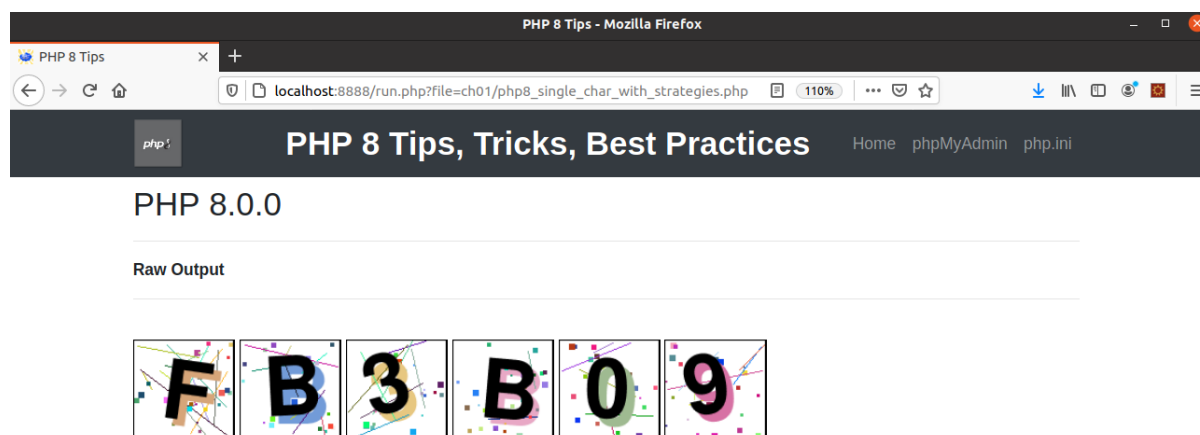


Chapter 1: Introducing New PHP 8 OOP Features



ID	111
Token	999999
Name	Fred

Switch	Match
Loose type comparisons (for example <code>\$a == \$b</code>)	Strict type comparisons (for example <code>\$a === \$b</code>)
Does not return a value	Returns a value
Requires <code>break</code>	Does not require <code>break</code>
Multiple commands per case	One command per match

Php8\Image\Strategy*	Description
<code>DotFill(\$num)</code>	Fills background with <code>\$num</code> dots
<code>LineFill(\$num)</code>	Fills background with <code>\$num</code> lines
<code>RotateText(\$angle)</code>	Rotates text by <code>\$angle</code>
<code>Shadow(\$offset, \$r, \$g, \$b)</code>	Adds a shadow with <code>\$offset</code> pixels apart, with a color determined by <code>\$r</code> , <code>\$g</code> and <code>\$b</code> (red, green, blue)

Disallowed	Not Allowed Example
<code>void</code> cannot be included in a union type	<code>void int</code>
<u>mixed</u> cannot be included in a union type (more on that below)	<u>mixed</u> int
Nullable types cannot be included in a union type	<code>string ?array</code>
Cannot include both <code>TRUE</code> and <code>FALSE</code> in a union type.	<code>TRUE FALSE</code>
Redundant types are not allowed	<code>int float int</code> <code>array iterable Traversable</code>

Chapter 2: Learning about PHP 8's Functional Additions

PHP 8.0.0

Raw Output

```
SELECT id,event_key,event_name,event_date FROM events WHERE event_date >= '2021-01-01' AND event_date <= '2021-04-01' LIMIT 10
```

ID	Key	Title	Date
153	CON-PRO-WQ-145	Conservation Promotion Symposium	2021-02-15 00:00:00
155	TRE-PRO-DF-540	Tree Promotion Meeting	2021-02-28 00:00:00
157	SOL-LOV-KV-312	Solar Energy Lovers Summit	2021-03-22 00:00:00
158	TRE-BEN-UC-744	Tree Benefit Summit	2021-03-19 00:00:00
160	HOR-IND-QM-995	Horticulture Industry Showcase	2021-02-27 00:00:00
166	WIN-BEN-AE-715	Wind Power Benefit Meeting	2021-03-12 00:00:00
178	HOR-PRO-QT-891	Horticulture Promotion Seminar	2021-03-06 00:00:00
182	DOG-BEN-YQ-576	Dog Benefit Summit	2021-03-16 00:00:00
188	CAT-PRO-BM-255	Cat Promotion Show	2021-02-25 00:00:00
211	DOG-BEN-GZ-755	Dog Benefit Conference	2021-03-28 00:00:00

```
ned@ned: ~/Repos/packt/PHP-8-Programming-Tips-Tricks-and-Best-Practices
root@php8_tips_php7 [ /repo/ch02 ]# php php7_nested_ternary.php

Chapter PHP Files: 59<br />
Non Matching: 7<br />

Chapter PHP Files: 59<br />
Non Matching: 2015<br />
root@php8_tips_php7 [ /repo/ch02 ]#
```

```
ned@ned: ~/Repos/packt/PHP-8-Programming-Tips-Tricks-and-Best-Practices
root@php8_tips_php8 [ /repo/ch02 ]# php php8_nested_ternary.php
PHP Fatal error: Unparenthesized `a ? b : c ? d : e` is not supported. Use either `(a ? b : c) ? d : e` or `a ? b : (c ? d : e)` in /repo/ch02/php8_nested_ternary.php on line 32

Fatal error: Unparenthesized `a ? b : c ? d : e` is not supported. Use either `(a ? b : c) ? d : e` or `a ? b : (c ? d : e)` in /repo/ch02/php8_nested_ternary.php on line 32
root@php8_tips_php8 [ /repo/ch02 ]#
```

