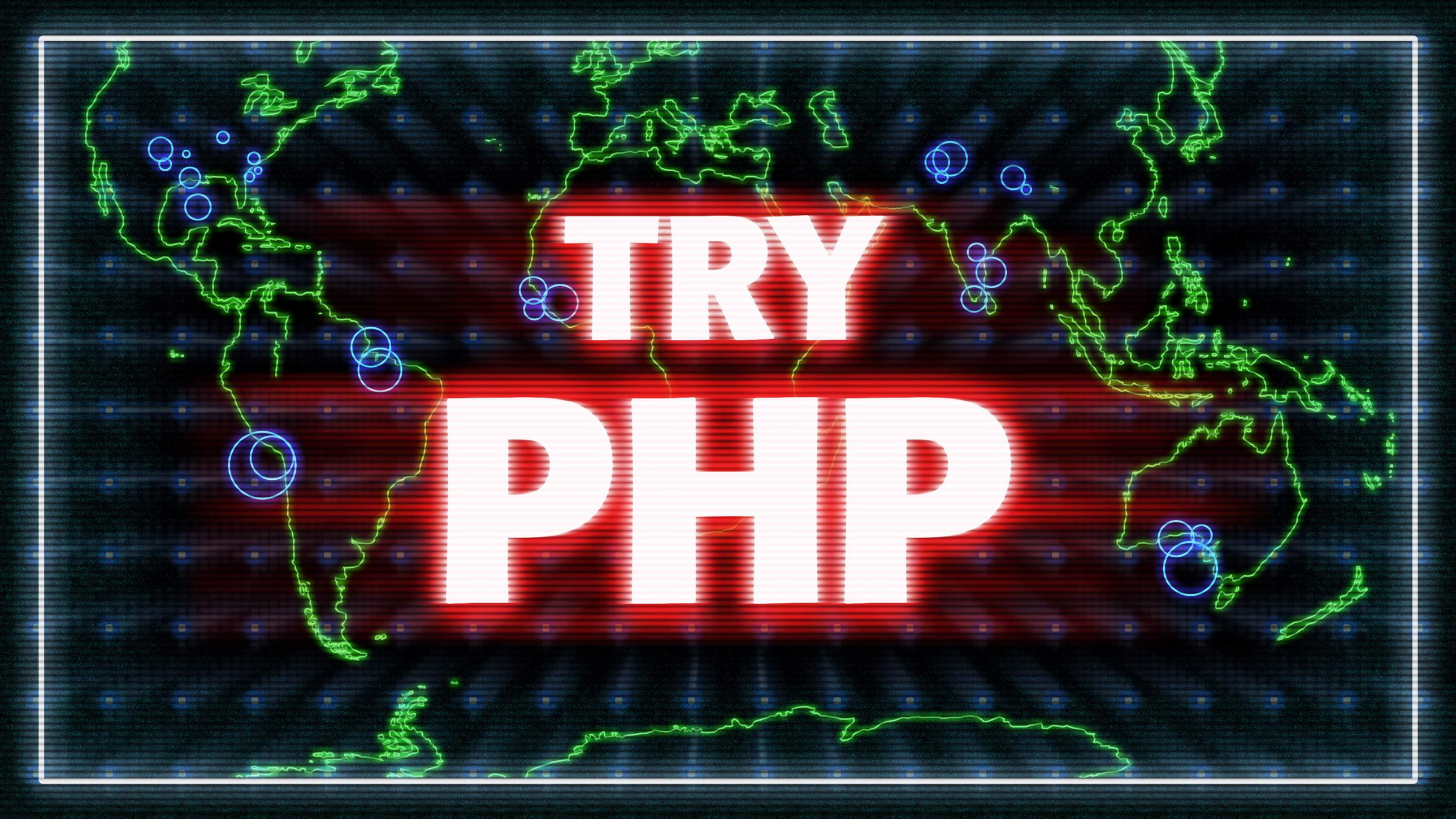

TRY
PHP

Level 1

# Getting Started

## The Basics of PHP

# What Will This Course Cover?

Here's what we'll go over in this course.

*Level 1*

Syntax Basics & Variables

*Level 2*

Simple Arrays & Associative Arrays

*Level 3*

Operators & Comparison Statements

*Level 4*

Looping Constructs

# What Do You Need to Know?

Suggested prerequisites:


Basic HTML & CSS

Front-end Foundations & Front-end Formations

# Why PHP, Why Now?

PHP is a server-side scripting language that has been around since 1997 and has grown into a modern and performant tool for building websites and applications.

- Allows execution of code inline with our HTML markup
- Simple reading and processing of files and images
- Request and response processing with forms
- High performance, scales easily

*Let's get started!*

# Starting From Scratch

Example of a simple HTML file:

**index.html**

HTML

```
<!DOCTYPE html>
<html>
 <head>
  <title></title>
 </head>
 <body>
   <p>Hello World</p>
 </body>
</html>
```

Output

Hello World

# Renaming Our File

Let's change the file from .html to .php so it can be processed by the server.

**index.php**

PHP

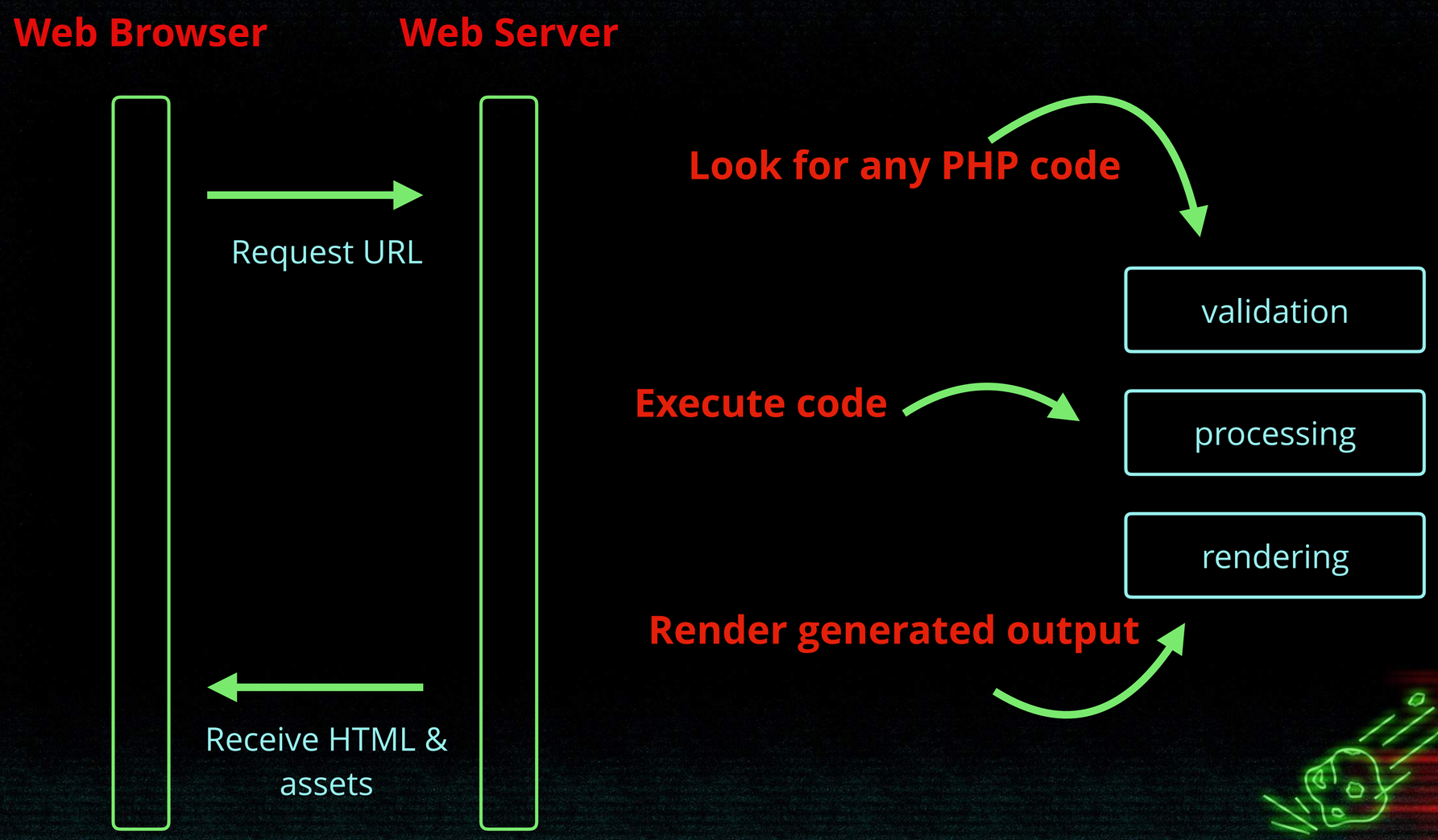
```
<!DOCTYPE html>
<html>
 <head>
  <title></title>
 </head>
 <body>
   <p>Hello World</p>
 </body>
</html>
```

