🧐

Variable & Constant

1. Variables

Variables in PHP are loosely typed, meaning you don't need to specify their type when declaring them. Some rules for naming variables:

- They start with a dollar sign `$`.

- They begin with a letter (a-z, A-Z) or an underscore.

- They can contain numbers but not as the first character.

- They are case-sensitive.

Example:

```php
$username = "Osama";
$Username = "Elzero";


echo $username;  // Osama
echo '<br>';
echo $Username;  // Elzero
echo '<br>';
echo "Hello $username"; // Hello Osama
```

2. Variable Variables

Variable variables allow you to use the value of a variable as the name of another variable.

Example:

```
$a = "osama";
$$a = "elzero";   // $osama = "elzero"
$$$a = "school";  // $elzero = "school"

echo $a;          // osama
echo "<br>";
echo $$a;         // elzero
echo "<br>";
echo $osama;      // elzero
echo "<br>";
echo $$$a;        // school
```

3. Assigning Variables by Reference

By default, variables are assigned by value. However, variables can also be assigned by reference, meaning one variable becomes an alias for another, pointing to the same value.

Example:

```
$a = "Osama";
$b = &$a;  // $b is a reference to $a
$b = "Elzero";  // Changing $b also changes $a

echo $a;  // Elzero
echo '<br>';
echo $b;  // Elzero
```

4. Pre-defined Variables

PHP provides a variety of pre-defined variables such as `$_GET`, `$_POST`, `$_SERVER`, etc. These variables allow you to interact with data from forms, URLs, and server information.

Example:

```
echo $_GET["username"];  // Retrieves the 'username' paramete
r from the URL


<form action="" method="get">
  <input type="text" name="username">
  <input type="submit" value="Send">
</form>
```

5. Constants

Constants are values that cannot be changed during script execution. By convention, constant names are written in uppercase.

Example:

```
define("DB_NAME", "elzero");
define("MAIN_NUMBER", 5);


echo DB_NAME;  // elzero
echo MAIN_NUMBER * 50;  // 250
```

6. Pre-defined Constants

PHP has several built-in constants that provide useful information such as PHP version and operating system.

Example:

```
echo php_uname();  // Outputs OS information
echo PHP_VERSION;  // Outputs PHP version
echo __LINE__;     // Outputs the current line number
echo __FILE__;     // Outputs the current file name
echo __DIR__;      // Outputs the current directory
```

7. Reserved Keywords

PHP has reserved keywords that cannot be used as variable or function names. For example, `clone` is a reserved keyword, so trying to use it as a function name will cause an error.

Example:

```php
function hello() {
  return "Hello";
}

echo hello();  // Hello

// Error: Cannot use reserved keyword 'clone' as function name
function clone() {
  return "Clone";
}

echo clone();  // Syntax error
```