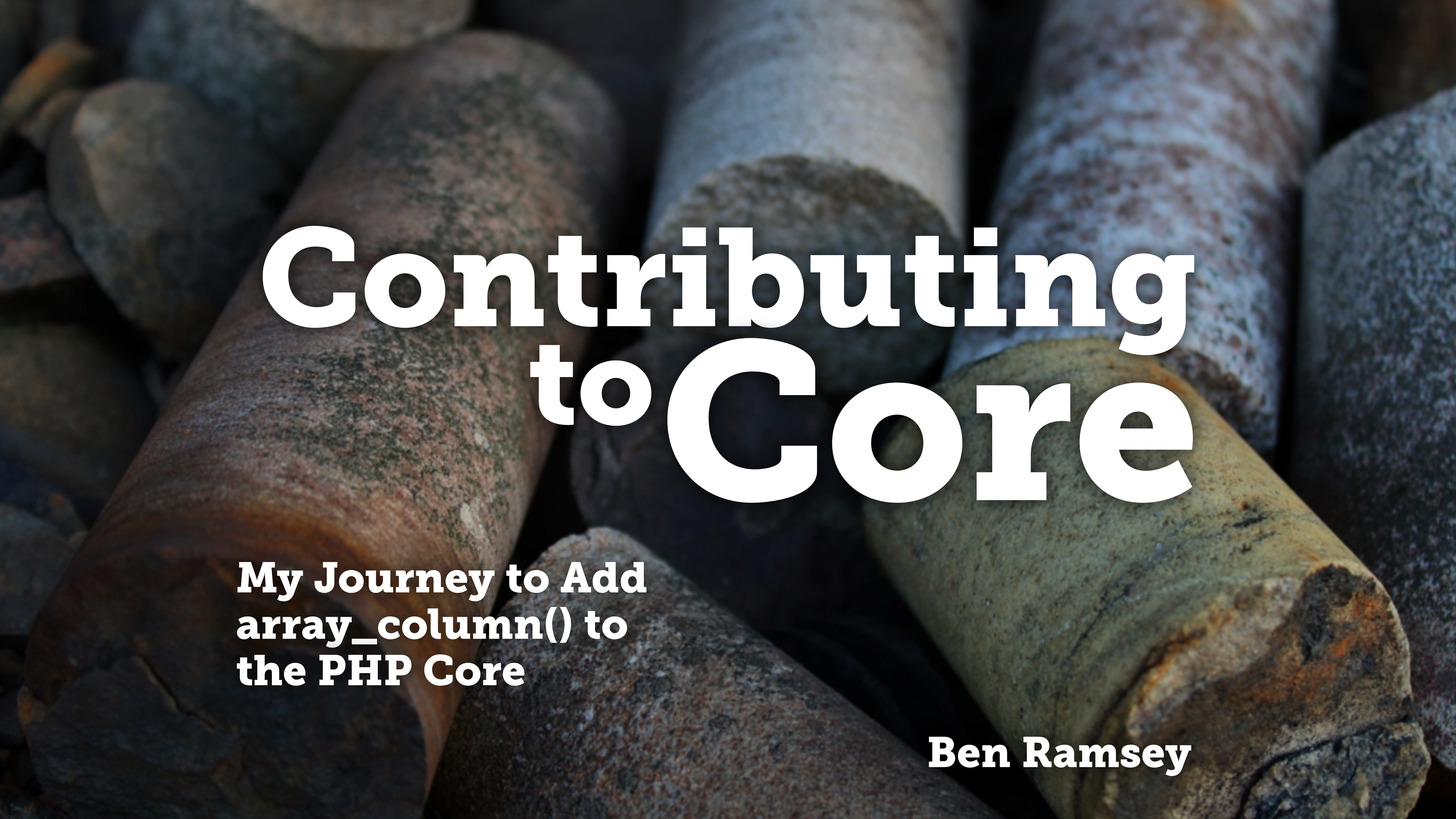




Contributing to Core

**My Journey to Add
array_column() to
the PHP Core**

Ben Ramsey

**Our
journey
begins**



array_column()

```
array array_column ( array $array , mixed  
$column_key [, mixed $index_key = null ] )
```



```
$records = array(  
    array(  
        'id' => 2135,  
        'first_name' => 'John',  
        'last_name' => 'Doe',  
    ),  
    array(  
        'id' => 3245,  
        'first_name' => 'Sally',  
        'last_name' => 'Smith',  
    ),  
    array(  
        'id' => 5342,  
        'first_name' => 'Jane',  
        'last_name' => 'Jones',  
    ),  
    array(  
        'id' => 5623,  
        'first_name' => 'Peter',  
        'last_name' => 'Doe',  
    )  
);
```



```
$first_names = array_column($records, 'first_name');  
print_r($first_names);
```