localhost:8888/ch02/php x +

localhost:8888/ch02/php8_arrow_func_3.php 200%

Original: 19e4YJkx

Captcha : 1 **9** **E4** **YJ** **k** **X**

```
ned@ned: ~/Repos/packt/PHP-8-Programming-Tips-Tricks-and-Best-Practices
root@php8_tips_php7 [ /repo/ch02 ]# php php7_array_slice.php

Total Elements : 6,760,000
Iterations      : 500
Output Every    : 10 iterations
5326286 : DE976 | 1459624 : FK570 | 5124216 : FG922 | 5184985 : CN280 | 6150764 : TW599 |
2141412 : UA692 | 2476971 : ED454 | 1109151 : TR444 | 1169144 : NC573 | 1725761 : XL182 |
1074824 : ZK853 | 5675948 : JS935 | 3355797 : FD230 | 4680661 : BL636 | 4277145 : DP343 |
5009483 : ML173 | 3111089 : FH648 | 4766533 : CF922 | 4202015 : ZZ521 | 4455268 : QM368 |
3096074 : ZU593 | 1024600 : RS762 | 6117826 : BA156 | 3200822 : Y0381 | 6389744 : HK591 |
1033419 : SX530 | 4749989 : PX343 | 6219269 : CR635 | 6676753 : WF475 | 3013320 : OY233 |
5378777 : UB448 | 5404284 : NC913 | 3968949 : FX712 | 6230174 : GC870 | 2370442 : OW689 |
2233334 : TM415 | 4568440 : BG808 | 5290640 : KE433 | 4169243 : NN639 | 5305548 : L0437 |
3922199 : BV314 | 1185229 : HT610 | 6465057 : SB946 | 1305651 : LJ671 | 4935368 : VW589 |
6711430 : DY665 | 6704402 : TQ582 | 6713508 : FW328 | 3584164 : AM373 | 2149293 : LD184 |

Elapsed Time: 7.3698909282684 seconds
root@php8_tips_php7 [ /repo/ch02 ]#
```

```
ned@ned: ~/Repos/packt/PHP-8-Programming-Tips-Tricks-and-Best-Practices
root@php8_tips_php8 [ /repo/ch02 ]# php php8_array_slice.php

Total Elements : 6,760,000
Iterations      : 500
Output Every    : 10 iterations
5206219 : NF452 | 5956429 : HL705 | 3299989 : QR491 | 3286930 : IK502 | 3614739 : GL977 |
3403365 : OR683 | 2805489 : DL397 | 1717522 : S0681 | 6574381 : KV685 | 4185913 : ER710 |
3359339 : LJ954 | 2827506 : SG111 | 4933318 : VA834 | 1382645 : IR257 | 1283102 : CC251 |
3472077 : FL122 | 3550052 : OM172 | 5868277 : WZ837 | 3107605 : BH361 | 5446581 : BX704 |
3852741 : IJ137 | 1005786 : WC244 | 1368052 : TK846 | 2713304 : TW438 | 6118334 : U0623 |
5437126 : CG329 | 1480742 : LQ115 | 3154850 : YK442 | 2334535 : LV415 | 5677366 : MG422 |
4821130 : WC412 | 1777480 : KQ576 | 1669496 : RK590 | 1220459 : KT984 | 4612669 : MJ195 |
1573504 : RK681 | 6700611 : DV348 | 5659625 : FX491 | 5663479 : YD647 | 4516488 : FC627 |
2814690 : TI401 | 1727074 : VY150 | 4000088 : H0301 | 3940046 : MG152 | 1882901 : JH205 |
1888944 : HS356 | 3371001 : RX971 | 1126950 : CG220 | 3220029 : JH801 | 4033689 : ZX974 |

Elapsed Time: 0.76895713806152 seconds
root@php8_tips_php8 [ /repo/ch02 ]#
```

```
ned@ned: ~/Repos/packt/PHP-8-Programming-Tips-Tricks-and-Best-Practices
root@php8_tips_php7 [ /repo/ch02 ]# php php7_str_contains.php
London : 08 : CA
London : ENG : GB
New London : CT : US
East London : 05 : ZA

Elapsed Time: 0.18811202049255
root@php8_tips_php7 [ /repo/ch02 ]#
```

```
ned@ned: ~/Repos/packt/PHP-8-Programming-Tips-Tricks-and-Best-Practices
root@php8_tips_php8 [ /repo/ch02 ]# php php8_str_contains.php
London : 08 : CA
London : ENG : GB
New London : CT : US
East London : 05 : ZA

Elapsed Time: 0.1437828540802
root@php8_tips_php8 [ /repo/ch02 ]#
```

```

ned@ned: ~/Repos/packt/PHP-8-Programming-Tips-Tricks-and-Best-Practices
root@php8_tips_php8 [ /repo/ch02 ]# php php8_sqlite_auth_admin.php admin


```

TABLE | CODE | ARGS | SESS
users | 18 | users::main: | admin
Unknown | 21 | ::: | admin:users
users | 20 | users:id:main: | admin:Unknown
users | 20 | users:user_name:main: | admin:users
users | 20 | users:user_email:main: | admin:users
users | 20 | users:user_pwd:main: | admin:users
Name : Email
fred : fred@caveman.com
wilma : wilma@gmail.com
barney : brubble@rock.net
betty : bettyr@new.clothes.biz
jporter : jporter@unlikelysource.com

```


</pre>root@php8_tips_php8 [ /repo/ch02 ]#

```

```

ned@ned: ~/Repos/packt/PHP-8-Programming-Tips-Tricks-and-Best-Practices
root@php8_tips_php8 [ /repo/ch02 ]# php php8_sqlite_auth_admin.php guest


```

TABLE | CODE | ARGS | SESS
users | 18 | users::main: | guest

```


PHP Warning: SQLite3::prepare(): Unable to prepare statement: 23, not authorized in /repo/ch02/php8_sqlite_auth_admin.php on line 19

Warning: SQLite3::prepare(): Unable to prepare statement: 23, not authorized in /repo/ch02/php8_sqlite_auth_admin.php on line 19

</pre>root@php8_tips_php8 [ /repo/ch02 ]#

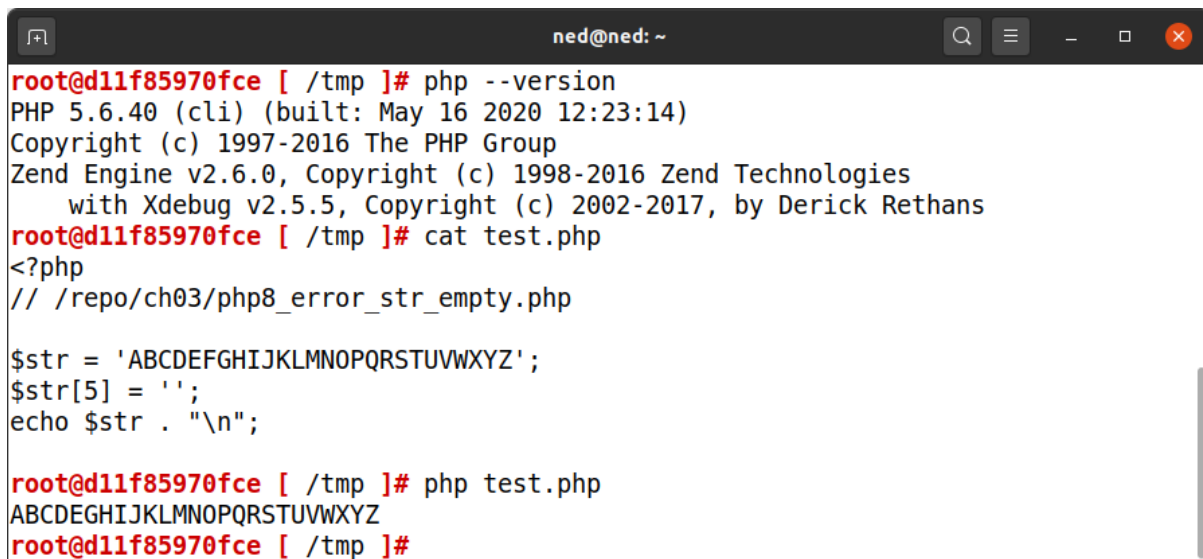
```

	Anonymous Function	Arrow Function
Less code	No	Yes
Inherits variables	requires <code>use ()</code>	Yes
Can be nested	Yes	Yes
<code>\$this</code> automatically bound	Yes	Yes
<code>\$\$</code> indirection supported	Yes	No
Multiple lines of code	Yes	No

Constant	Description
SQLite3::OK	Success
SQLite3::IGNORE	Statement is allowed to prepare, but is rendered neutral
SQLite3::DENY	Deny access

Code (1 st Param)	2 nd Param	3 rd Param	SQL
SQLITE_READ	Table Name	Column Name	SELECT (each result)
SQLITE_SELECT	NULL	NULL	SELECT (first issued)
SQLITE_INSERT	Table Name	NULL	INSERT
SQLITE_UPDATE	Table Name	Column Name	UPDATE
SQLITE_DELETE	Table Name	NULL	DELETE
SQLITE_CREATE_*	Name of item created	Either Table Name or NULL	CREATE TABLE INDEX VIEW and so on
SQLITE_DROP_*	Name of item created	Either Table Name or NULL	DROP TABLE INDEX VIEW and so on

