

by Dave Child (DaveChild) via cheatography.com/1/cs/1743/

#### **Useful Links**

Official Site http://www.php-fig.org

#### **Accepted Standards**

PSR-0 Autoloading Standard

http://www.php-fig.org/psr/psr-0/

PSR-1 Basic Coding Standard

http://www.php-fig.org/psr/psr-1/

PSR-2 Coding Style Guide

http://www.php-fig.org/psr/psr-2/

PSR-3 Logger Interface

http://www.php-fig.org/psr/psr-3/

PSR-4 Improved Autoloading

http://www.php-fig.org/psr/psr-4/

#### **PSR-0 - Overview**

A fully-qualified namespace and class must have the following structure \<Vendor Name>\(<Namespace>\)\*<Class Name>

Each namespace must have a top-level namespace ("Vendor Name").

Each namespace can have as many subnamespaces as it wishes.

Each namespace separator is converted to a DIRECTORY\_SEPARATOR when loading from the file system.

Each \_ character in the CLASS NAME is converted to a DIRECTORY\_SEPARATOR. The \_ character has no special meaning in the namespace.

The fully-qualified namespace and class is suffixed with .php when loading from the file system.

Alphabetic characters in vendor names, namespaces, and class names may be of any combination of lower case and upper case.

#### **PSR-1 - Overview**

Files MUST use only <?php and <?= tags.

Files MUST use only UTF-8 without BOM for PHP code.

Files SHOULD either declare symbols (classes, functions, constants, etc.) or cause side-effects (e.g. generate output, change .ini settings, etc.) but SHOULD NOT do both.

Namespaces and classes MUST follow PSR-0.

Class names MUST be declared in Studly-Caps.

Class constants MUST be declared in all upper case with underscore separators.

Method names MUST be declared in camelCase.

#### **PSR-2 - Overview**

Code MUST follow PSR-1.

Code MUST use 4 spaces for indenting, not tabs.

There MUST NOT be a hard limit on line length; the soft limit MUST be 120 characters; lines SHOULD be 80 characters or less.

There MUST be one blank line after the namespace declaration, and there MUST be one blank line after the block of use declarations.

Opening braces for classes MUST go on the next line, and closing braces MUST go on the next line after the body.

Opening braces for methods MUST go on the next line, and closing braces MUST go on the next line after the body.

Visibility MUST be declared on all properties and methods; abstract and final MUST be declared before the visibility; static MUST be declared after the visibility.

Control structure keywords MUST have one space after them; method and function calls MUST NOT.

# **PSR-2 - Overview (cont)**

Opening braces for control structures MUST go on the same line, and closing braces MUST go on the next line after the body.

Opening parentheses for control structures MUST NOT have a space after them, and closing parentheses for control structures MUST NOT have a space before.

#### PSR-2 - General

Code MUST follow all rules outlined in PSR-1.

All PHP files MUST use the Unix LF (linefeed) line ending.

All PHP files MUST end with a single blank line.

The closing ?> tag MUST be omitted from files containing only PHP.

There MUST NOT be a hard limit on line length.

The soft limit on line length MUST be 120 characters; automated style checkers MUST warn but MUST NOT error at the soft limit.

Lines SHOULD NOT be longer than 80 characters; lines longer than that SHOULD be split into multiple subsequent lines of no more than 80 characters each.

There MUST NOT be trailing whitespace at the end of non-blank lines.

Blank lines MAY be added to improve readability and to indicate related blocks of code

There MUST NOT be more than one statement per line.

Code MUST use an indent of 4 spaces, and MUST NOT use tabs for indenting.

PHP keywords MUST be in lower case.

The PHP constants true, false, and null MUST be in lower case.



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# PSR-2 - Namespace and Use Declarations

When present, there MUST be one blank line after the namespace declaration.

When present, all use declarations MUST go after the namespace declaration.

There MUST be one use keyword per declaration.

There MUST be one blank line after the use

# PSR-2 - Classes, Properties, and Methods

The extends and implements keywords

MUST be declared on the same line as the
class name

The opening brace for the class MUST go on its own line; the closing brace for the class MUST go on the next line after the body.

Lists of implements MAY be split across multiple lines, where each subsequent line is indented once. When doing so, the first item in the list MUST be on the next line, and there MUST be only one interface per line.

Visibility MUST be declared on all properties.

The var keyword MUST NOT be used to declare a property.

There MUST NOT be more than one property declared per statement.

Property names SHOULD NOT be prefixed with a single underscore to indicate protected or private visibility.

Visibility MUST be declared on all methods.

Method names SHOULD NOT be prefixed with a single underscore to indicate protected or private visibility.

Method names MUST NOT be declared with a space after the method name.

The opening brace of a method MUST go on its own line, and the closing brace MUST go on the next line following the body.

# PSR-2 - Classes, Properties, and Methods (cont)

There MUST NOT be a space after the opening parenthesis of a method, and there MUST NOT be a space before the closing parenthesis.

In the argument list, there MUST NOT be a space before each comma, and there MUST be one space after each comma.

Method arguments with default values MUST go at the end of the argument list.

Argument lists MAY be split across multiple lines, where each subsequent line is indented once. When doing so, the first item in the list MUST be on the next line, and there MUST be only one argument per line.

When the argument list is split across multiple lines, the closing parenthesis and opening brace MUST be placed together on their own line with one space between them

When present, the abstract and final declarations MUST precede the visibility declaration.

When present, the static declaration MUST come after the visibility declaration.

When making a method or function call, there MUST NOT be a space between the method or function name and the opening parenthesis, there MUST NOT be a space after the opening parenthesis, and there MUST NOT be a space before the closing parenthesis.

