

PHP stands for PHP: Hypertext Preprocessor is a widely used open-source server-side scripting language especially suited for creating dynamic websites and mobile APIs.

PHP supports many databases like MySQL, Solid, PostgreSQL, Oracle, Sybase, generic ODBC, etc. PHP code is embedded within HTML.

It is used to manage dynamic content, session tracking, databases, and also to build an entire e-commerce site.

What is a session in PHP?

A session in PHP is a way to store information to be used across multiple pages of an entire website. The information is not stored on the user's computer, unlike cookies. This information will be available to all pages on the site during that visit.

Differentiate between variables and constants in PHP

Variables

The value of a variable can be changed during the execution. Variables require compulsory usage of the \$ sign at the start. It is possible to define a variable by simple assignment.

Constants

The constant value can't be changed during script execution. No dollar sign (\$) is required before using a constant. Constants can't be defined by simple assignments. They are defined using the define() function.

What does PEAR stands for?

PEAR stands for “PHP Extension and Application Repository”. PEAR is a framework and repository for all of the reusable PHP components.

Is PHP a case-sensitive language?

PHP can be considered as a partial case-sensitive language. The variable names are completely case-sensitive but function names are not. Also, user-defined functions are not case-sensitive but the rest of the language is case-sensitive.

What are the rules for naming a PHP variable?

A variable must start with a dollar symbol, followed by the variable name. For example: \$price=100; where price is a variable name.

Variable names must begin with a letter or underscore.

A variable name can consist of letters, numbers, or underscores. But you cannot use characters like + , – , % , & etc.

A PHP variable name cannot contain spaces.

What is the difference between “echo” and “print” in PHP?

Echo

echo can output one or more strings.

echo is faster than print because it does not return any value.

If you want to pass more than one parameter to echo, a parenthesis should be used.

Print

print can only output one string and it always returns 1.

print is slower compared to echo.

Use of parenthesis is not required with the argument list.

What are cookies? How to create cookies in PHP?

A cookie is a small record that the server installs on the client's computer. They store data about a user on the browser. It is used to identify a user and is embedded on the user's computer when they request a particular page

In PHP, we can create cookies using the `setcookie()` function:
`function:setcookie(name, value, expire, path, domain, secure, httponly);`

What is the difference between the `include()` and `require()` functions?

`include()` function

This function is used to copy all the contents of a file called within the function, text wise into a file from which it is called.

When the file is included and cannot be found, it will only produce a warning (`E_WARNING`) and the script will continue the execution.

`require()` function:

The `require()` function performs same as the `include()` function. It also takes the file that is required and copies the whole code into the file from where the `require()` function is called.

When the file is included cannot be found, it will produce a fatal error (`E_COMPILE_ERROR`) and terminates the script

What is the most used method for hashing passwords in PHP?

The crypt() function is used for this functionality as it provides a large number of hashing algorithms that can be used. These algorithms include sha1, sha256, or md5 which are designed to be very fast and efficient.

How does the 'foreach' loop work in PHP?

The foreach statement is a looping construct that is used in PHP to iterate and loop through the array data type.

The syntax for using the foreach statement in PHP is given below:

```
foreach($array as $value)
{
    Code inside the loop;
}
```

What are traits?

Traits are a mechanism that lets you create reusable code in PHP and similar languages where multiple inheritances are not supported. It's not possible to instantiate it on its own.

Explain the main types of errors.

Notices: Notices are non-critical errors that can occur during the execution of the script. These are not visible to users. Example: Accessing an undefined variable.

Warnings: These are more critical than notices. Warnings don't interrupt the script execution. By default, these are visible to the user. Example: include() a file that doesn't exist.

Fatal: This is the most critical error type which, when occurs, immediately terminates the execution of the script. Example: Accessing a property of a non-existent object or require() a non-existent file.

What is the purpose of @ in PHP?

In PHP, @ is used for suppressing error messages. If any runtime error occurs on the line which consists of @ symbol at the beginning, then the error will be handled by PHP.

What are the different types of Array in PHP?

Indexed Array

An array with a numeric key is known as the indexed array. Values are stored and accessed in linear order.

Associative Array

An array with strings for indexing elements is known as the associative array. Element values are stored in association with key values rather than in strict linear index order.