Chapter 3: Taking Advantage of Error-Handling Enhancements



```
ned@ned: ~  
root@d11f85970fce [ /tmp ]# php --version  
PHP 5.6.40 (cli) (built: May 16 2020 12:23:14)  
Copyright (c) 1997-2016 The PHP Group  
Zend Engine v2.6.0, Copyright (c) 1998-2016 Zend Technologies  
    with Xdebug v2.5.5, Copyright (c) 2002-2017, by Derick Rethans  
root@d11f85970fce [ /tmp ]# cat test.php  
<?php  
// /repo/ch03/php8_error_str_empty.php  
  
$str = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ';  
$str[5] = '';  
echo $str . "\n";  
  
root@d11f85970fce [ /tmp ]# php test.php  
ABCDEFGHJKLMNOPQRSTUVWXYZ  
root@d11f85970fce [ /tmp ]#
```

Chapter 4: Making Direct C-Language Calls

php / php-src Watch 1.5k Star 29.1k Fork 6.5k

[Code](#) [Pull requests 277](#) [Actions](#) [Security](#) [Insights](#)

master php-src / ext / [Go to file](#)

dstogov Merge branch 'PHP-8.0' 15 hours ago [History](#)

..		
bcmath	Fix memory leak with bcsqrt on number $0 < X < 1$	last month
bz2	Verify parameter names of function aliases	2 months ago
calendar	Fix test	3 months ago
com_dotnet	Fix COMPersistHelper::__construct() stub	last month
ctype	Add more precise type info for stubs	4 months ago
curl	Allow PHP_CURL_APIs to be imported by DLLs	last month
date	Merge branch 'PHP-8.0'	2 days ago

Available Releases				
Version	State	Release Date	Downloads	
1.9.0	stable	2020-11-25	mongodb-1.9.0.tgz (1269.9kB) DLL	[Changelog]

FFI Method	Returns	Notes
<code>arrayType()</code>	<code>FFI\CType</code>	Produces a C array. The first argument is the data type produced by a call to <code>FFI::type()</code> . The second argument is an array representing the dimensions of the array.
<code>cdef()</code>	<code>FFI</code>	As an argument you must provide a C language code block. The FFI instance returned provides a bridge between the PHP program and the C language library.
<code>new()</code>	<code>FFI\CData</code>	Produces a native C data structure. If the first argument is a string, it must be a valid C type. Otherwise, supply an <code>FFI\CType</code> object as the first argument.
<code>scope()</code>	<code>FFI</code>	Creates an FFI instance based upon <i>pre-loaded</i> C declarations.
<code>string()</code>	<code>string</code>	Returns a native PHP string from an <code>FFI\CData</code> instance consisting of given number of bytes.
<code>type()</code>	<code>FFI\CType</code>	Creates an <code>FFI\CType</code> object that can be used with other FFI extension classes.

FFI Method	Returns	Notes
<code>isNull()</code>	<code>bool</code>	Returns <code>TRUE</code> if the <code>FFI\CData</code> instance is a null pointer.
<code>memcmp()</code>	<code>int</code>	Operates in much the same manner as the PHP <code>strcmp()</code> function, or the <code><=></code> operator. Returns a value less than 0 if the first <code>FFI\CData</code> instance is less than the second. Returns 0 if both are equal, and returns a value greater than 0 if the second argument's value is greater than the first.

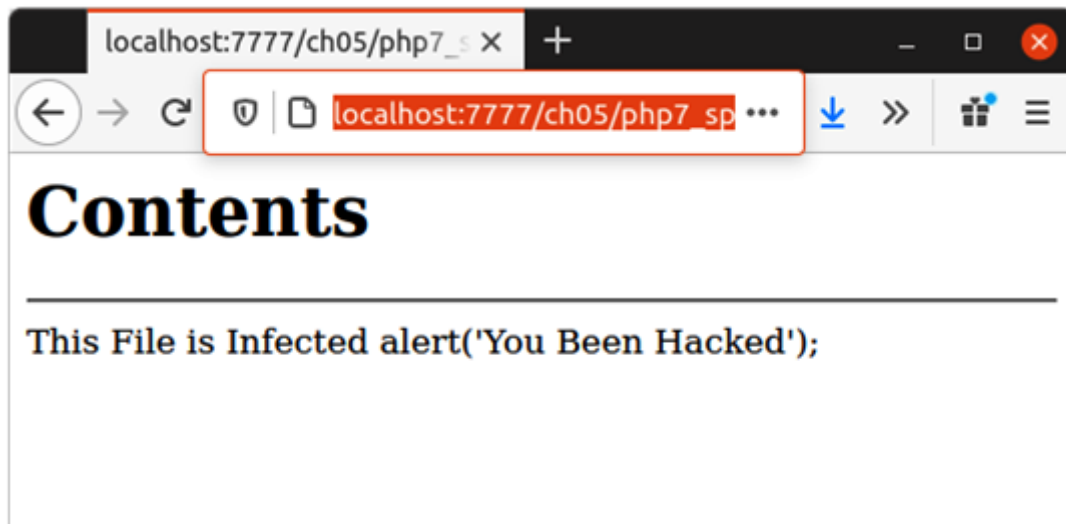
FFI Method	Returns	Notes
<code>alignof()</code>	<code>int</code>	Returns the <i>alignment</i> of an <code>FFI\CType</code> or <code>FFI\CData</code> instance. A great way to visualize the return value would be the <i>block size</i> in memory.
<code>sizeof()</code>	<code>int</code>	Returns the amount of memory used by an <code>FFI\CType</code> or <code>FFI\CData</code> instance.
<code>typeof()</code>	<code>FFI\CType</code>	Returns the data type of an <code>FFI\CData</code> object. The data type returned is not a PHP native data type. Instead what's returned is an <code>FFI\CType</code> instance that identifies the C data type.

FFI Method	Returns	Notes
<code>addr()</code>	<code>FFI\CData</code>	Creates pointer to C data
<code>cast()</code>	<code>FFI\CData</code>	Performs a C language type cast
<code>free()</code>	<code>void</code>	Releases an FFI pointer. There is no direct equivalent in PHP
<code>memcpy()</code>	<code>void</code>	Copies specified bytes from one <code>FFI\CData</code> instance to another.
<code>memset()</code>	<code>void</code>	Populates a <code>FFI\CData</code> instance with <code>\$size</code> bytes consisting of <code>\$value</code> .

Chapter 5: Discovering Potential OOP Backward-Compatibility Breaks

```
object(Test)#1 (3) {  
  ["name"]=> string(4)  
  "Doug"  
  
  ["key":"Test":private]=>  
  int(12345)  
  
  ["status":protected]=>  
  array(3) {  
    [0]=> string(1)  
    "A"  
    [1]=> string(1)  
    "B"  
    [2]=> string(1)  
    "C"  
  }  
}
```

```
object(Test)#2 (3) {  
  ["name"]=> string(4)  
  "Doug"  
  
  ["key":"Test":private]=>  
  int(12345)  
  
  ["status":protected]=>  
  array(3) {  
    [0]=> string(1)  
    "A"  
    [1]=> string(1)  
    "B"  
    [2]=> string(1)  
    "C"  
  }  
}
```