*PHP files can render HTML as well as PHP!*

Output

Hello World

# What Is Different Now?




# Creating a Code Block

**index.php**

PHP

```
<!DOCTYPE html>
<html>
 <head>
  <title></title>
 </head>
 <body>
  <p><?php ?></p>
 </body>
</html>
```

*PHP code is written between these symbols*

Output

*Let's write some code that will output something so we can see it here!*

# Our First PHP Code

**index.php**

PHP

```
<!DOCTYPE html>
<html>
 <head>
  <title></title>
 </head>
 <body>
  <p><?php echo 'Hello World'; ?></p>
 </body>
</html>
```

*PHP statements end in semicolons*

*echo outputs whatever comes after it*

Output

**Hello World**

# Variables and Data Subject to Change

**index.php**

PHP

```
<!DOCTYPE html>
<html>
 <head>
  <title></title>
 </head>
 <body>
  <p><?php $name = 'Hoba'; ?></p>
 </body>
</html>
```

*Variables in PHP always start with a $*

Output

*Notice that the data in the variable isn't printed out automatically*

# Outputting Data That's Stored in Variables

**index.php**

PHP

```
<!DOCTYPE html>
<html>
 <head>
  <title></title>
 </head>
 <body>
  <p>
   <?php
    $name = 'Hoba';
    echo $name;
   ?>
  </p>
 </body>
</html>
```

*Echoing the variable outputs the data inside of it*

Output

Hoba

# Variable Naming Conventions

Variables must always begin with a $ followed by a letter.

- ✓ $name
- ✓ $_age
- ✓ $full_name
- ✓ $war_1984

- ✗ $10_best_targets
- ✗ $so-very-invalid
- ✗ stalemate

TRY PHP

# PHP Code Can Go Anywhere

**index.php**

PHP

```
<?php $name = 'Hoba'; ?>
<!DOCTYPE html>
<html>
 <head>
  <title></title>
 </head>
 <body>
  <p>
  <?php echo $name; ?>
  </p>
 </body>
</html>
```

Assign the variable

Use the variable

Output

Hoba

# Variables Can Be Used in Multiple Locations

**index.php**

PHP

```
<?php $name = 'Hoba'; ?>
<!DOCTYPE html>
<html>
 <head>
  <title><?php echo $name; ?></title>
 </head>
 <body>
  <p>
  <?php echo $name; ?>
  </p>
 </body>
</html>
```

*Same variable used twice*

Output

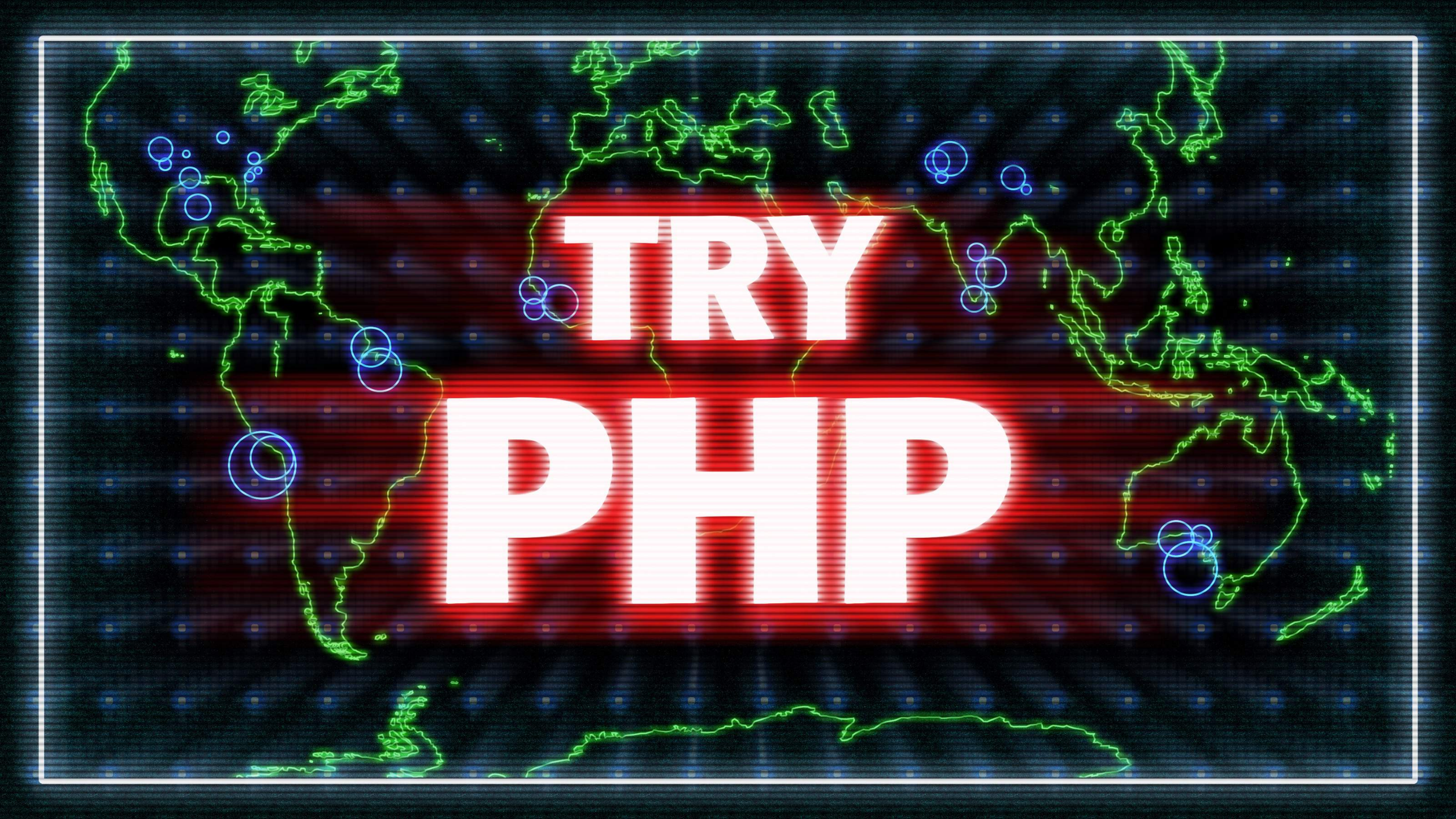
**Hoba**

# What Have We Learned?

Let's have a quick review.