Array

(

[0] => John

[1] => Sally

[2] => Jane

[3] => Peter

)


```
$last_names = array_column($records, 'last_name', 'id');  
print_r($last_names);
```

Array

(

[2135] => Doe

[3245] => Smith

[5342] => Jones

[5623] => Doe

)

My story





A brief history of internals

A close-up photograph of several fallen maple leaves on a green lawn. The leaves are in various stages of autumn color change, ranging from bright yellow and orange to deep red and maroon. Some leaves show signs of decay, such as small holes and dark spots. The word "changes" is written in a large, white, sans-serif font across the center of the image, partially overlapping the leaves.

changes

RFC Process

wiki.php.net/rfc/howto

Subversion

wiki.php.net/rfc/phpvcs

Release Process

wiki.php.net/rfc/releaseprocess

Voting Process

wiki.php.net/rfc/voting

DVCS (Git)

wiki.php.net/rfc/dvcs

**So, you
have an
idea?**



1. Email internals

`internals@lists.php.net`

Don't be intimidated

Propose your idea

Get feedback

Don't get discouraged

2. Create an RFC

Get wiki karma, if needed

Create your RFC on the wiki by going to a URL like wiki.php.net/rfc/my_rfc and clicking "Create this page"

Follow the RFC template provided

Add your RFC to the "In Draft" section on wiki.php.net/rfc

3. Open discussion

Change the status of your RFC to "Under Discussion"

Move your RFC to the "Under Discussion" section on wiki.php.net/rfc

Send email to internals to introduce your RFC

Try to answer/resolve all questions; incorporate the feedback into your RFC

4. Call for votes

When all questions have been resolved and a minimum of 2 weeks have passed, change the RFC status to "Voting"

Move your RFC to the "Voting" section on wiki.php.net/rfc

Add the voting macro to the RFC page

Start a new thread on internals with "[VOTE]" in the subject line

5. Voting ends

Your RFC will be:

1. Accepted
2. Declined
3. Needs more discussion

In any case, update the status of the RFC
on the wiki

6. Implementation

Once implemented, update the RFC again with:

1. The version it was merged into
2. Links to the commits/pull request
3. A link to the PHP manual entry

The mailing list

*Here be
dragons?*



Not really

**Just passionate
people**

1. Respect other people working on the project.
2. Do not post when you are angry.
3. Make sure you know what you are talking about.
4. Be aware of what previous posters have said.
5. Use your real name & keep signatures to two lines.
6. Now and then, step back from an active thread.
7. Do not top post.
8. Do not hijack threads.

Creating an RFC

PHP: rfc:my_rfc

https://wiki.php.net/rfc/my_rfc?do=edit&rev=0

☆

≡

php

Edit this pageAdminLogoutramsey (ramsey)

Search

references > start

Edit the page and hit Save. See [syntax](#) for Wiki syntax. Please edit the page only if you can **improve** it. If you want to test some things, learn to make your first steps on the [playground](#).

B

I

U

TT

S

H

H

H

H

===== PHP RFC: Your Title Here =====

* Version: 0.9

* Date: 2013-02-24 (use today's date here)

* Author: Your Name, your_email_address@example.com

* Status: Draft (or Under Discussion or Accepted or Declined)

* First Published at: http://wiki.php.net/rfc/your_rfc_name

This is a suggested template for PHP Request for Comments (RFCs). Change this template to suit your RFC. Not all RFCs need to be tightly specified. Not all RFCs need all the sections below. Read <https://wiki.php.net/rfc/howto> carefully!