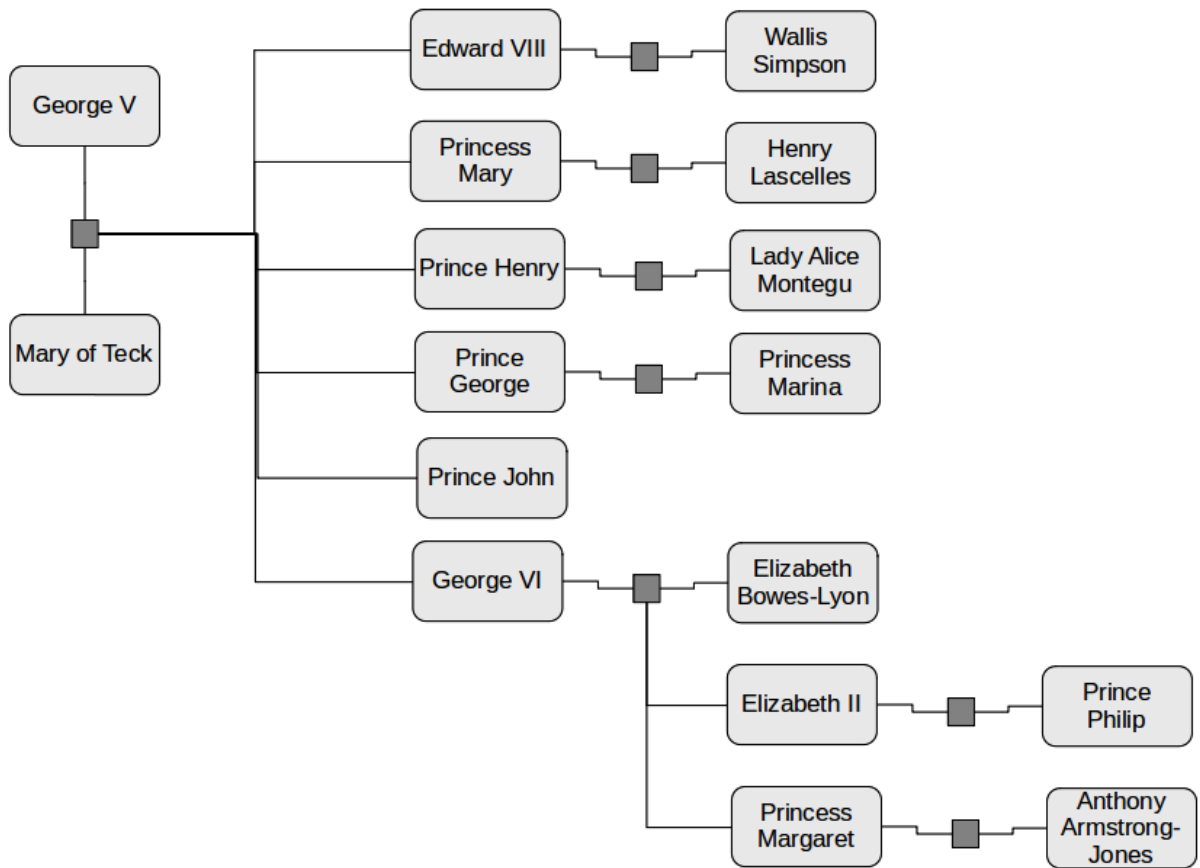
Chapter 6: Understanding PHP 8 Functional Differences

No images...

Chapter 7: Avoiding Traps When Using PHP 8 Extensions

Extension	Method	Returns
Core	socket_create() socket_create_listen() socket_accept() socket_import_stream() socket_addrinfo_connect() socket_addrinfo_bind() socket_wsaprotocol_info_import() socket_addrinfo_lookup()	Socket Socket Socket Socket Socket Socket Socket array of AddressInfo
cURL	curl_init() curl_multi_init() curl_share_init()	CurlHandle CurlMultiHandle CurlShareHandle
Enchant	enchant_broker_init() enchant_broker_request_dict() enchant_broker_request_pwl_dict()	EnchantBroker EnchantDictionary EnchantDictionary
GD	imagecreate*()	GdImage
OpenSSL	openssl_x509_read() openssl_csr_sign() openssl_csr_new() openssl_pkey_new()	OpenSSLCertificate OpenSSLCertificate OpenSSLCertificateSigningRequest OpenSSLAsymmetricKey
Semaphore	msg_get_queue() sem_get() shm_attach()	SysvMessageQueue SysvSemaphore SysvSharedMemory
Shared Memory	shmop_open()	Shmop
XML Parser	xml_parser_create() xml_parser_create_ns()	XMLParser XMLParser
Zlib	inflate_init() deflate_init()	InflateContext DeflateContext

Extension	Implements IteratorAggregate
Date	DatePeriod
DOM	DOMNamedNodeMap and DOMNodeList
Intl	IntlBreakIterator and ResourceBundle
MySQLi	mysqli_result
PDO_MySQL	PDOStatement
SPL	SplFixedArray





Fixed point implementation of the bilinear interpolation (default (also on image creation))

Old Compile Flag	New Compile Flag
<code>--with-gd</code>	<code>--enable-gd</code>
<code>--with-jpeg-dir=DIR</code>	<code>--with-jpeg</code>
<code>--with-xpm-dir=DIR</code>	<code>--with-xpm</code>
<code>--with-vpx-dir=DIR</code>	<code>--with-webp</code>
<code>--with-png-dir=DIR</code>	removed: libpng is required
<code>--with-zlib-dir</code>	removed: zlib is required

Extension	Library	Minimum Vers
PgSQL	libpq	9.1
PDO_PGSQL	libpq	9.1
MySQLi	libmysqlclient	5.1
PDO_MySQL	libmysqlclient	5.1

Extension	Functions	Notes
Date	<code>mktime()</code> <code>gmmktime()</code>	The first argument (<code>\$hour</code>) is now mandatory
Enchant	<code>enchant_broker_list_dicts()</code> <code>enchant_broker_describe()</code> <code>enchant_dict_suggest()</code>	If no results, these three functions now return an empty array instead of <code>NULL</code>
Tidy	<code>tidy_repair_string()</code>	The <code>\$use_include_path</code> parameter is no longer supported.

Extension	Function	Returns
Core	socket_create() socket_create_listen() socket_accept() socket_import_stream() socket_addrinfo_connect() socket_addrinfo_bind() socket_wsaprotocol_info_import() socket_addrinfo_lookup()	Socket Socket Socket Socket Socket Socket Socket array of AddressInfo
cURL	curl_init() curl_multi_init() curl_share_init()	CurlHandle CurlMultiHandle CurlShareHandle
Enchant	enchant_broker_init() enchant_broker_request_dict() enchant_broker_request_pwl_dict()	EnchantBroker EnchantDictionary EnchantDictionary
GD	imagecreate*()	GdImage
OpenSSL	openssl_x509_read() openssl_csr_sign() openssl_csr_new() openssl_pkey_new()	OpenSSLCertificate OpenSSLCertificate OpenSSLCertificateSigningRequest OpenSSLAsymmetricKey
Semaphore	msg_get_queue() sem_get() shm_attach()	SysvMessageQueue SysvSemaphore SysvSharedMemory
Shared Memory	shmop_open()	Shmop
XML Parser	xml_parser_create() xml_parser_create_ns()	XMLParser XMLParser
Zlib	inflate_init() deflate_init()	InflateContext DeflateContext

Chapter 8: Learning about PHP 8's Deprecated or Removed Functionality

Removed Function	Suggested Replacement
<code>__autoload()</code>	<code>spl_autoload_register()</code>
<code>convert_cyr_string()</code>	<code>mb_convert_encoding()</code>
<code>create_function()</code>	<code>function () {}</code> <code>fn () => <expression></code>
<code>each()</code>	<code>ArrayIterator</code>
<code>ezmlm_hash()</code>	none other than running an OS command
<code>fgetss()</code>	<code>strip_tags(fgets())</code>
<code>get_magic_quotes_gpc()</code> <code>get_magic_quotes_runtime()</code>	none: the magic quotes feature itself has been removed from PHP
<code>hebrevc()</code>	<code>hebrew()</code>
<code>is_real()</code>	<code>is_float()</code>
<code>money_format()</code>	<code>NumberFormatter::formatCurrency</code>
<code>restore_include_path()</code>	<code>ini_restore('include_path')</code>