- Syntax basics
- Code blocks
- PHP request and response server workflow
- Variables and naming rules
- The `echo` statement

*Now we can move on to some challenges!*


TRY
PHP

Level 1

# Getting Started

## Strings & Data

# Our Code So Far

**index.php**

PHP

```
<?php $name = 'Hoba'; ?>
<!DOCTYPE html>
<html>
 <head>
  <title><?php echo $name; ?></title>
 </head>
 <body>
  <p>
   <?php echo $name; ?>
  </p>
 </body>
</html>
```

# Combining More Data With Variables

**index.php**

PHP

```
<?php $name = 'Hoba'; ?>
<!DOCTYPE html>
<html>
 <head>
  <title><?php echo $name; ?></title>
 </head>
 <body>
  <p>
   <?php echo 'Meteor Name: ' . $name; ?>
  </p>
 </body>
</html>
```

Output

**Meteor Name: Hoba**

*Notice the space?*

*The dot means "combine these two things"*

# String Evaluation

**index.php**

PHP

```
<?php $name = 'Hoba'; ?>
<!DOCTYPE html>
<html>
 <head>
  <title><?php echo $name; ?></title>
 </head>
 <body>
  <p>
   <?php echo "Meteor Name: $name"; ?>
  </p>
 </body>
</html>
```

*Variables will print inside strings as long as you wrap them in double quotes*

Output

**Meteor Name: Hoba**

# PHP Data Types: Strings

To define a string, we will surround our information in single quotes during assignment.

```php
<?php

$size = 'epic';
$weight = '600 Million Grams';
```

# PHP Data Types: Integers

An integer is a number, either positive or negative, without a decimal point.

```php
<?php

$discovered = 1920;
$speed = 720;
```

# PHP Data Types: Floats

Floating point numbers will be any number that decimal point can “float.”

```
<?php

$width = 8.9;
$latitude = -19.5833333333;
```

# PHP Data Types: Booleans

Boolean is a data type that can contain one of two values: a true or a false.

```php
<?php

$largest = true;
$destroyed = false;
```

# PHP Data Types: The Results

```
...
  <body>
  <?php
   echo "<p>$size</p>";
   echo "<p>$weight</p>";
   echo "<p>$discovered</p>";
   echo "<p>$speed</p>";
   echo "<p>$width</p>";
   echo "<p>$latitude</p>";
   echo "<p>$largest</p>";
   echo "<p>$destroyed</p>";
  ?>
  </body>
```

Output

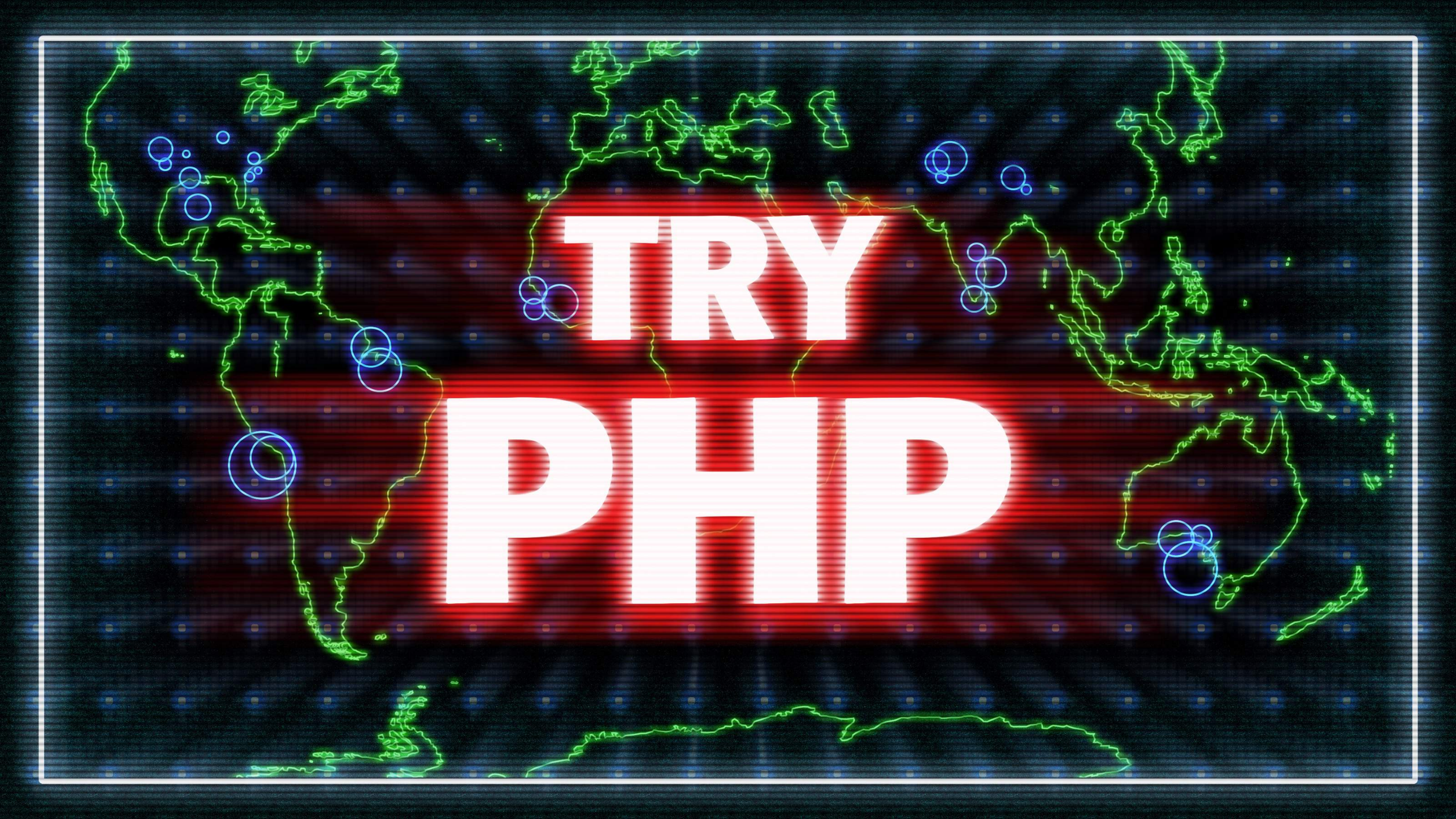
epic
600 Million Grams
1920
720
8.9
-19.5833333333
1

*If you echo a false boolean, nothing will appear*

# What Have We Learned?

Let’s have a quick review.

- String concatenation
- Strings
- Integers
- Floating point numbers or floats
- Booleans


TRY
PHP

Level 2

# Arrays

## Simple & Associative Arrays

# Why an Array?

Variables alone will not scale. We need a better way to keep our data.

**index.php**

```
<?php
// We could keep going with variables
$meteor_1 = 'Hoba';
$meteor_2 = 'Cape York';
$meteor_3 = 'Campo del Cielo';
$meteor_4 = 'Canyon Diablo';
…
$meteor_42 = 'Prefect';
```

# Arrays, a Map

An array maps values to keys, like an address for setting and recalling.

| Key | Value |
|---|---|
| 0 | Hoba |
| 1 | Cape York |
| 2 | Campo del Cielo |
| 3 | Canyon Diablo |

# Creating an Array

Let's create an empty array to hold our meteorite data.

**index.php**

```
<?php
// Create our array, using the php array function
$meteors = array();

// Create our array, using a shortcut available since 5.4
$meteors = [];
```

*The array function has good readability*

*Here, the brackets define an empty array*

# Array With Values

We can create an array with one or more key value pairs using the same function.

**index.php**

```php
<?php
// Create our array with a single value
$meteors = array('Hoba');
$meteors = ['Hoba'];

// Create array with multiple values
$meteors = array('Hoba','Cape York');

// Echo the array
echo($meteors);
```

*echo will not show the data within the array*

Output

**Array**

# Array With Values

We can create an array with one or more key value pairs using the same function.

