



Arrays

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An **array** is a special variable, which can hold more than one value at a time. If you have a list of items (a list of names, for example), storing them in single variables would look like this:

```
$name1 = "David";  
$name2 = "Amy";  
$name3 = "John";
```

But what if you have 100 names on your list? The solution: Create an **array**!

Numeric Arrays

Numeric or indexed arrays associate a numeric index with their values. The index can be assigned automatically (index always starts at **0**), like this:

```
$names = array("David", "Amy", "John");
```

As an alternative, you can assign your index manually.

```
$names[0] = "David";  
$names[1] = "Amy";  
$names[2] = "John";
```

We defined an **array** called **\$names** that stores three values. You can access the **array** elements through their indices.

```
echo $names[1]; // Outputs "Amy"
```

Try It Yourself

Remember that the first element in an **array** has the index of **0**, not 1.

Numeric Arrays

You can have integers, strings, and other data types together in one **array**.
Example:

```
<?php  
$myArray[0] = "John";  
$myArray[1] = "<strong>PHP</strong>";  
$myArray[2] = 21;  
  
echo "$myArray[0] is $myArray[2] and knows $myArray[1]";  
  
// Outputs "John is 21 and knows PHP"  
?>
```

Tap **Try It Yourself** to play around with the code!

Multi-Dimensional Arrays

A **multi-dimensional array** contains one or more arrays.

The dimension of an **array** indicates the number of indices you would need to select an element.

- For a **two-dimensional array**, you need two indices to select an element
- For a **three-dimensional array**, you need three indices to select an element

Arrays more than three levels deep are difficult to manage.

Multi-Dimensional Arrays

Let's create a two-dimensional **array** that contains 3 arrays:

```
$people = array(  
    'online'=>array('David', 'Amy'),  
    'offline'=>array('John', 'Rob', 'Jack'),  
    'away'=>array('Arthur', 'Daniel')  
);
```

Now the two-dimensional **\$people array** contains 3 arrays, and it has two indices: **row** and **column**.

To access the elements of the **\$people array**, we must point to the two indices.

```
echo $people['online'][0]; //Outputs "David"  
echo $people['away'][1]; //Outputs "Daniel"
```

The arrays in the multi-dimensional **array** can be both numeric and associative.

End.