Extension	Removed Function	Suggested Replacement
Exif	<code>read_exif_data()</code>	<code>exif_read_data()</code>
GD	<code>image2wbmp()</code> <code>png2wbmp()</code> <code>jpeg2wbmp()</code>	create the image as normal, then use <code>imagewbmp()</code>
GMP	<code>gmp_random()</code>	<code>gmp_random_range()</code> or <code>gmp_random_bits()</code>
Imap	<code>imap_header()</code>	<code>imap_headerinfo()</code>
LDAP	<code>ldap_sort()</code>	<code>\$res = ldap_search();</code> and then: <code>usort(\$res);</code>
	<code>ldap_control_paged_result()</code> <code>ldap_control_paged_result_response()</code>	<code>\$res = ldap_search();</code> and then implement pagination using <code>FilterIterator</code>
OCI8	<code>oci_internal_debug()</code> <code>ociinternaldebug()</code>	None
Zlib	<code>gzgetss()</code>	<code>strip_tags(gzgets())</code>

Alias	Use Instead
mbereg	mb_ereg()
mbereg_match	mb_ereg_match()
mbereg_replace	mb_ereg_replace()
mbereg_search	mb_ereg_search()
mbereg_search_getpos	mb_ereg_search_getpos()
mbereg_search_getregs	mb_ereg_search_getregs()
mbereg_search_init	mb_ereg_search_init()
mbereg_search_pos	mb_ereg_search_pos()
mbereg_search_regs	mb_ereg_search_regs()
mbereg_search_setpos	mb_ereg_search_setpos()
mberegi	mb_eregi()
mberegi_replace	mb_eregi_replace()
mbregex_encoding	mb_regex_encoding()
mbsplit	mb_split()

Alias	Use Instead	Alias	Use Instead
pg_errormessage()	pg_last_error()	pg_getlastoid()	pg_last_oid()
pg_numrows()	pg_num_rows()	pg_locreate()	pg_lo_create()
pg_numfields()	pg_num_fields()	pg_lounlink()	pg_lo_unlink()
pg_cmdtuples()	pg_affected_rows()	pg_loopen()	pg_lo_open()
pg_fieldname()	pg_field_name()	pg_loclose()	pg_lo_close()
pg_fieldsize()	pg_field_size()	pg_loread()	pg_lo_read()
pg_fieldtype()	pg_field_type()	pg_lowrite()	pg_lo_write()
pg_fieldnum()	pg_field_num()	pg_loreadall()	pg_lo_read_all()
pg_result()	pg_fetch_result()	pg_loimport()	pg_lo_import()
pg_fieldprtlen()	pg_field prtlen()	pg_loexport()	pg_lo_export()
pg_fieldisnull()	pg_field_is_null()	pg_setclientencoding()	pg_set_client_encoding()
pg_freeresult()	pg_free_result()	pg_clientencoding()	pg_client_encoding()

Extension	Deprecated Functionality	Suggested Replacement
Enchant	enchant_dict_add_to_personal() enchant_dict_is_in_session() enchant_broker_free() enchant_broker_free_dict() enchant_broker_set_dict_path() enchant_broker_get_dict_path()	enchant_dict_add() enchant_dict_is_added() unset(\$enchantObject) (same) None: no longer supported (same)
OCI8	OCI-Lob OCI-Collection	OCILob OCICollection
ODBC	odbc_connect() odbc_exec()	No longer re-uses connections The flags parameter is removed
PostgreSQL	PGSQL_LIBPQ_VERSION_STR	PGSQL_LIBPQ_VERSION
	pg_connect()	Must now use a connection string
	pg_lo_import(), pg_lo_export()	First argument is now the connection
	pg_fetch_all()	Now returns empty array if no results
Reflection	ReflectionParameter::getClass() ReflectionParameter::isArray() ReflectionParameter::isCallable() ReflectionParameter::isDisabled()	ReflectionParameter::getType() (same) (same) None
LibXML	libxml_disable_entity_loader()	None: no longer needed

Chapter 9: Mastering PHP 8 Best Practices

Extension	Functions No Longer Useful
cURL	<code>curl_close()</code> <code>curl_multi_close()</code> <code>curl_share_close()</code>
Exif	<code>read_exif_data()</code>
GD	<code>imagedestroy()</code>
OpenSSL	<code>openssl_x509_free()</code> *
Shared Memory	<code>shmop_close()</code> *
XMLParser	<code>xml_parser_free()</code>

Method / Property	Description
<code>\$firstElementChild</code>	Contains either the first <code>DOMElement</code> instance in this object, or <code>NULL</code> .
<code>\$lastElementChild</code>	Contains either the last <code>DOMElement</code> instance in this object, or <code>NULL</code> .
<code>\$elementChildCount</code>	Integer value representing the total number of child elements in this object.
<code>append()</code>	Appends the node to the end of the current list of child nodes.
<code>prepend()</code>	Adds the node to the beginning of the current list of child nodes.

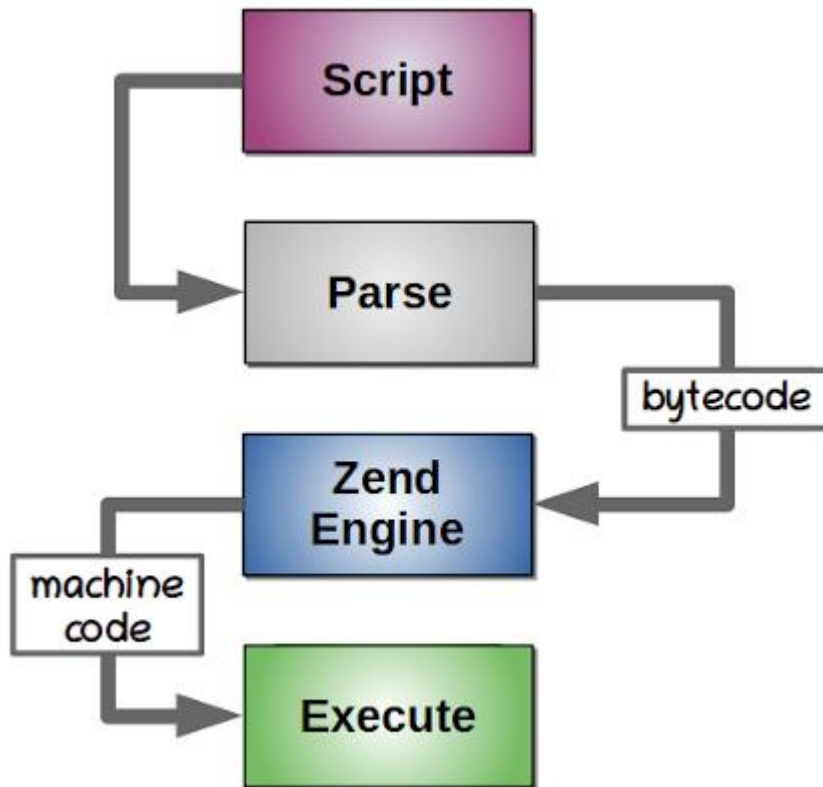
Method / Property	Description
<code>\$previousElementSibling</code>	Contains either the previous <code>DOMElement</code> instance at the same node level in this object, or <code>NULL</code> .
<code>\$nextElementSibling</code>	Contains either the next <code>DOMElement</code> instance at the same node level in this object, or <code>NULL</code> .
<code>remove()</code>	Simplified way of removing this node. Alleviates the need to first acquire the parent node.
<code>before()</code>	Adds the node at the same level in this object before this node.
<code>after()</code>	Adds the node at the same level in this object after this node.
<code>replaceWith()</code>	Replaces this node with specified element.