Quoting [\[\[http://news.php.net/php.internals/71525|Rasmus\]\]](http://news.php.net/php.internals/71525):

SavePreviewCancel

Edit summary ☐ Minor Changes

Note: By editing this page you agree to license your content under the following license: [CC Attribution-Noncommercial-Share Alike 3.0 Unported](#)

Copyright © 2001-2014 The PHP GroupOther PHP.net sitesPrivacy policy

Introduction

Proposal

Backward Incompatible Changes

Proposed PHP Version

Open Issues

Patches and Tests

Implementation

Rejected Features

PHP: rfc:array_column

← → ↻ 🏠 🔒 https://wiki.php.net/rfc/array_column ⭐ ☰

php

Edit this pageAdminLogoutramsey (ramsey)

Search

references › start › rfc › array_column

Request for Comments: array_column

- Version: 2.4
- Date: 2013-01-11
- Author: Ben Ramsey ramsey@php.net
- Status: Implemented in PHP 5.5
- First Published at: http://wiki.php.net/rfc/array_column

Introduction

This RFC proposes a new array function that returns the values of the specified column from a multi-dimensional array. Inspired by database methods like `PDOStatement::fetchColumn()`, `array_column()` moves useful functionality into the core that once had to be implemented in userland code with sometimes complex loops.

This has been submitted as a [pull request on GitHub](#), where there has already been a significant amount of discussion.

Specification



– Table of Contents

- Request for Comments:
- array_column
- Introduction
- Specification
 - Description
 - Parameters
 - Return Values
 - Examples
- Proposal and Patch
- Mailing list discussion
- Voting
- Changelog

Set up your environment



ramsey/vagrant-php-src-de x

← → ↺ 🏠 🔒 GitHub, Inc. [US] https://github.com/ramsey/vagrant-php-src-dev ☆ ☰

GitHub

This repository Search

Explore Features Enterprise Blog

Sign up Sign in

📄 ramsey / **vagrant-php-src-dev**

★ Star 30 🍴 Fork 3

Uses Vagrant to provision a basic virtual environment for hacking on the PHP core.

🕒 10 commits 🌿 1 branch 🏷️ 0 releases 👤 2 contributors

🔗

branch: master ▾

vagrant-php-src-dev / +

☰

Update the Vagrantfile for more memory, etc.

👤 ramsey authored on Feb 21

latest commit 403b20c3fc 📄

📁 puppet	Set up the VM for PHP 5.6 development by default	9 months ago
📄 .gitignore	Adding .DS_Store to the ignore list	a year ago
📄 README.md	Create README.md	a year ago
📄 Vagrantfile	Update the Vagrantfile for more memory, etc.	9 months ago

📖 README.md

vagrant-php-src-dev

Uses Vagrant to provision a basic virtual environment for hacking on the PHP core.

<> Code

🔔 Issues 0

🔗 Pull Requests 0

📶 Pulse

📊 Graphs

HTTPS clone URL

https://github.com/📄

You can clone with [HTTPS](#) or [Subversion](#). ⓘ

🖥️ Clone in Desktop

☁️ Download ZIP

Contributing to PHP Core

bram.se/php-contrib

Build cycle

Running make can take a while; no need to run configure or make clean after every code change

Don't forget to buildconf

Compiler warning messages can be difficult to see; use:

```
make 2> tee ~/php55-make.log
```

Running tests

Running make test can also take forever

You can run individual tests:

```
sapi/cli/php run-tests.php ext/  
standard/tests/array/  
array_column_basic.phpt
```

Don't forget to set your test executable:

```
export TEST_PHP_EXECUTABLE=/home/  
vagrant/src/php-src/sapi/cli/php
```


lxr.php.net

This is your friend.

It allows you to quickly search for symbols and references within the PHP source.

{ Search

x

←

→

↻

🏠

📄 lxr.php.net

☆

≡

{OpenGrok

Full Search

Definition

Symbol

File Path

History

Search

Clear

Help

In Project(s)

select all

invert selection

PECL

PHP_5_2

PHP_5_3

PHP_5_4

PHP_5_5

PHP_5_6

OpenGrok - a "wicked fast" source browser!

The following trees are available:

- [PHP – master branch \(github\)](#)
- [PHP – phpng \(github\)](#)
- [PHP – 5.6 \(github\)](#)
- [PHP – 5.5 \(github\)](#)
- [PHP – 5.4 \(github\)](#)
- [PHP – 5.3 \(github\)](#)
- [PHP – 5.2 \(github\)](#)
- [PHP – abandoned unicode tree \(github\)](#)
- [PECL \(trunk/master branch of most extensions\)](#)
- [Third party libraries \(some third party libraries used by PHP\)](#)
- [Other implementations of the PHP language \(e.g. HipHop, Phalanger\)](#)

The trees are updated hourly, except PECL, which is updated daily.

