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# Project Guidelines

## Global

##### Length:

* 1 char for loop counters,
* 1 word for condition/loop variables,
* 1-2 words for methods,
* 2-3 words for classes,
* 3-4 words for globals.

##### Characters consistently

Don't use lowercase/uppercase characters inconsistently: e.g. userName, UserName, USER\_NAME, m\_userName, username, ...:

* use Camel Case (aka Upper Camel Case) for classes: VelocityResponseWriter
* use Lower Case for packages: com.company.project.ui
* use Mixed Case (aka Lower Camel Case) for variables: studentName
* use Upper Case for constants : MAX\_PARAMETER\_COUNT = 100
* use Camel Case for enum class names and Upper Case for enum values.
* don't use '\_' anywhere except constants and enum values (which are constants).

##### Reuse variable

Don't reuse same variable name in the same class in different contexts: e.g. in method, constructor and class.

Don't use same variable for different purposes in a method, conditional etc.

## Variable Names

* Use camel case in variable names as well e.g. price, quantity, totalAmount etc.
* Use all caps for constants e.g. MAX\_QUANTITY, MAX\_PRICE etc.
* Avoid using non ASCII characters and words from local language! Using any character other than ASCII character, especially non English is worst practice. English is a universal language for programming and stick with it.
* All names start with a **letter.**
* If you have to represent a collection or plural, prefer something like listOfEmployees, bunchOfEmployees over employees.

##### Avoid Pointless Names:

No: abc, temp, data

##### Avoid Similar Names:

No: employee and employees

##### Avoid Clutters:

**No:** \_, m\_, o\_, simply \_, obj\_

##### Avoid Hungarian notation:

No: bExit for boolean variable, iMax for integer variables

Make good use of common verb e.g. is, has, can or do  
  
Yes: isAlive(), hasNext(), canExecute()…

Example:

if(isRaining){

bringUmbrella();

}

##### Use specific names for variables:

No: "value", "equals", "data"…

Follow Classical Programming Convention:  
  
i and j as loop counter in for loop

E.g.: for(int i=0; i<10; i++){ // your code }

##### Spaces Around Operators

Always put spaces around operators ( = + - \* / )

Yes: Integer x = 42; var x = y + z; var values = ["Volvo", "Saab", "Fiat"];  
No: Integer x=42;

## Method Names

* Start name of method from small character and follow camel case e.g. getEmployee(), getPayDate() etc.
* Instead of having three different methods destroy(), kill(), or finish() at different modules, prefer one of them e.g. destroy().
* Method names should start with verb e.g. get, set, do, invoke etc.
* Prefer shorter name over longer one, if it reveal intent clearly: getPayDate() is better than retreivePaymentDate().
* Prefer shorter name if and only if it reveal intent completely, otherwise choose longer and descriptive name: getLiquidityIndicator() is better than getLInd().
* If variable name is payDate then getter method name must be getPayDate()and setter method must be setPayDate().

##### Give Meaningful Names:

Yes: getPayDate()

No: getPD()

## Class Names

Start name of class as capital letter e.g. Employee, Student or Thread.  
  
Class name should be noun and should tell what does this class represent e.g. Employee, Thread, String etc.

## Interface Names

Interface name should describe ability or CAN DO part e.g.

[Runnable - can run](http://javarevisited.blogspot.sg/2012/01/difference-thread-vs-runnable-interface.html), Callable - can be called etc. 

## Package Name

Package name should follow standard company structure e.g. com.company.project.module.

# Client Application

##### Brackets

* Open-brace ("{") characters on the same line as the statement that opens the block.
* Use one space before the opening bracket
* Put the closing bracket on a new line, without leading spaces

if (condition) {

/\* handle the condition \*/

} else {

/\* handle the "else" case \*/

}

##### Code Indentation

Always use 4 spaces for indentation of code blocks:

function toCelsius(fahrenheit) {  
    return (5 / 9) \* (fahrenheit - 32);  
}

#### Line breaks

Long lines shouldn't be allowed - break at natural breaking points.

if (class.CONDITION || class.OTHER\_CONDITION || class.SOME\_OTHER\_CONDITION

|| class.YET\_ANOTHER\_CONDITION ) {

/\* something \*/

}

var toolkitProfileService = Components.classes["@mozilla.org/toolkit/profile-service;1"]

.createInstance(Components.interfaces.nsIToolkitProfileService);

##### Title and heading capitalization

Use sentence-style capitalization (only capitalize the first word and proper nouns):

* **Correct**: "A new method for creating JavaScript rollovers"
* **Incorrect**: "A New Method for Creating JavaScript Rollovers"

### Latin abbreviations

#### In notes and parentheses

Common Latin abbreviations (etc., i.e., e.g.) may be used in parenthetical expressions and notes. Use periods in these abbreviations.