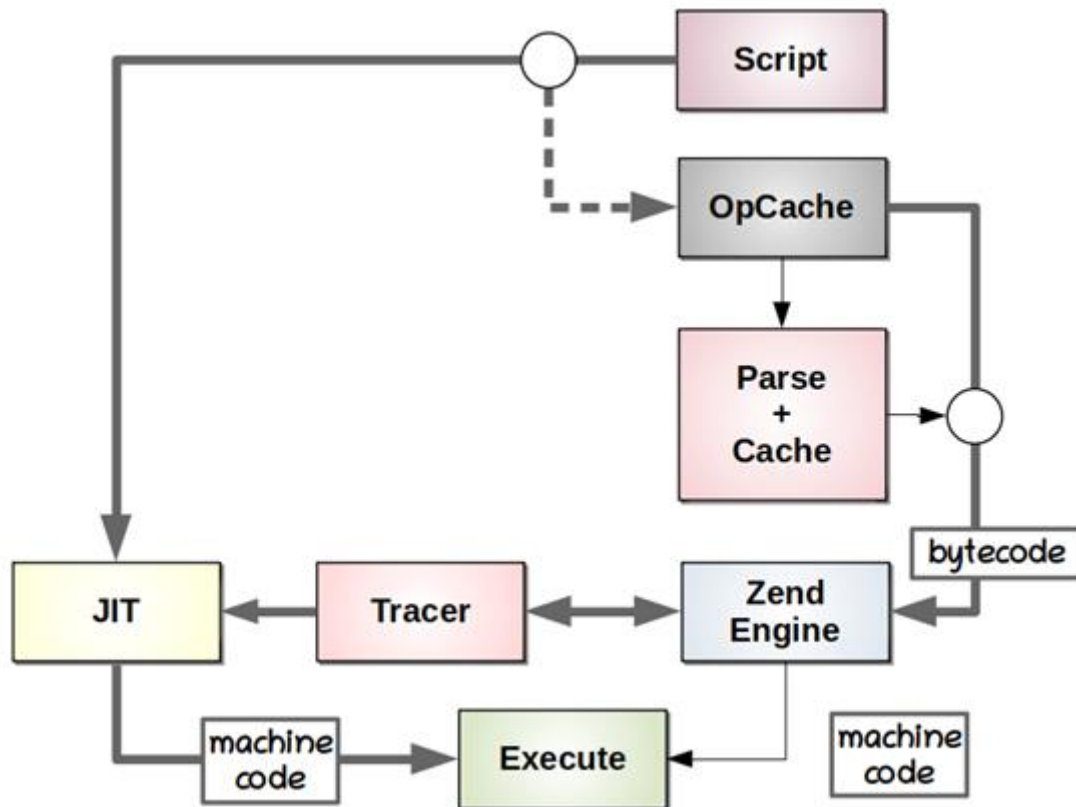
Context	New Name
<code>extends Xyz</code>	<code>Xyz@anonymous</code>
<code>implements Abc</code>	<code>Abc@anonymous</code>
<code>implements Abc, Def</code>	<code>Abc@anonymous</code>
<code>extends Xyz implements Abc</code>	<code>Xyz@anonymous</code>

Namespace + Class	Old Tokenization	New Tokenization
<code>JustClass</code>	<code>T_STRING</code>	<code>T_STRING</code>
<code>AbsoluteClass</code>	<code>T_NS_SEPARATOR</code> <code>+ T_STRING</code>	<code>T_NAME_FULLY_QUALIFIED</code>
<code>Some\Thing\Class</code>	<code>T_STRING</code> <code>+ T_NS_SEPARATOR</code> <code>+ T_STRING</code>	<code>T_NAME_QUALIFIED</code>
<code><namespace>\Class</code>	<code>T_NAMESPACE</code> <code>+ T_NS_SEPARATOR</code> <code>+ T_STRING</code>	<code>T_NAME_RELATIVE</code>

Chapter 10: Improving Performance

```
|00000840 ff ff ff ff 00 00 00 00 ff ff ff ff ff ff ff ff |.....|
|00000850 40 02 00 00 00 00 00 00 0d 00 00 00 ff ff ff ff |@.....|
|00000860 1d aa 83 9f 7a c3 f4 d5 20 08 00 00 00 00 00 00 |...Z...|
|00000870 01 00 00 00 56 00 00 00 1d aa 83 9f 7a c3 f4 d5 |...V...Z...|
|00000880 39 00 00 00 00 00 00 00 00 70 68 70 38 5c 6a 69 |9.....php8\ji|
|00000890 74 5c 6d 61 6e 64 65 6c 62 72 6f 74 2f 72 65 70 |t\mandelbrot/rep|
|000008a0 6f 2f 73 72 63 2f 50 68 70 38 2f 4a 69 74 2f 4d |o/src/Php8/Jit/M|
|000008b0 61 6e 64 65 6c 62 72 6f 74 2e 70 68 70 3a 35 24 |andelbrot.php:5$|
|000008c0 30 00 00 00 00 00 00 00 01 00 00 00 56 00 00 00 |0.....V...|
|000008d0 8c 06 62 77 f6 61 07 b3 13 00 00 00 00 00 00 00 |..bw.a.....|
|000008e0 50 68 70 38 5c 4a 69 74 5c 4d 61 6e 64 65 6c 62 |Php8\Jit\Mandelb|
|000008f0 72 6f 74 00 00 00 00 00 ff ff ff ff ff ff ff ff |rot.....|
```





Internal Constant	Value	Meaning
ZEND_JIT_DEBUG_ASM	1	Dump assembler code
ZEND_JIT_DEBUG_SSA	2	Dump static single assignments
ZEND_JIT_DEBUG_REG_ALLOC	4	Register allocation info
ZEND_JIT_DEBUG_ASM_STUBS	8	Assembler stubs
ZEND_JIT_DEBUG_PERF	16	Create perf.map for Linux perf
ZEND_JIT_DEBUG_PERF_DUMP	32	Create perf.dump for Linux perf
ZEND_JIT_DEBUG_OPROFILE	64	Debug info for Linux Oprofile
ZEND_JIT_DEBUG_VTUNE	128	Debug info for Intel VTune
ZEND_JIT_DEBUG_GDB	256	Debug using GNU debugger
ZEND_JIT_DEBUG_SIZE	512	Memory sizing
ZEND_JIT_DEBUG_ASM_ADDR	1024	Assembler addressing
ZEND_JIT_DEBUG_TRACE_START	4096	Trace start
ZEND_JIT_DEBUG_TRACE_STOP	8192	Trace stop
ZEND_JIT_DEBUG_TRACE_COMPILED	16384	Trace compiled
ZEND_JIT_DEBUG_TRACE_EXIT	32768	Trace exit
ZEND_JIT_DEBUG_TRACE_ABORT	65536	Trace abort
ZEND_JIT_DEBUG_TRACE_BLACKLIST	131072	Trace blacklist
ZEND_JIT_DEBUG_TRACE_BYTECODE	262144	Trace bytecode reference
ZEND_JIT_DEBUG_TRACE_TSSA	524288	Trace static single assignment
ZEND_JIT_DEBUG_TRACE_EXIT_INFO	1048576	Trace exit information