Multidimensional Array

An array containing one or more arrays within itself is known as a multidimensional array. The values are accessed using multiple indices.

What is the use of session_start() and session_destroy() functions in PHP?

The `session_start()` function is used to start a new session. Also, it can resume an existing session if it is stopped. In this particular case, the return will be the current session if resumed.

Syntax:

```
session_start();
```

The `session_destroy()` function is used to destroy all of the session variables as given below:

```
<?php  
session_start();  
session_destroy();  
?>
```

What are the different ways of handling the result set of MySQL in PHP?

`mysqli_fetch_array()`: Returns the current row of the result set as an associative array, a numeric array, or both.

`mysqli_fetch_assoc()`: Returns the current row of the result set as an associative array.

`mysqli_fetch_object()`: Returns the current row of a result set, as an object.

`mysqli_fetch_row()`: Returns result row as an enumerated array.

How to connect to a URL in PHP?

Any URL can be connected to PHP easily by making use of the library called cURL. This comes as a default library with the standard installation of PHP.

How to create API in PHP?

API stands for Application Programming Interface. It defines the functions and variables. Communication between the database via PHP extensions is handled by API.

What is PDO in PHP?

PDO stands for PHP Data Object. PDO is a set of PHP extensions that provide a core PDO class and database, specific drivers. The PDO extension can access any database which is written for the PDO driver.

Differentiate between GET and POST

GET

GET method is used for requesting data from a specified resource. Data is sent in the form of URL parameters which are strings of name-value pairs separated by ampersands(&). GET method cannot be used for sending binary data like images or word documents. You can use this method only for data that is not secure.

POST

POST is used for sending the data to the server as a package in a separate communication with the processing script. Data sent through the POST method will not be seen in the URL. Sensitive information can be sent using this method. Data sent through this method is secure.

How to terminate the execution of a script in PHP?

To terminate the execution of the script in PHP, the `exit()` function is used. It is a built-in function that outputs a message and then terminates the current script.

What is the use of `count()` function in PHP?

The PHP `count()` function counts the number of elements present in the array.

What are the different types of loop in PHP?

PHP supports four different types of loop which are listed below:

- for loop
- while loop
- do-while loop
- foreach loop

PHP for Loop

PHP for loop is used when you know exactly how many times you want to iterate through a block of code. It consists of three expressions:

- **Initialization:** Sets the initial value of the loop variable.
- **Condition:** Checks if the loop should continue.
- **Increment/Decrement:** Changes the loop variable after each iteration.

Syntax

```
for ( Initialization; Condition; Increment/Decrement ) {
```

```
    // Code to be executed
```



```
}
```

while Loop

The while loop is also an entry control loop like for loops. It first checks the condition at the start of the loop and if its true then it enters into the loop and executes the block of statements, and goes on executing it as long as the condition holds true.

Syntax

```
while ( condition ) {  
  
    // Code is executed  
  
}
```

PHP do-while Loop

The do-while loop is an exit control loop which means, it first enters the loop, executes the statements, and then checks the condition. Therefore, a statement is executed at least once using the do...while loop. After executing once, the program is executed as long as the condition holds true.

Syntax

```
do {  
  
    // Code is executed  
  
} while ( condition );
```

PHP foreach Loop

This foreach loop is used to iterate over arrays. For every counter of loop, an array element is assigned and the next counter is shifted to the next element.

Syntax:

```
foreach ( $array as $value ) {  
    // Code to be executed  
}  
  
// or  
  
foreach ( $array as $key => $value ) {  
    // Code to be executed  
}
```

What is the difference between unset() and unlink() in PHP?

The unset() Function is used when you want to make that file empty.

Unlink() function: The unlink() function is an inbuilt function in PHP which is used to delete a file

What is Object-Oriented Programming (OOP) in PHP, and how does it enhance code reusability and organization?

Expected Answer: OOP in PHP revolves around “objects” containing both data and code, achieved through attributes (properties) and methods. It boosts code reusability via inheritance and polymorphism, while organizing code by encapsulating related properties and behaviors into objects, fostering modularity and clarity.

Can you explain the concept of PHP "super globals"?