Reference: [OpenGrok Help](#), [Lucene Query Parser Syntax](#)

served by {OpenGrok on



Indexes created Thu Nov 06 21:18:28 UTC 2014

{O} Search

x

←

→

↻

🏠

lxr.php.net/search?q=array_column&defs=&refs=&path=&hist=&project=PHP_5_6

☆

≡

{OpenGrok

Home

Sort by: last modified time | **relevance** | path

Full Search

array_column

Definition

Symbol

File Path

History

Search

Clear

Help

In Project(s)

select all

invert selection

PECL

PHP_5_2

PHP_5_3

PHP_5_4

PHP_5_5

PHP_5_6

Searched **full:array_column** (Results 1 - 4 of 4) sorted by relevance

/PHP_5_6/ext/standard/

HAD

php_array.h

74

PHP_FUNCTION(array_column); **variable**

2419

* Specialized conversion rules for array_column() function

HAD

array.c

2443

/* {{{ proto array array_column(array input, mixed column_key[, mixed index_key])

2446

PHP_FUNCTION(array_column)

HAD

basic_functions.c

3302

PHP_FE(array_column, arginfo_array_column)

/PHP_5_6/

HAD

NEWS

1572

. Added array_column function which returns a column in a multidimensional

1573

array. https://wiki.php.net/rfc/array_column. (Ben Ramsey)

Completed in 36 milliseconds

served by {OpenGrok on



Indexes created Thu Nov 06 21:18:28 UTC 2014

Cross Reference: /PHP_5_6 x

← → ↺ 🏠

lxr.php.net/xref/PHP_5_6/ext/standard/array.c#2443

☆ ☰

{OpenGrok

Cross Reference: array.c

xref: /PHP_5_6/ext/standard/array.c

Home | History | Annotate | Line# | Navigate | Download Search ☐ only in /PHP_5_6/ext/standard/

2443

/* {{{ proto array array_column(array input, mixed column_key[, mixed index_key])

2444

Return the values from a single column in the input array, identified by the

2445

value_key and optionally indexed by the index_key */

2446

PHP_FUNCTION(array_column)

2447

{

2448

zval **zcolumn = NULL, **zkey = NULL, **data;

2449

HashTable *arr_hash;

2450

HashPosition pointer;

2451

2452

if (zend_parse_parameters(ZEND_NUM_ARGS() TSRMLS_CC, "hZ!|Z!", &arr_hash, &zcolumn, &zkey) == FAILURE) {

2453

return;

2454

}

2455

2456

if ((zcolumn && !array_column_param_helper(zcolumn, "column" TSRMLS_CC)) ||

2457

(zkey && !array_column_param_helper(zkey, "index" TSRMLS_CC))) {

2458

RETURN_FALSE;

2459

}

2460

2461

array_init(return_value);

2462

for (zend_hash_internal_pointer_reset_ex(arr_hash, &pointer);

2463

zend_hash_get_current_data_ex(arr_hash, (void**)&data, &pointer) == SUCCESS;

2464

zend_hash_move_forward_ex(arr_hash, &pointer)) {

2465

zval **zcolval, **zkeyval = NULL;

2466

HashTable *ht;

2467

2468

if (Z_TYPE_PP(data) != IS_ARRAY) {

2469

/* Skip elements which are not sub-arrays */

2470

continue;

2471

}

2472

ht = Z_ARRVAL_PP(data);

2473

2474

if (!zcolumn) {

2475

/* NULL column ID means use entire subarray as data */

2476

zcolval = data;

2477

2478

/* Otherwise, skip if the value doesn't exist in our subarray */

2479

else if ((Z_TYPE_PP(zcolumn) == IS_STRING) &&

**Sending a
pull request**

Implement new array functi x

← → ↺ 🏠

GitHub, Inc. [US] https://github.com/php/php-src/pull/257

 ☆ ☰

GitHub

This repository Search

Explore Features Enterprise Blog

Sign up Sign in

php / php-src

★ Star 4,895 🍴 Fork 1,703

Implement new array function array_column() #257

🔒 Closed

ramsey wants to merge 14 commits into php:PHP-5.3 from unknown repository

💬 Conversation 18

📄 Commits 14

📄 Files changed 5

+528 -0



ramsey commented on Jan 11, 2013

This pull request supersedes pull request #56. I have cleaned it up and have rebased branch PHP-5.3 onto my branch.