**index.php**

```php
<?php
// Create our array with a single value
$meteors = array('Hoba');
$meteors = ['Hoba'];

// Create array with multiple values
$meteors = array('Hoba','Cape York');

// Let's take a look at our array
with an internal function
print_r($meteors);
```

*print_r will echo human-readable output*

Output

```
Array (
[0] => Hoba
[1] => Cape York
)
```

# Adding More Data to Our Array

We can append new values by placing square brackets after the array variable.

**index.php**

```php
<?php
…
// Let's add two more items
$meteors[] = 'Campo del Cielo';
$meteors[] = 'Canyon Diablo';

print_r($meteors);
```

*Empty brackets after the variable name indicate a new item in the array*

Output

```
Array (
[0] => Hoba
[1] => Cape York
[2] => Campo del Cielo
[3] => Canyon Diablo
)
```

# How Can We Access This Data?

Placing the key, or index, inside the square bracket gives us access to the value.

**index.php**

```php
<?php
$meteors = array(
    'Hoba',
    'Cape York',
    'Campo del Cielo',
    'Canyon Diablo'
    );

echo $meteors[0];
```

*Remember: Array keys are 0 indexed*

Output

```
Hoba
```

# How Can We Access This Data?

Placing the key, or index, inside the square bracket gives us access to the value.

**index.php**

```php
<?php
$meteors = array(
    'Hoba',
    'Cape York',
    'Campo del Cielo',
    'Canyon Diablo'
    );

echo $meteors[0];
echo $meteors[1];
echo $meteors[3];
```

Output

```
Hoba
Cape York
Canyon Diablo
```

# Modifying an Existing Item

Placing the key inside also allows us access to modify the value.

**index.php**

```php
<?php
…
$meteors[0] = 'Los Angeles';

print_r($meteors);
```

*Choose your key to modify*

*Then modify the value*

Output

```
Array (
[0] => Los Angeles
[1] => Cape York
[2] => Campo del Cielo
[3] => Canyon Diablo
)
```

# Storing Even More Data in an Array

What if we want to store more information about the meteorite?

| Name | Weight | Location | Year |
|---|---|---|---|
| Hoba | 600000000 | -19.58333, 17.91667 | 1920 |
| Cape York | 58200000 | 76.13333, -64.93333 | 1818 |
| Campo del Cielo | 50000000 | -27.46667, -60.58333 | 1576 |
| Canyon Diablo | 30000000 | 35.05, -111.03333 | 1891 |

# Associative vs. Index Arrays

Associative arrays allow us to use strings as the key.

**index.php**

*This array operator associates keys with values*

```php
<?php
// Create an associative array
$meteors = array(
    'Hoba' => 600000000,
    'Cape York' => 58200000,
  );

print_r($meteors);
```

*The name is our key*

Output

```
Array (
[Hoba] => 600000000
[Cape York] =>
58200000
)
```

# Accessing an Item in the Array

Instead of the numerical index, we now use the string key for access.

**index.php**

```php
<?php

// Access our data.
echo $meteors['Hoba'];
echo $meteors['Cape York'];
```

Output

```
600000000
58020000
```

# Appending a New Item

Using a string key, we can add a new item as well.

**index.php**

```php
<?php
// Add new meteorite data.
$meteors['Canyon Diablo'] = 30000000;

print_r($meteors);
```

*Place the key inside of square brackets*

*Then set your value*

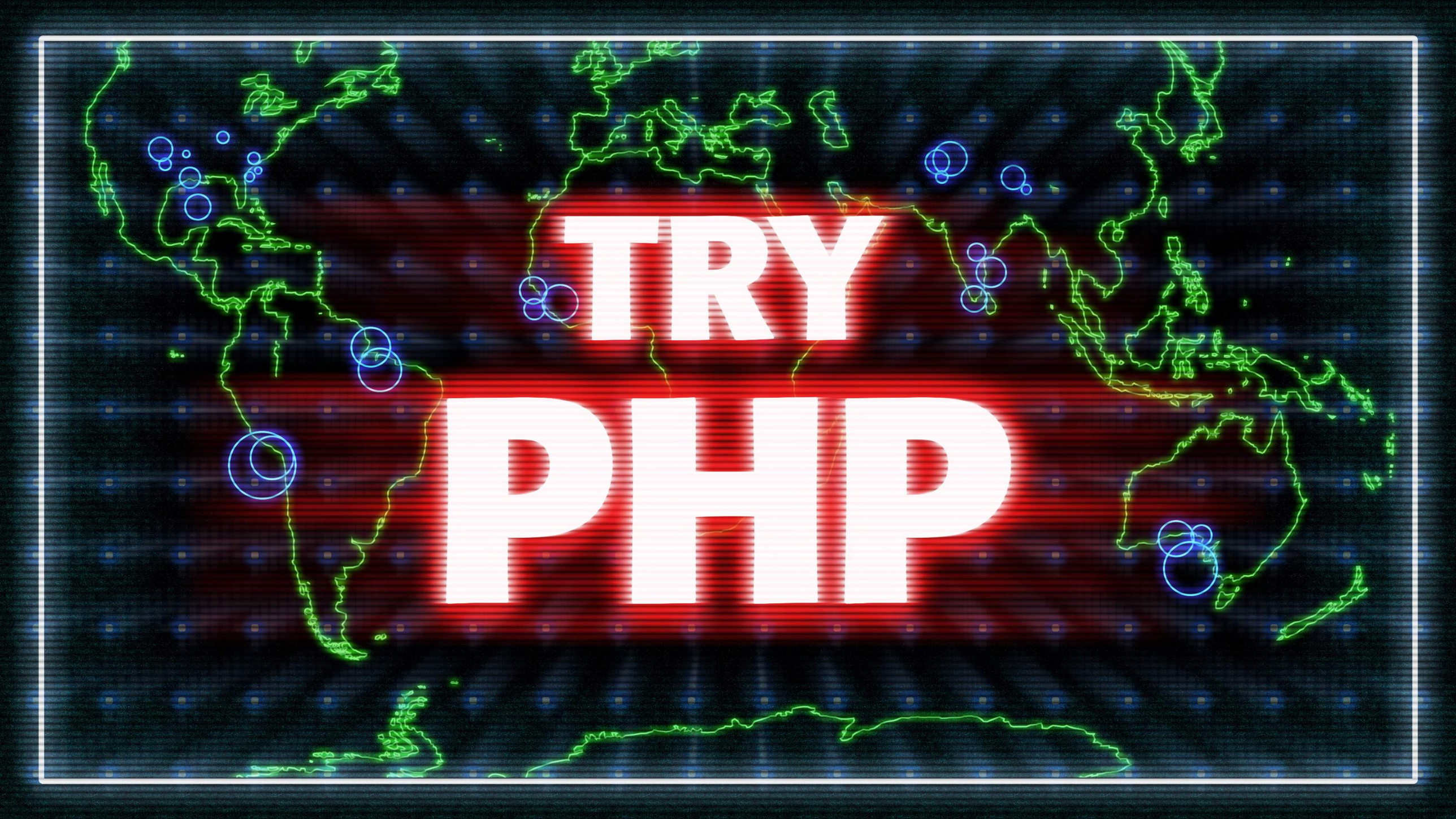
Output

```
Array(
  ...
  [Canyon Diablo]
    => 30000000
)
```

# What Have We Learned?

Let’s have a quick review.