In the argument list, there MUST NOT be a space before each comma, and there MUST be one space after each comma.

#### **PSR-2 - Control Structures**

There MUST be one space after the control structure keyword

There MUST NOT be a space after the opening parenthesis

There MUST NOT be a space before the closing parenthesis

There MUST be one space between the closing parenthesis and the opening brace

The structure body MUST be indented once

The closing brace MUST be on the next line after the body

The body of each structure MUST be enclosed by braces.

The keyword elseif SHOULD be used instead of else if.

The case statement MUST be indented once from switch, and the break keyword (or other terminating keyword) MUST be indented at the same level as the case body.

There MUST be a comment such as // no break when fall-through is intentional in a non-empty case body.

# **PSR-2 - Closures**

Closures MUST be declared with a space after the function keyword, and a space before and after the use keyword.

The opening brace MUST go on the same line, and the closing brace MUST go on the next line following the body.

There MUST NOT be a space after the opening parenthesis of the argument list or variable list, and there MUST NOT be a space before the closing parenthesis of the argument list or variable list.



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# PSR-2 - Closures (cont)

In the argument list and variable list, there MUST NOT be a space before each comma, and there MUST be one space after each comma.

Closure arguments with default values MUST go at the end of the argument list.

Argument lists and variable lists MAY be split across multiple lines, where each subsequent line is indented once. When doing so, the first item in the list MUST be on the next line, and there MUST be only one argument or variable per line.

When the ending list (whether or arguments or variables) is split across multiple lines, the closing parenthesis and opening brace MUST be placed together on their own line with one space between them.

# PSR-3 - Log Levels (RFC 5424)

debug	error
info	critical
notice	alert
warning	emergency

#### PSR-3 - Basics

The LoggerInterface exposes eight methods matching log level names (see Log Levels block)

A ninth method, log, accepts a log level as first argument. Calling this method with one of the log level constants MUST have the same result as calling the level-specific method.

Calling the log method with a level not defined by this specification MUST throw a Psr\Log\InvalidArgumentException if the implementation does not know about the level

Users SHOULD NOT use a custom level without knowing for sure the current implementation supports it.

#### PSR-3 - Message

Every method accepts a string as the message, or an object with a \_\_toString() method.

The message MAY contain placeholders which implementors MAY replace with values from the context array.

Placeholder names MUST correspond to keys in the context array.

Placeholder names MUST be delimited with a single opening brace { and a single closing brace }. There MUST NOT be any whitespace between the delimiters and the placeholder name.

Placeholder names SHOULD be composed only of the characters A-Z, a-z, 0-9, underscore \_, and period .. The use of other characters is reserved for future modifications of the placeholders specification.

Implementors MAY use placeholders to implement various escaping strategies and translate logs for display. Users SHOULD NOT pre-escape placeholder values since they can not know in which context the data will be displayed.

# **PSR-3 - Context**

Every method accepts an array as context data. This is meant to hold any extraneous information that does not fit well in a string. The array can contain anything.

Implementors MUST ensure they treat context data with as much lenience as possible.

A given value in the context MUST NOT throw an exception nor raise any php error, warning or notice.

If an Exception object is passed in the context data, it MUST be in the 'exception' key.

# PSR-3 - Context (cont)

Logging exceptions is a common pattern and this allows implementors to extract a stack trace from the exception when the log backend supports it.

Implementors MUST still verify that the 'exception' key is actually an Exception before using it as such, as it MAY contain anything.

#### **PSR-3 - Helper Classes and Interfaces**

The Psr\Log\AbstractLogger class lets you implement the LoggerInterface very easily by extending it and implementing the generic log method. The other eight methods are forwarding the message and context to it.

The Psr\Log\LoggerTrait only requires you to implement the generic log method. Note that since traits can not implement interfaces, in this case you still have to implement LoggerInterface.

The Psr\Log\NullLogger is provided together with the interface. It MAY be used by users of the interface to provide a fall-back "black hole" implementation if no logger is given to them. However conditional logging may be a better approach if context data creation is expensive.

The Psr\Log\LoggerAwareInterface only contains a setLogger(LoggerInterface \$logger) method and can be used by frameworks to auto-wire arbitrary instances with a logger.

The Psr\Log\LoggerAwareTrait trait can be used to implement the equivalent interface easily in any class. It gives you access to \$this->logger.

The Psr\Log\LogLevel class holds constants for the eight log levels.



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# **PSR-4 Specification**

A fully qualified class name has the following form: \<NamespaceName>)\*\<ClassName>

The fully qualified class name MUST have a top-level namespace name, also known as a "vendor namespace".

The fully qualified class name MAY have one or more sub-namespace names.

The fully qualified class name MUST have a terminating class

Underscores have no special meaning in any portion of the fully qualified class name.

Alphabetic characters in the fully qualified class name MAY be any combination of lower case and upper case.

All class names MUST be referenced in a case-sensitive fashion.

A contiguous series of one or more leading namespace and subnamespace names, not including the leading namespace separator, in the fully qualified class name (a "namespace prefix") corresponds to at least one "base directory".

The contiguous sub-namespace names after the "namespace prefix" correspond to a subdirectory within a "base directory", in which the namespace separators represent directory separators. The subdirectory name MUST match the case of the sub-namespace names.

The terminating class name corresponds to a file name ending in .php. The file name MUST match the case of the terminating class

Autoloader implementations MUST NOT throw exceptions, MUST NOT raise errors of any level, and SHOULD NOT return a value.



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