00 55 FD // y:.....U.f..U.
                  E5 DA E7 B9 22 2B D6 9E 4C A8 FE 7F 07 3C C4 2C // ...."+..L...<.,
                  86 EB C7 71 EB 26 85 A4 A4 32 92 27 50 AE 40 C1 ) // ...q.&...2.'P.@.

    .hash algorithm 0x00008004
    .ver 1:0:0:0
}
```

## Сборки со строгим именем

```
C:\Users\Ангелика\Desktop\07.09.2012\ClassLibraryDemo\ClassLibraryDemoStrongName\bin\Debug>gacutil -i ClassLibraryDemoStrongName.dll
Microsoft (R) .NET Global Assembly Cache Utility. Version 4.0.30319.1
Copyright (c) Microsoft Corporation. All rights reserved.

Assembly successfully added to the cache
```

Компьютер > Windows7\_OS (C:) > Windows > Microsoft.NET > assembly > GAC\_MSIL

Имя	Дата изменения	Тип
Accessibility	12.08.2012 20:38	Папка
AspNetMMCEExt	12.08.2012 20:42	Папка
<b>ClassLibraryDemoStrongName</b>	04.09.2012 16:48	Папка
CppCodeProvider	13.08.2012 12:29	Папка
FSharp.Compiler	13.08.2012 12:29	Папка
FSharp.Compiler.Interactive.Settings	13.08.2012 12:29	Папка
FSharp.Compiler.Server.Shared	13.08.2012 12:29	Папка
FSharp.Core	06.08.2012 13:15	Папка

Компьютер > Windows7\_OS (C:) > Windows > Microsoft.NET > assembly > GAC\_MSIL > ClassLibraryDemoStrongName > v4.0\_1.0.0.0\_fdd254cb694e5165

Имя	Дата изменения	Тип	Размер
<b>ClassLibraryDemoStrongName.dll</b>	04.09.2012 16:48	Расширение при...	5 КБ

## Сборки со строгим именем

Program.cs\* x Program.cs

ConsoleApplicationDemoGAC.Prog Main(string[] args)

```
using System;
using ClassLibraryDemoStrongName;

namespace ConsoleApplicationDemoGAC
{
    class Program
    {
        static void Main(string[] args)
        {
            var book = new Book("Title1", "Author1");
            Console.WriteLine(book.ToString());
            Console.ReadKey();
        }
    }
}
```

Solution Explorer

Solution 'SolutionDemoLibrary' (4 projects)

- ConsoleApplicationDemo
- ConsoleApplicationDemoGAC
  - Properties
  - References
    - ClassLibraryDemoStrongName
    - Microsoft.CSharp
    - System
    - System.Core
    - System.Data
    - System.Data.DataSetExtensions
    - System.Xml
    - System.Xml.Linq

Program.cs

07.09.2012 ▸ SolutionDemoLibrary ▸ ConsoleApplicationDemoGAC ▸ bin ▸ Debug

Добавить в библиотеку ▾    Общий доступ ▾    Новая папка			
Имя	Дата изменения	Тип	
ConsoleApplicationDemoGAC	04.09.2012 16:59	Приложение	
ConsoleApplicationDemoGAC	04.09.2012 16:59	Программа	