- Numerical indexed arrays
- Associative arrays
- Array creation with values
- Modification of array data


TRY
PHP

Level 2

# Arrays

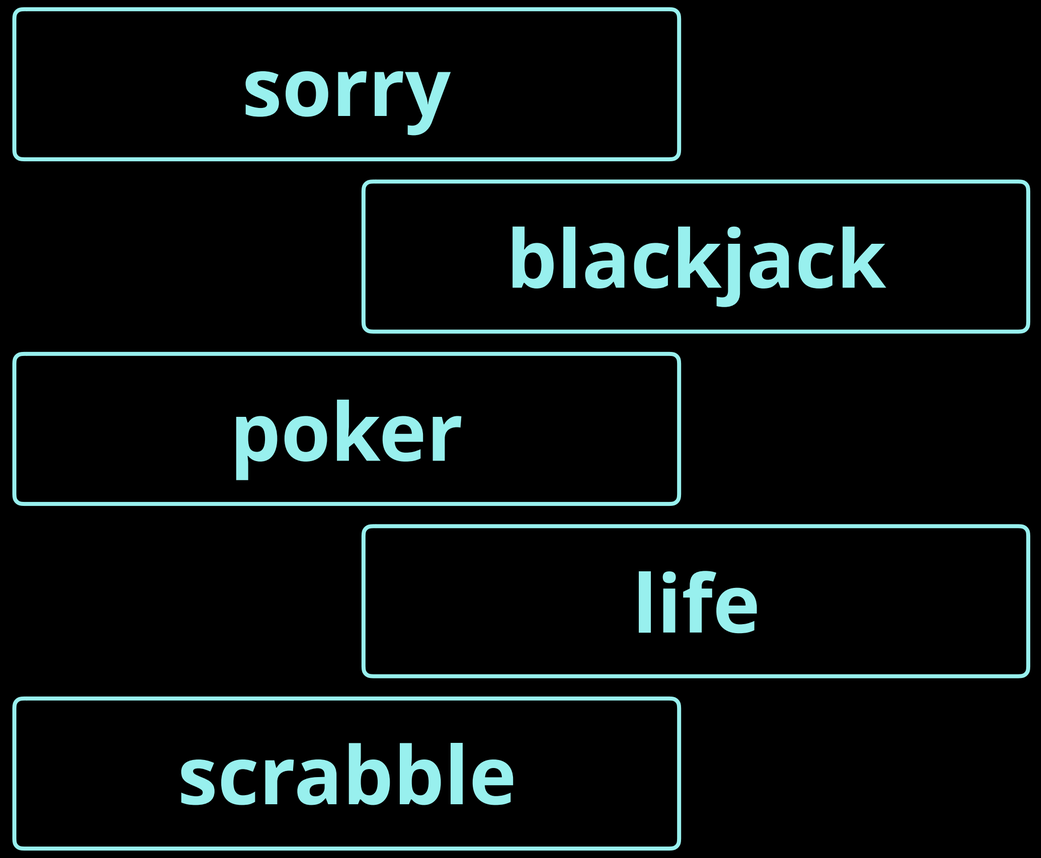
## Multidimensional Arrays & Array Functions

# An Array of Games

Arrays can help us organize data.

**index.php**

```php
<?php

$games = array(
    'sorry',
    'blackjack',
    'poker',
    'life',
    'scrabble',
);
```



# Groups of Games

How can we better organize our list of games?

sorry

blackjack

poker

life

scrabble

# Imagining Two Groups

Splitting our games into two groups can help us sort and recall the data.

| *Tabletop Games* | *Card Games* |
| --- | --- |
| sorry | blackjack |
| life | poker |
| scrabble | |

# Another Dimension

**index.php**

```php
<?php
$games = array(
    'tabletop' => 'sorry'
);
```

*Tabletop Games*

sorry

# Another Dimension

**index.php**

```php
<?php
$games = array(
    'tabletop' => array()
);
```

Tabletop Games

# Another Dimension

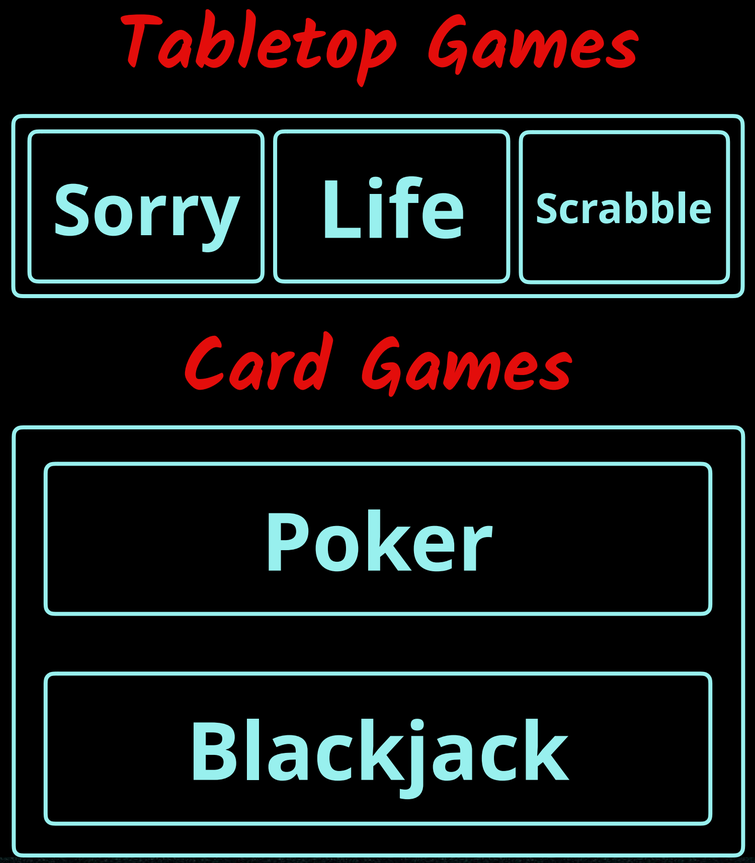
**index.php**

```php
<?php
$games = array(
    'tabletop' => array(
        'sorry',
        'life',
        'scrabble',
    ),
);
```

# Another Dimension

**index.php**

```php
<?php
$games = array(
    'tabletop' => array(
        'sorry',
        'life',
        'scrabble',
    ),
    'card' => array(
        'poker',
        'blackjack',
    ),
);
```



# Array Inspection

If we print_r our $games array, you can see the multidimensional structure.

```php
<?php
print_r($games);
```

Output

```
Array(
  [tabletop] => Array(
    [0] => sorry
    [1] => life
    [2] => scrabble
  [card] => Array(
    [0] => poker
    [1] => blackjack
)
```

# Accessing Data

By using the array's key, we can see the array value.

**index.php**

```php
<?php

print_r($games['tabletop']);
```

Output

```
Array (
[0] => sorry
[1] => life
[2] => scrabble
)
```

# Accessing Data

By using the array's key, we can see the array value.

**index.php**

```php
<?php

print_r($games['tabletop']);

print_r($games['card']);
```

Output

```
Array (
[0] => poker
[1] => blackjack
)
```

# Accessing Data

By using the array's key, we can see the array value.

**index.php**

```php
<?php

print_r($games['tabletop']);

print_r($games['card']);

echo $games['tabletop'][0];
```

Output

```
sorry
```

# Modifying the Data

Instead of single item access, we can use the same methods to change a value.

**index.php**

```php
<?php

$games['card'][0] = 'rummy';

print_r($games['card']);
```

Output

```
Array (
[0] => rummy
[1] => blackjack
)
```

# **Array Functions:** count

This function lets us count all the items in an array.

**index.php**

```php
<?php
$people = array(
    'David',
    'Jennifer',
    'Falken',
    'Joshua',
);

echo count($people);
```

Output

```
4
```

# **Array Functions:** implode

implode **joins all elements of the array into a string.**

**index.php**

```php
<?php
$people = array(
    'David',
    'Jennifer',
    'Falken',
    'Joshua',
);

echo implode(' ', $people);
```

*the character that separates the combined array values*

*the array to combine*

Output

```
'David Jennifer Falken Joshua'
```

# **Array Functions:** shuffle

shuffle **changes the array in place to a random order.**

**index.php**

```php
<?php
$people = array(
    'David',
    'Jennifer',
    'Falken',
    'Joshua',
);

// Randomize the array.
shuffle($people);

echo implode(' ', $people);
```

Output

```
'Jennifer David Joshua Falken'
```

# Array Functions: asort

asort will sort the array values, in place, in alphabetical order.

