<http://stackoverflow.com/questions/150479/order-of-items-in-classes-fields-properties-constructors-methods>

StyleCop

<http://www.dofactory.com/reference/csharp-coding-standards.aspx>

C# Coding Standards and Naming Conventions

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| --- |
| Below are our **C# coding standards**, naming conventions, and best practices. Use these in your own projects and/or adjust these to your own needs. |

1. Naming Conventions and Style

douse **PascalCasing** for class names and method names.

public class ClientActivity

{

    public void ClearStatistics()

    {

        //...

    }

    public void CalculateStatistics()

    {

        //...

    }

}

**Why**: consistent with the Microsoft's .NET Framework and easy to read.

douse **camelCasing** for method arguments and local variables.

public class UserLog

{

    public void Add(LogEvent logEvent)

    {

        int itemCount = logEvent.Items.Count;

        // ...

    }

}

**Why**: consistent with the Microsoft's .NET Framework and easy to read.

do notuse **Hungarian** notation or any other type identification in identifiers

// Correct

int counter;

string name;

// Avoid

int iCounter;

string strName;

**Why**: consistent with the Microsoft's .NET Framework and Visual Studio IDE makes determining types very easy (via tooltips). In general you want to avoid type indicators in any identifier.

do notuse **Screaming Caps** for constants or readonly variables

// Correct

public static const string ShippingType = "DropShip";

// Avoid

public static const string SHIPPINGTYPE = "DropShip";

**Why**: consistent with the Microsoft's .NET Framework. Caps grap too much attention.

avoidusing **Abbreviations**. Exceptions: abbreviations commonly used as names,   
                 such as **Id, Xml, Ftp, Uri**

// Correct

UserGroup userGroup;

Assignment employeeAssignment;

// Avoid

UserGroup usrGrp;

Assignment empAssignment;

// Exceptions

CustomerId customerId;

XmlDocument xmlDocument;

FtpHelper ftpHelper;

UriPart uriPart;

**Why**: consistent with the Microsoft's .NET Framework and prevents inconsistent abbreviations.

douse **PascalCasing** for abbreviations 3 characters or more (2 chars are both uppercase)

**Html**Helper htmlHelper;

**Ftp**Transfer ftpTranfer;

**UI**Control uiControl;

**Why**: consistent with the Microsoft's .NET Framework. Caps would grap visually too much attention.

do notuse **Underscores** in identifiers. Exception: you can prefix private static variables   
                    with an underscore.

// Correct

public DateTime clientAppointment;

public TimeSpan timeLeft;

// Avoid

public DateTime client\_Appointment;

public TimeSpan time\_Left;

// Exception

private DateTime \_registrationDate;

**Why**: consistent with the Microsoft's .NET Framework and makes code more natural to read (without 'slur'). Also avoids underline stress (inability to see underline).

douse **predefined type names** instead of system type names like Int16, Single, UInt64, etc

// Correct

string firstName;

int lastIndex;

bool isSaved;

// Avoid

String firstName;

Int32 lastIndex;

Boolean isSaved;

**Why**: consistent with the Microsoft's .NET Framework and makes code more natural to read.

douse implicit type **var** for local variable declarations. Exception: primitive types (int, string,   
          double, etc) use predefined names.

var stream = File.Create(path);

var customers = new Dictionary<int?, Customer>();

// Exceptions

int index = 100;

string timeSheet;

bool isCompleted;

**Why**: removes clutter, particularly with complex generic types. Type is easily detected with Visual Studio tooltips.

douse noun or noun phrases to name a class.

public class Employee

{

}

public class BusinessLocation

{

}

public class DocumentCollection

{

}

**Why**: consistent with the Microsoft's .NET Framework and easy to remember.

doprefix interfaces with the letter **I**.  Interface names are noun (phrases) or adjectives.

public interface IShape

{

}

public interface IShapeCollection

{

}

public interface IGroupable

{

}

**Why**: consistent with the Microsoft's .NET Framework.

doname source files according to their main classes. Exception: file names with partial classes  
          reflect their source or purpose, e.g. designer, generated, etc.

// Located in Task.cs

public partial class Task

{

    //...

}

// Located in Task.generated.cs

public partial class Task

{

    //...

}

**Why**: consistent with the Microsoft practices. Files are alphabetically sorted and partial classes remain adjacent.

doorganize namespaces with a clearly defined structure

// Examples

namespace Company.Product.Module.SubModule

namespace Product.Module.Component

namespace Product.Layer.Module.Group

**Why**: consistent with the Microsoft's .NET Framework. Maintains good organization of your code base.

dovertically align curly brackets.

// Correct

class Program

{

    static void Main(string[] args)

    {

    }

}

**Why**: Microsoft has a different standard, but developers have overwhelmingly preferred vertically aligned brackets.

dodeclare all member variables at the top of a class, with static variables at the very top.

// Correct

public class Account

{

    public static string BankName;

    public static decimal Reserves;

    public string Number {get; set;}

    public DateTime DateOpened {get; set;}

    public DateTime DateClosed {get; set;}

    public decimal Balance {get; set;}

    // Constructor

    public Account()

    {

        // ...

    }

}

**Why**: generally accepted practice that prevents the need to hunt for variable declarations.

douse singular names for enums. Exception: bit field enums.

// Correct

public enum Color

{

    Red,

    Green,

    Blue,

    Yellow,

    Magenta,

    Cyan

}

// Exception

[Flags]

public enum Dockings

{

    None = 0,

    Top = 1,

    Right = 2,

    Bottom = 4,

    Left = 8

}

**Why**: consistent with the Microsoft's .NET Framework and makes the code more natural to read. Plural flags because enum can hold multiple values (using bitwise 'OR').

do notexplicitly specify a type of an enum or values of enums (except bit fields)

// Don't

public enum Direction : long

{

    North = 1,

    East = 2,

    South = 3,

    West = 4

}

// Correct

public enum Direction

{

    North,

    East,

    South,

    West

}

**Why**: can create confusion when relying on actual types and values.

do notsuffix enum names with Enum

// Don't

public enum CoinEnum

{

    Penny,

    Nickel,

    Dime,

    Quarter,

    Dollar

}

// Correct

public enum Coin

{

    Penny,

    Nickel,

    Dime,

    Quarter,

    Dollar

}

**Why**: consistent with the Microsoft's .NET Framework and consistent with prior rule of no type indicators in identifiers.