opcache.* Setting	Type	Description
jit_bisect_limit	int	Much like a break point, this tells JIT to stop after this limit has been reached. Use this to isolate the process causing the break.
jit_prof_threshold	float	If your "T" value is set to 2, this setting sets the level at which a function is considered "hot". (# calls to this func) divided by the (# calls to all funcs) must be > the value set here. For example, 0.1 means that functions that comprise more than 10% of all calls will be compiled
jit_max_root_traces	int	Maximum number of root traces.
jit_max_side_traces	int	Maximum number of side traces.
jit_max_exit_counters	int	Maximum number of side trace exit counters. Puts a limit on the total number of side traces.
jit_hot_loop	int	A loop is considered "hot" after this many iterations.
jit_hot_func	int	A function is considered "hot" after this many iterations.
jit_hot_return	int	A return is considered "hot" after this many iterations.
jit_hot_side_exit	int	An exit is considered "hot" after this many iterations.
jit_blacklist_root_trace	int	Maximum times a root trace compilation can fail before being blacklisted.
jit_blacklist_side_trace	int	Maximum times a side trace compilation can fail before being blacklisted.
jit_max_loop_unrolls	int	Maximum times a an attempt to close the loop on a side trace compilation can fail before being blacklisted.
jit_max_recursive_calls	int	Maximum number of times recursive call loops closings can fail.
jit_max_recursive_returns	int	Maximum number of times recursive return loops closings can fail.
jit_max_polymorphic_calls	int	Maximum number of times polymorphic (dynamic or method) calls can be inlined. Any call above this limit is classed as megamorphic and is not inlined.

Chapter 11: Migrating Existing PHP Apps to PHP 8

	A	B	C
68	sample_data/phpldapadmin-1.2.3/lib	schema_functions.php	1 PASSED this scan: scanRemovedFunctions PASSED this scan: scanIsResource The following magic methods were detected: PASSED this scan: scanMagicSignatures
69	sample_data/phpldapadmin-1.2.3/lib	ds_ldap_pla.php	0 PASSED this scan: scanRemovedFunctions PASSED this scan: scanIsResource The following magic methods were detected: Signature: __get(string \$name): mixed Actual : __get(\$key) PASSED this scan: scanMagicSignatures WARNING: using the "@" operator to suppress warnings no longer works in PHP 8.
70	sample_data/phpldapadmin-1.2.3/lib	AttributeFactory.php	1 PASSED this scan: scanRemovedFunctions PASSED this scan: scanIsResource PASSED this scan: scanMagicSignatures
71	sample_data/phpldapadmin-1.2.3/lib	AJAXTree.php	1 PASSED this scan: scanRemovedFunctions PASSED this scan: scanIsResource PASSED this scan: scanMagicSignatures
72	sample_data/phpldapadmin-1.2.3/lib	Query.php	1 PASSED this scan: scanRemovedFunctions PASSED this scan: scanIsResource PASSED this scan: scanMagicSignatures
73	sample_data/phpldapadmin-1.2.3/lib	ds_ldap.php	0 PASSED this scan: scanRemovedFunctions PASSED this scan: scanIsResource The following magic methods were detected: PASSED this scan: scanMagicSignatures WARNING: using the "@" operator to suppress warnings no longer works in PHP 8. WARNING: the "track_errors" php.ini directive is removed. You can no longer rely upon "\$php_errors
74	sample_data/phpldapadmin-1.2.3/lib	MassRender.php	1 PASSED this scan: scanRemovedFunctions PASSED this scan: scanIsResource PASSED this scan: scanMagicSignatures
75	sample_data/phpldapadmin-1.2.3/lib	hooks.php	0 WARNING: the following function has been removed: each. Use this instead: Use "foreach()" or ArrayIterator PASSED this scan: scanIsResource PASSED this scan: scanMagicSignatures
76	sample_data/phpldapadmin-1.2.3/lib	xmlTemplates.php	1 PASSED this scan: scanRemovedFunctions PASSED this scan: scanIsResource



Executing Mandelbrot ... but disabled output ...



Version	3.0.1
Support Xdebug on Patreon, GitHub, or as a business	

Feature	Enabled/Disabled	Docs
Development Aids	✓ enabled	[01F][5B-9]
Coverage	✗ disabled	[01F][5B-9]
GC Stats	✗ disabled	[01F][5B-9]
Profiler	✓ enabled	[01F][5B-9]
Step Debugger	✗ disabled	[01F][5B-9]
Tracing	✓ enabled	[01F][5B-9]