* Correct: Web browsers (e.g. Firefox) can be used ...
* Incorrect: Web browsers e.g. Firefox can be used ...
* Incorrect: Web browsers, e.g. Firefox, can be used ...
* Incorrect: Web browsers, (eg: Firefox) can be used ...

#### In running text

In regular text (i.e. text outside of notes or parentheses), use the English equivalent of the abbreviation.

* + **Correct**: ... web browsers, and so on.
  + **Incorrect**: ... web browsers, etc.
  + **Correct**: Web browsers such as Firefox can be used ...
  + **Incorrect**: Web browsers e.g. Firefox can be used ...

#### Meanings and English equivalents of Latin abbreviations

|  |  |  |
| --- | --- | --- |
| **Abbrev** | **Latin** | **English** |
| cf. | confer | compare |
| e.g. | exempli gratia | for example |
| et al. | et alii | and others |
| etc. | et cetera | and so forth, and so on |
| i.e. | id est | that is, in other words |
| N.B. | nota bene | note well |
| P.S. | post scriptum | postscript |

#### Plurals of acronyms and abbreviations

For plurals of acronyms or abbreviations, add s. Don't use an apostrophe. Ever. Please.

* **Correct**: CD-ROMs
* **Incorrect**: CD-ROM's

#### Hyphenation

Hyphenate compounds when the last letter of the prefix is a vowel and is the same as the first letter of the root.

* **Correct**: email, re-elect, co-op
* **Incorrect**: e-mail, reelect, coop

#### Dates

For dates (not including dates in code samples) use the format "January 1, 1990":

* **Correct**: February 24, 2006
* **Incorrect**: February 24th, 2006; 24 February, 2006; 24/02/2006

Alternately, you can use the YYYY/MM/DD format:

* **Correct**: 2006/02/24
* **Incorrect**: 02/24/2006; 24/02/2006; 02/24/06

#### Decades

For decades, use the format "1990s". Don't use an apostrophe.

* **Correct**: 1990s
* **Incorrect**: 1990's

#### Plurals of numerals

For plurals of numerals add "s". Don't use an apostrophe.

* **Correct**: 486s
* **Incorrect**: 486's

#### Commas

In running text, use commas only in five-digit and larger numbers.

* **Correct**: 4000; 54,000
* **Incorrect**: 4,000; 54000

#### Serial comma

**Use the serial comma**. The serial (also known as "Oxford") comma is the comma that appears before the conjunction in a series of three or more items.

* **Correct**: I will travel on trains, planes, and automobiles.
* **Incorrect**: I will travel on trains, planes and automobiles.

#### HTML elements

* **Correct**: the [<span>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/span) element
* **Incorrect**: the span tag

## Structure

ASP.NET Structure <- AngularJS & Typescript

ASP.NET Structure

AngularJS

Typescript

* Solution *Name*
* ***Name*Application**
* Properties
* References
* App\_Data
* Config
* Content
* Fonts
  + - Images
    - Scripts
      * Angular*Name*Project
* module.ts
* routes.ts
* Controllers
* ts*Name*Controller.ts

…

* Interfaces
* interfaces.ts

…

* Services
  + *name*Services.ts

…

* Views
  + partial.html

…

* + - * includeScript
* typings
* angularjs
* jquery

…

* Styles
  + less
* style.less

…

* + css
* style.min.css

…

* + includeStyles
* Controller
* *ProjectName*Controller.cs
* Services
* Models
* Views
  + - ProjectName
  + Index.cshtml
* Shared
  + \_Layout.cshtml
* \_ViewStart.cshtml
* web.config
* Global.asax
* packages.config.
* Web.config

# Explanation

Reasons for using a naming convention

* to reduce the effort needed to read and understand source code;[[1]](https://en.wikipedia.org/wiki/Naming_convention_(programming)#cite_note-1)
* to enable code reviews to focus on more important issues than arguing over syntax and naming standards.
* to enable code quality review tools to focus their reporting mainly on significant issues other than syntax and style preferences.
* to enhance source code appearance (for example, by disallowing overlong names or unclear abbreviations).

Documentation allows you to transfer the why behind code. Much in the same way code comments explain the why, and not the how, documentation serves the same purpose.

If people don’t know why your project exists,

they won’t use it.

If people can’t figure out how to install your code,

they won’t use it.

If people can’t figure out how to use your code,

they won’t use it.

You only get contributions after you have put in a lot of work.

You only get contributions after you have users.

You only get contributions after you have documentation.

Technical writing is an art that doesn’t come naturally. Writing documentation will start you down the road to being a better technical writer, which is a useful skill to have as a programmer.

### Documentation of Project:

What problem your project solves

Installation instructions

# References

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