**index.php**

```php
<?php
$people = array('David','Jennifer','Falken','Joshua');

// Sort the array alphabetically.
asort($people);

echo implode(' ', $people);
```

Output

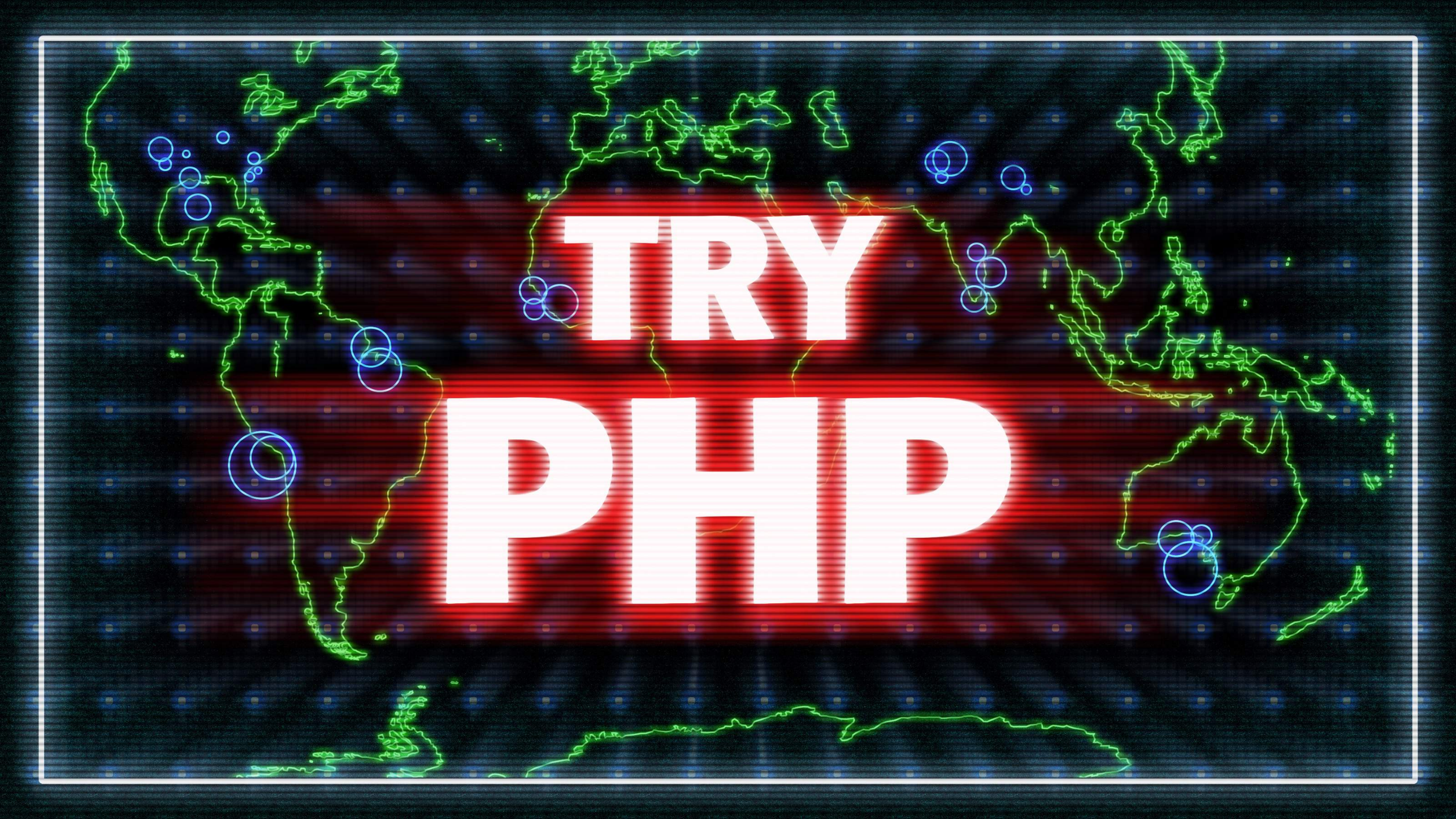
```
'David Falken
Jennifer Joshua'
```

# What Have We Learned?

Let's have a quick review.

- Multidimensional array basics
- Some simple array functions
  - shuffle
  - implode
  - asort
  - count

*And Now, It's Challenge Time!*


TRY
PHP

Level 3

# Conditionals & Operators

## What If? Now What? What Else?

# Arithmetic Operators

These are some of the arithmetic operators available to us in PHP.

*Addition*

```
php > 5 + 5
```

→ 10

*Multiplication*

```
php > 5 * 2
```

→ 10

*Subtraction*

```
php > 5 - 2
```

→ 3

*Division*

```
php > 2 / 5
```

→ 0.4

*Exponent*

```
php > 5 ** 2
```

→ 25

# Comparison Operators

These are some of the comparison operators available to us in PHP.

*Equal*

```
php > 5 == '5'
```

→ `true`

*Greater Than or Equal To*

```
php > 5 >= 5
```

→ `true`

*Not Equal To*

```
php > 5 != 2
```

→ `true`

*Greater Than*

```
php > 5 > 2
```

→ `true`

*Less Than*

```
php > 2 < 5
```

→ `true`

*Identical*

```
php > 5 ==='5'
```

→ `false`

# Identical Comparison Operator

To be identical, the items must be of the same type and value.

*Identical*

```
php > 5 ==='5'
```

→ `false`

```
5    // is integer data
'5'  // is string data
```

# Control Flow

The if statement allows us to execute code based on a condition.

**index.php**

```php
<?php
$year = 2016;

if ($year >= 2001) {
   echo "Hal can't do that for you, and he is sorry.";
}
```

*Test if our $year is greater than or equal to 2001*

*Run code within as long as our Test is true*

# Default Condition

The else statement allows us to run code when the if returns false.

**index.php**

```php
<?php
$year = 2016;

if ($year >= 2001) {
   echo "Hal can't do that for you, and he is sorry.";
} else {
   echo "You still have time. Destroy the machines!";
}
```

*Run this code if our Test is false*

# Logical Operators

These are some of the logical operators available to us in PHP.

```
<?php
$a = true;
$b = false;
```

*True if only the variable is not true*

*And*

```
php > $a && $b
```

→ `false`

*Or*

```
php > $a || $b
```

→ `true`

*Not*

```
php > !$b
```

→ `true`

*True if $a and $b are both true*

*True if either $a or $b are true*

# Testing Multiple Conditions

Using the logical operator and, we can test to see if multiple conditions are true.

**index.php**

```
<?php
$year = 1984;

if ($year >= 1994 && $year < 2001){
   echo "Skynet is growing stronger every day.";
} else {
   echo "You still have time. Destroy the machines!";
}
```

*Is $year between 1994 and 2000?*

# Multiple if Statements

The elseif statement allows us to have multiple conditions.