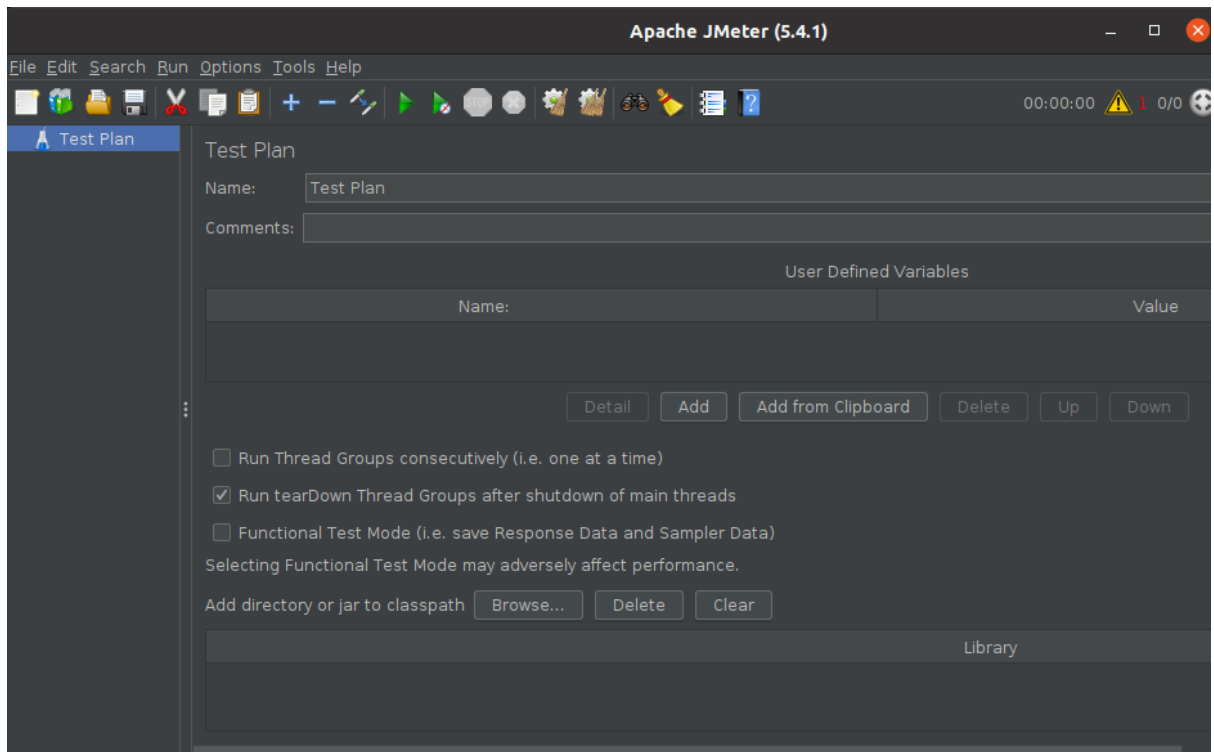
Diagnostic Log

No messages

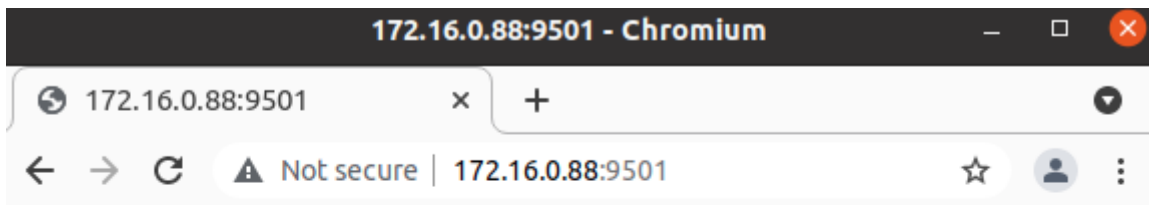
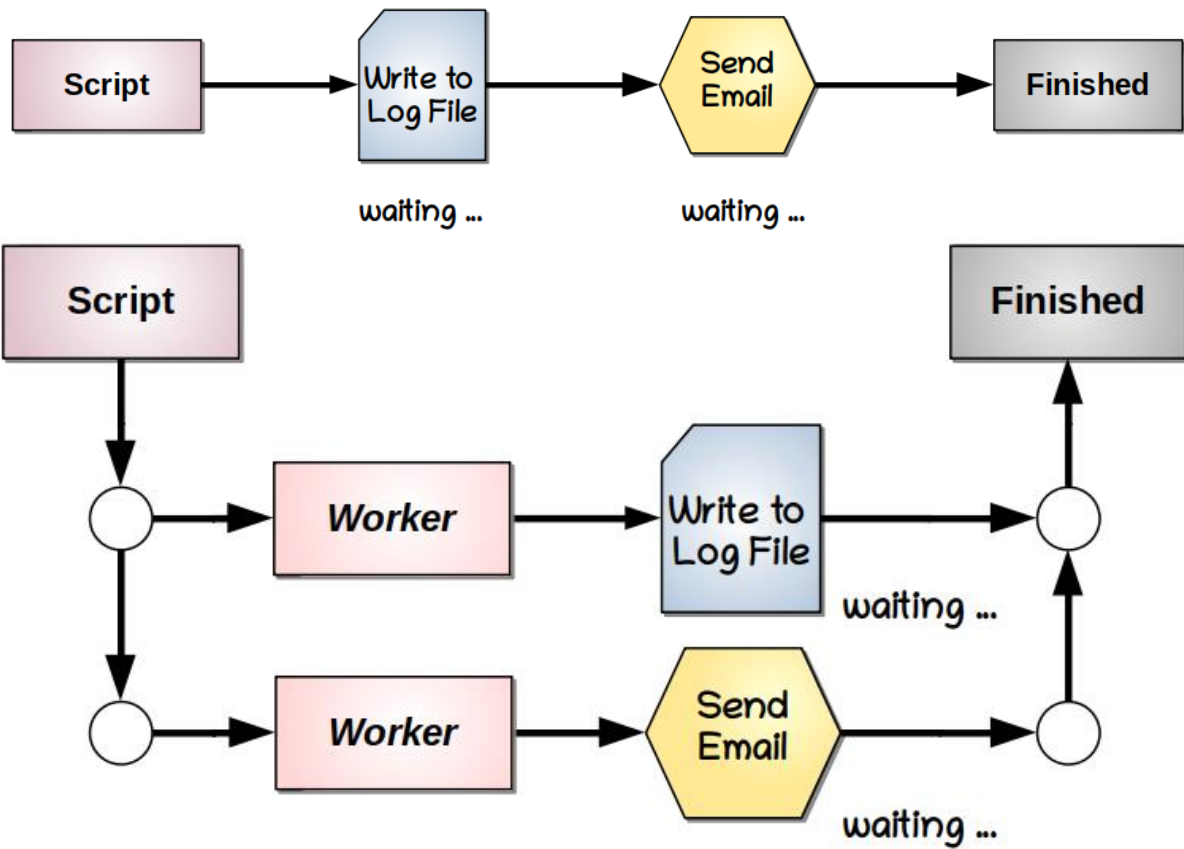
Profiler		Docs
Profile File	/tmp/cachegrind.out.12131	[01F][5B-9]

Function Tracing		Docs
Trace File	/tmp/trace.3037553963.xt	[01F][5B-9]

PHP



Chapter 12: Creating PHP 8 Applications Using Asynchronous Programming



Hello World

Option	Description
<code>--enable-openssl</code>	Set this to allows Swoole to use OpenSSL. There's a hard dependency on the OS library <code>libssl.so</code> .
<code>--with-openssl-dir</code>	This tells Swoole where to find the OpenSSL library. An example for the Docker container used for this book would be <code>--with-openssl-dir=/usr/include/openssl</code> .
<code>--enable-http2</code>	This is especially important when you are using Swoole directly from the comand line. This option allows Swoole to process HTTP2 requests using its own built-in library <code>nghttp2</code> .
<code>--enable-swoole-json</code>	Makes Swoole JSON functions available. PHP <code>ext/json</code> must also be present, however this is already a default extension.
<code>--enable-swoole-curl</code>	Provides native support for cURL. For this to work properly you must also have the <code>libcurl4</code> OpenSSL development library installed on your OS.
<code>--enable-mysqlnd</code>	This option provides support for the PHP <code>mysqlnd</code> (MySQL Native Driver) module. The recommended option is to use PDO MySQL instead, in which case you do not need to enable <code>mysqlnd</code> support.
<code>--enable-sockets</code>	Use this option is you rely upon the PHP Sockets extension. Once enabled, connections created by the Sockets extension can be processed by <code>Swoole\Event::add()</code> . The best practice, however, is to use <code>Coroutine\Socket</code> instead.
<code>--enable-debug</code>	If you have <code>gdb</code> (the GNU debugger) installed, enable this option for Swoole debugging.
<code>--enable-debug-log</code>	For the development environment only, enable this option to gain access to Swoole debug logs.
<code>--enable-trace-log</code>	Enable this option to add kernel level tracing to the debug log.

Swoole\HTTP\Request Property	Equivalent PHP Super Global
<code>Request::header</code>	<code>\$_SERVER['HTTP_*']</code>
<code>Request::server</code>	<code>\$_SERVER[*]</code>
<code>Request::get</code>	<code>\$_GET</code>
<code>Request::post</code>	<code>\$_POST</code>
<code>Request::cookie</code>	<code>\$_COOKIE</code>
<code>Request::files</code>	<code>\$_FILES</code>

Fiber method	Description
<code>Fiber::start()</code>	Starts fiber execution. The callback associated with the fiber can then be suspended, canceled and resumed at will. Any arguments are passed to the callback. Suspend the fiber by making a static call <code>\$fiber::suspend()</code> . Cancel the fiber by having it throw an exception using <code>\$fiber->throw()</code> .
<code>Fiber::resume()</code>	Restarts fiber execution. Returns the value provided by <code>Fiber::suspend()</code> .
<code>Fiber::suspend()</code>	This method is made via a static call from inside the callback assigned to the fiber. You can then resume or cancel the fiber using <code>suspend()</code> or <code>throw()</code> .
<code>Fiber::throw()</code>	When calling this method, provide an instance of <code>Throwable</code> . The fiber is then canceled.
<code>Fiber::isStarted()</code> <code>Fiber::isSuspended()</code> <code>Fiber::isRunning()</code> <code>Fiber::isTerminated()</code>	These four methods return a <code>boolean</code> and are used to display the state of the fiber.
<code>Fiber::getReturn()</code>	Much like a PHP <code>Generator</code> , you can use this method to get the value provided by the callback's <code>return</code> (if any).
<code>Fiber::this()</code>	Returns the currently running fiber instance.