This pull request also includes new work as a result of feedback received on the original pull request and mailing list discussion.

References:

- https://wiki.php.net/rfc/array_column
- [#56](#)
- <http://marc.info/?l=php-internals&m=134030710017255&w=2>

Labels

None yet

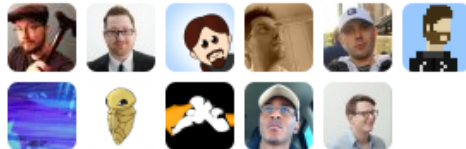
Milestone

No milestone

Assignee

No one assigned

11 participants



📄 ramsey added some commits on Apr 14, 2012

📄 Implement new array function array_column() ...

9035a1e

But I don't know C

... compile it successfully, load
... With these mechanical de
... comparatively easy.
... to print "hello, world" is

```
printf("hello, world\n");
```

Just how to run this program depends on the sys
a specific example, on the UNIX operating
source program in a file whose name
compile it with the command
cc hello.c



Find a mentor

**You win
some, you
lose some**

About the process

PHP RFCs

wiki.php.net/rfc

How to create a PHP RFC

wiki.php.net/rfc/howto

Chris Jones's blog post, "The Mysterious PHP RFC Process..."

[blogs.oracle.com/opal/entry/
the_mysterious_php_rfc_process](https://blogs.oracle.com/opal/entry/the_mysterious_php_rfc_process)

Voting RFC

wiki.php.net/rfc/voting

Developing core

PHP Internals Book

www.phpinternalsbook.com

Extending and Embedding PHP

www.amazon.com/Extending-Embedding-PHP-Sara-Golemon/dp/067232704X

php-src on GitHub

github.com/php/php-src

References about maintaining and extending PHP

wiki.php.net/internals/references

Thank you

Ben Ramsey
benramsey.com
[@ramsey](#)

joinind.in/12710

Contributing to Core: My Journey to Add array_column() to the PHP Core
Copyright © Ben Ramsey. Some rights reserved.

This work is licensed under a Creative Commons Attribution 4.0 International.

For uses not covered under this license, please contact the author.

Ramsey, Ben. "Contributing to Core: My Journey to Add array_column() to the PHP Core." True North PHP. Microsoft Canada, Mississauga. 7 Nov. 2014. Conference presentation.



Photo Credits

1. "Core Samples" by Avius Quovis,
[flickr.com/photos/avius/5684689806](https://www.flickr.com/photos/avius/5684689806)
2. "Apple Core" by Steve Maher,
[flickr.com/photos/stevemaher/4498613692](https://www.flickr.com/photos/stevemaher/4498613692)
3. "Long road" by Sjoerd van Oosten,
[flickr.com/photos/f-l-e-x/3951859740](https://www.flickr.com/photos/f-l-e-x/3951859740)
4. "PHPers out to do Amsterdam" by Aaron Wormus,
[flickr.com/photos/aaron/200158232](https://www.flickr.com/photos/aaron/200158232)
5. "Making Sage Breakfast Sausage" by Joel Johnson,
[flickr.com/photos/joeljohnson/366017497](https://www.flickr.com/photos/joeljohnson/366017497)
6. "Fallen leaves" by Brian Richardson,
[flickr.com/photos/seriousbri/6293591130](https://www.flickr.com/photos/seriousbri/6293591130)
7. "Luminous Idea" by Tiago Daniel,
[flickr.com/photos/bazik/395792175](https://www.flickr.com/photos/bazik/395792175)

Photo Credits

8. "Dragon" by Paola Kizette Cimenti,
[flickr.com/photos/kizette/2973745353](https://www.flickr.com/photos/kizette/2973745353)
9. "Nature montagnarde" by Benoit Theodore,
[flickr.com/photos/gelinh/6498667217](https://www.flickr.com/photos/gelinh/6498667217)
10. "printf('hello, world\n');" by isipeoria,
[flickr.com/photos/isipeoria/6691167811](https://www.flickr.com/photos/isipeoria/6691167811)
11. "Interns and Mentors" courtesy of Pacific Northwest National Laboratory,
[flickr.com/photos/pnnl/7161669168](https://www.flickr.com/photos/pnnl/7161669168)