**index.php**

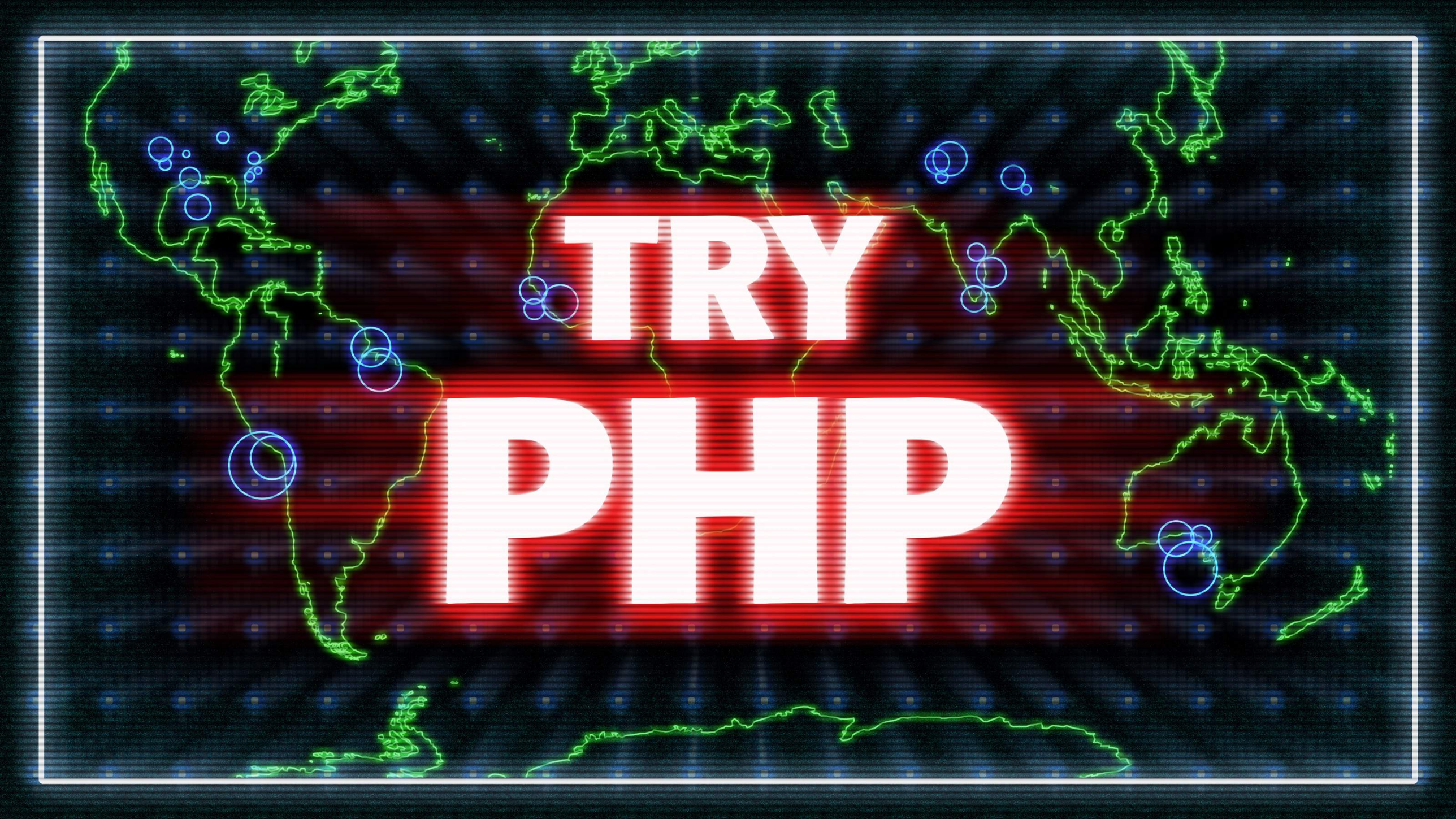
```php
<?php
$year = 1984;

if ($year >= 2001) {
   echo "Hal can't do that for you, and he is sorry.";
} elseif ($year >= 1984) {
   echo "Eurasia has fallen! Rejoice with Big Brother.";
} else {
   echo "You still have time. Destroy the machines!";
}
```

*Test this if the first condition is false*

# What Have We Learned?

Let’s have a quick review.

- Comparison operators
- Arithmetic operators
- if, if-else, else comparisons
- Logical operators


TRY
PHP

Level 4

# Loops

## Cycle Through All the Data

# Don’t Repeat Yourself

The DRY (or “Don’t Repeat Yourself”) method helps us keep our code efficient.

```
<?php
    $value = 1*12;
    echo "1 times 12 is $value";
    $value = 2*12;
    echo "2 times 12 is $value";
    $value = 3*12;
    echo "3 times 12 is $value";
    $value = 4*12;
    echo "4 times 12 is $value";
    $value = 5*12;
    echo "5 times 12 is $value";
```

Assign the product of 1 and 12 to a variable.

echo our product

# while **Loops**

Now let's initialize, test, and increment.

*Initialize an integer variable and set it to 1*

```
<?php
$i = 1;

while( $i <= 12 ) {
    $value = $i * 12;
    echo "$i times 12 is $value";
    $i++;
}
```

# while **Loops**

Now let's initialize, test, and increment.

*Initialize an integer variable and set it to 1*

*Test if our variable is less than or equal to 12*

```
<?php
$i = 1;

while( $i <= 12 ) {
    $value = $i * 12;
    echo "$i times 12 is $value";
    $i++;
}
```

# while **Loops**

Now let's initialize, test, and increment.

*Initialize an integer variable and set it to 1*

```
<?php
$i = 1;

while( $i <= 12 ) {
    $value = $i * 12;
    echo "$i times 12 is $value";
    $i++;
}
```

*Test if our variable is less than or equal to 12*

*Run code within as long as our Test is true*

# while **Loops**

Now let's initialize, test, and increment.

*Initialize an integer variable and set it to 1*

```
<?php
$i = 1;

while( $i <= 12 ) {
    $value = $i * 12;
    echo "$i times 12 is $value";
    $i++;
}
```

*Test if our variable is less than or equal to 12*

*Run code within as long as our Test is true*

*Increment our test integer $i by one*

# while **Loops**

Now let's initialize, test, and increment.

```php
<?php
$i = 1;

while( $i <= 12 ) {
    $value = $i * 12;
    echo "$i times 12 is $value";
    $i++;
}
```

Output

```
1 times 12 is 12
2 times 12 is 24
3 times 12 is 36
...
10 times 12 is 120
11 times 12 is 132
12 times 12 is 144
```

# Using a for Loop

Now let's initialize, test, and increment.

```
<?php

for( $i = 1; $i <= 12; $i++) {
   $value = $i * 12;
   echo "$i times 12 is $value";
}
```

*Initialize an integer variable and set it to 1*

*Test if our variable is less than or equal to 12*

*Increment our integer variable `$i` by one*

*`$i++` is the same as `$i = $i + 1`*

# Using a for Loop

Now let's initialize, test, and increment.

```php
<?php

for( $i = 1; $i <= 12; $i++) {
   $value = $i * 12;
   echo "$i times 12 is $value";
}
```

Output

```
1 times 12 is 12
2 times 12 is 24
3 times 12 is 36
...
10 times 12 is 120
11 times 12 is 132
12 times 12 is 144
```

# The Simple Meteorite Array

How else could we extract each item in the array other than direct access?

```php
<?php
$meteors = array(
    'Hoba',
    'Cape York',
    'Campo del Cielo',
    'Canyon Diablo',
    );
```

# Looping Access to the Array

The foreach and as will allow us to cycle through each item in our array.

```php
<?php
$meteors = array(
    'Hoba',
    'Cape York',
    'Campo del Cielo',
    'Canyon Diablo',
    );

foreach($meteors as $meteor) {
    echo $meteor;
}
```

*On each pass through our `foreach` loop, the data in `$meteor` will update with the next item in the collection.*

*The value, our meteorite names*

Output

```
Hoba
Cape York
Campo del Cielo
Canyon Diablo
```

# Associative Meteorite Array

What would happen if we ran this array through our existing foreach loop?

```php
<?php
$meteors = array(
    'Hoba' => 600000000,
    'Cape York' => 58200000,
    'Campo del Cielo' => 50000000,
    'Canyon Diablo' => 30000000,
    );
```

