

PHP Arrays

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PHP Arrays Rock!

- Better than Python Dictionaries
- Better than Java Hash Maps
- PHP Arrays have all the benefits of Python Dictionaries but they can also maintain the order of the items in the array

http://en.wikipedia.org/wiki/Associative_array

Associative Arrays

Can be key => value or simply indexed by numbers

Ignore two-dimensional arrays for now...

http://en.wikipedia.org/wiki/Associative_array

Integer Indices

```
<?php
    $stuff = array("Hi", "There");
    echo $stuff[1], "\n";
?>
```

There

Key / Value

```
<?php
    $stuff = array("name" => "Chuck",
                   "course" => "WA4E");
    echo $stuff["course"], "\n";
?>
```

WA4E

Dumping an Array

The function `print_r()` shows PHP data - it is good for debugging.

```
<?php
    $stuff = array("name" => "Chuck",
                  "course" => "WA4E");
    echo("<pre>\n");
    print_r($stuff);
    echo("\n</pre>\n");
?>
```

```
Array(
    [name] => Chuck
    [course] => WA4E
)
```

var_dump vs. print_r

```
<?php
    $stuff = array("name" => "Chuck",
                   "course" => "SI664");
    var_dump($stuff);
?>
```

```
array(2) {
    ["name"]=>
    string(5) "Chuck"
    ["course"]=>
    string(5) "SI664"
}
```

var_dump() and false

```
<?php
$thing = FALSE;
echo("One\n");
print_r($thing);
echo("Two\n");
var_dump($thing);
?>
```

```
One
Two
bool(false)
```

<http://stackoverflow.com/questions/3406171/php-var-dump-vs-print-r>

Building Up an Array

You can allocate a new item in the array and append a value at the same time using empty square braces [] on the right hand side of an assignment statement.

```
$va = array();  
$va[] = "Hello";  
$va[] = "World";  
print_r($va);
```

```
Array(  
    [0] => Hello  
    [1] => World  
)
```

Building Up an Array

You can also add new items in an array using a key.

```
$za = array();  
$za["name"] = "Chuck";  
$za["course"] = "WA4E";  
print_r($za);
```

```
Array(  
    [name] => Chuck  
    [course] => WA4E  
)
```

Looping Through an Array

```
<?php
    $stuff = array("name" => "Chuck",
                   "course" => "SI664");
    foreach($stuff as $k => $v ) {
        echo "Key=", $k, " Val=", $v, "\n";
    }
?>
```

Key=name Val=Chuck

Key=course Val=SI664

Looping Through an Array

```
<?php
    $stuff = array("Chuck","SI664");
    foreach($stuff as $k => $v ) {
        echo "Key=", $k, " Val=", $v, "\n";
    }
?>
```

Key=0 Val=Chuck

Key=1 Val=SI664

Counted Loop Through an Array

```
<?php
    $stuff = array("Chuck","SI664");
    for($i=0; $i < count($stuff); $i++) {
        echo "I=", $i, " Val=", $stuff[$i], "\n";
    }
?>
```

I=0 Val=Chuck

I=1 Val=SI664

Arrays of Arrays

The elements of an array can be many things other than a string or integer. You can even have objects or other arrays.

```
$products = array(  
    'paper' => array(  
        'copier' => "Copier & Multipurpose",  
        'inkjet' => "Inkjet Printer",  
        'laser' => "Laser Printer",  
        'photo' => "Photographic Paper"),  
    'pens' => array(  
        'ball' => "Ball Point",  
        'hilite' => "Highlighters",  
        'marker' => "Markers"),  
    'misc' => array(  
        'tape' => "Sticky Tape",  
        'glue' => "Adhesives",  
        'clips' => "Paperclips")  
);
```

```
echo $products["pens"]["marker"];
```

Markers