These are built-in global arrays in PHP, like `$_GET`, `$_POST`, and `$_SESSION`, that provide data from various sources (e.g., form input) accessible throughout a script.

How is data sent in a POST request?

Data is sent in the request body, making POST requests suited for sending large amounts of data, especially of sensitive nature.

What is PDO and why is it significant?

PDO (PHP Data Objects) provides a consistent way to access databases, allowing developers to use different databases with the same functions and methods.

How can one prevent SQL injections in PHP?

By using prepared statements and parameterized queries, often available through PDO or MySQLi.

What is the "ternary operator" in PHP?

It's a shorthand for if-else statements, used like: `$x = (expression) ? value_if_true : value_if_false.`

Describe the use of `isset()` in PHP.

`isset()` determines if a variable is declared and has a value other than NULL. It's often used to check if form input exists.

What does include and require do?

Both are used to include a file within another PHP script. The difference lies in error handling; require will produce a fatal error and halt script execution if the file isn't found, while include only produces a warning. .

How are cookies set in PHP?

Using the setcookie() function, which sends a HTTP cookie to the client.

Explain OOP in the context of PHP.

PHP supports object-oriented programming (OOP), allowing developers to define classes, create objects, and use principles like inheritance, polymorphism, and encapsulation.

What is namespacing in PHP and why is it useful?

Namespacing allows for better organization by encapsulating items. It helps prevent naming collisions in larger applications or when using third-party libraries.

How can PHP handle file uploads?

Using the `$_FILES` super global and functions like `move_uploaded_file()`. Proper validation and security checks should be applied during uploads.

Explain the `__construct()` method in PHP.

It's a constructor method invoked when an object of a class is created. Useful for any initialization an object may need upon creation.

Describe the difference between "GET" and "POST" methods in PHP.

"GET" sends data via URL and has length restrictions, while "POST" sends data in the request body and is more secure and suitable for larger data.

How do you start and destroy a session in PHP?

Using `session_start()` to start and `session_destroy()` to destroy a session.

Explain the significance of the `header()` function in PHP.

It's used to send raw HTTP headers. For instance, it can be used for redirection or to set content type.

What are "magic methods" in PHP?

These are methods with specific names, starting with two underscores (e.g., `__construct()`, `__destruct()`) that are triggered under particular circumstances. .

What is the MVC pattern and its relevance in PHP frameworks?

Model-View-Controller (MVC) separates an application into three interconnected components. Many PHP frameworks, like Laravel and CodeIgniter, employ this pattern for organized and modular development.

Explain dependency injection in PHP.

Dependency injection provides objects with their dependencies. It promotes decoupling, making the system more modular and testable.

What is composer in PHP?

Composer is a dependency management tool in PHP, allowing developers to declare and manage libraries on a per-project basis.

Name and define the three scope levels available in PHP.

- Private – Detectable only in its own class
- Public – Can be seen by any other code accessing the class
- Protected – Can be seen by classes parent(s) and classes that extend the current class

What is the use of the function 'imagetypes()'?

The `imagetypes()` function is an inbuilt PHP function which is used to give the image types supported by the current version of PHP inbuilt installed library.

How do we use PHP to display information of a variable that's readable by a human?

To achieve this result, we need to use `print_r()`.

How do we set an infinite execution time for PHP script?

We add a `set_time_limit(0)` at the start of a script to make the time of execution infinite. This helps to prevent the PHP error of 'maximum execution time exceeded.' We can also specify this in the `php.ini` file.

What is overloading and overriding in PHP?

PHP is a powerful scripting language used to create websites and [web applications](#). It has many features, one of which is overloading and overriding. Overloading is the ability to define multiple methods with the same name but with different parameters. Overriding is the ability to redefine an inherited way.

What is the use of callback in PHP?

A callback is a PHP function used to execute other parts, and it is often used to add custom functionality to the code or to provide an alternative way to execute code.

How does PHP handle multibyte characters?

PHP has built-in functions and libraries for handling multibyte character encodings like UTF-8. Functions like `mb_strlen()`, `mb_substr()`, and `mb_convert_encoding()` are commonly used for multibyte string manipulation. Additionally, the `mbstring` extension provides comprehensive support for multibyte string operations.