# Looping Through an Associative Array

What would happen if we ran this array through our existing foreach loop?

```php
<?php
$meteors = array(
    'Hoba' => 600000000,
    'Cape York' => 58200000,
    'Campo del Cielo' => 50000000,
    'Canyon Diablo' => 30000000,
    );

foreach($meteors as $meteor) {
    echo $meteor;
}
```

Output

```
600000000
58200000
50000000
30000000
```

*The value is our meteorite weight!*

# How Can We Access the Key and Value?

We can use the array operator => to set up the key and value variables.

```
<?php
$meteors = array(
    'Hoba' => 600000000,
    'Cape York' => 58200000,
    'Campo del Cielo' => 50000000,
    'Canyon Diablo' => 30000000,
    );


foreach($meteors as $name => $weight){

}
```

*$name and $weight will change values with each pass*

# How Can We Access the Key and Value?

We can use the object operator => to set up the key and value variables.

```php
<?php
$meteors = array(
    'Hoba' => 600000000,
    'Cape York' => 58200000,
    'Campo del Cielo' => 50000000,
    'Canyon Diablo' => 30000000,
    );

foreach($meteors as $name => $weight){
    echo "$name weighs $weight grams.";
}
```

Output

```
Hoba weighs
600000000 grams.
...
Canyon Diablo weighs
30000000 grams.
```

# A Complete Picture

```php
<?php
$meteors = array(
    'Hoba' => 600000000,
    'Cape York' => 58200000,
    'Campo del Cielo' => 50000000,
    'Canyon Diablo' => 30000000,
    );
$epic = 600000000; // 600 million grams
$huge = 50000000; // 50 million grams
?>
```

# A Complete Picture

```php
<?php
$meteors = array(
    'Hoba' => 600000000,
    'Cape York' => 58200000,
    'Campo del Cielo' => 50000000,
    'Canyon Diablo' => 30000000,
    );
$epic = 600000000; // 600 million grams
$huge = 50000000; // 50 million grams
foreach ($meteors as $name => $weight) {

}
?>
```

# A Complete Picture

```php
<?php
$meteors = array(
    'Hoba' => 600000000,
    'Cape York' => 58200000,
    'Campo del Cielo' => 50000000,
    'Canyon Diablo' => 30000000,
    );
$epic = 600000000; // 600 million grams
$huge = 50000000; // 50 million grams
foreach ($meteors as $name => $weight) {
    if ($weight >= $epic) {
        echo 'You have found an epic meteorite!<br>';
        echo 'Your meteorite\'s name is ' . $name . '<br>';
    }
}
?>
```

# A Complete Picture

```php
<?php
$meteors = array('Hoba' => 600000000, ...);
$epic = 600000000; // 600 million grams
$huge = 50000000; // 50 million grams
foreach ($meteors as $name => $weight) {
    if ($weight >= $epic) {
        echo 'You have found an epic meteorite!<br>';
        echo 'Your meteorite\'s name is ' . $name . '<br>';
    } elseif ($weight >= $huge) {
        echo 'You have found a huge meteorite!<br>';
        echo 'Your meteorite\'s name is ' . $name . ‘<br>';
    }
}
?>
```

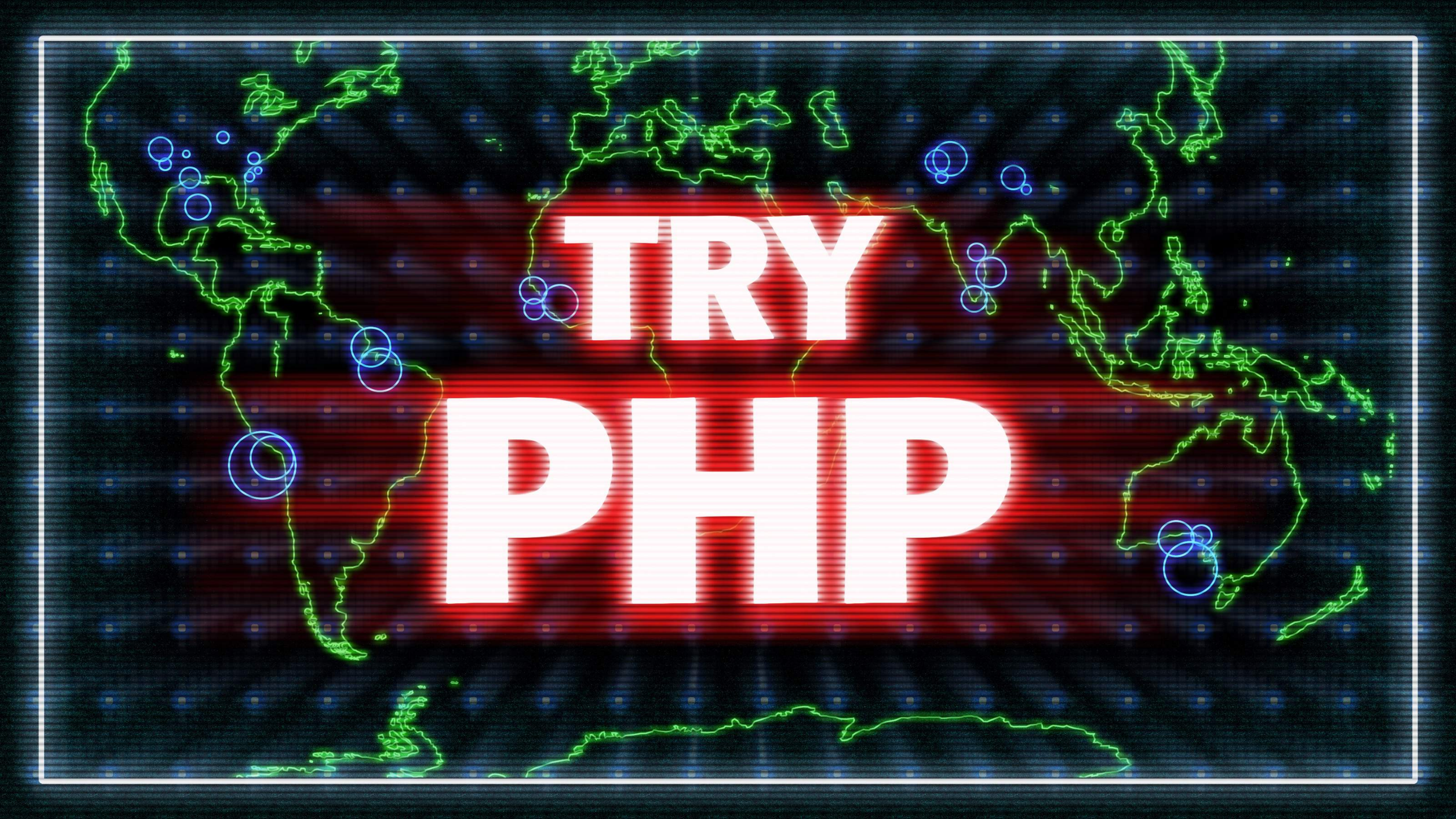
# A Complete Picture

```php
<?php
$meteors = array('Hoba' => 600000000, ...);
$epic = 600000000; // 600 million grams
$huge = 50000000; // 50 million grams
foreach ($meteors as $name => $weight) {
    if ($weight >= $epic) {
        echo 'You have found an epic meteorite!<br>';
        echo 'Your meteorite\'s name is ' . $name . '<br>';
    } elseif ($weight >= $huge) {
        echo 'You have found a huge meteorite!<br>';
        echo 'Your meteorite\'s name is ' . $name . ‘<br>';
    } else {
        echo 'You have found a meteorite, awesome!<br>';
        echo 'Your meteorite\'s name is ' . $name . '<br>';
    }
}
?>
```

# What Have We Learned?

Let's have a quick review.

- while **loop**
- for **loop**
- foreach **loop**
- foreach **with key/value**
- **Combining loops and conditionals**


TRY
PHP