

INTRODUCTION TO PHP

PROGRAMMING

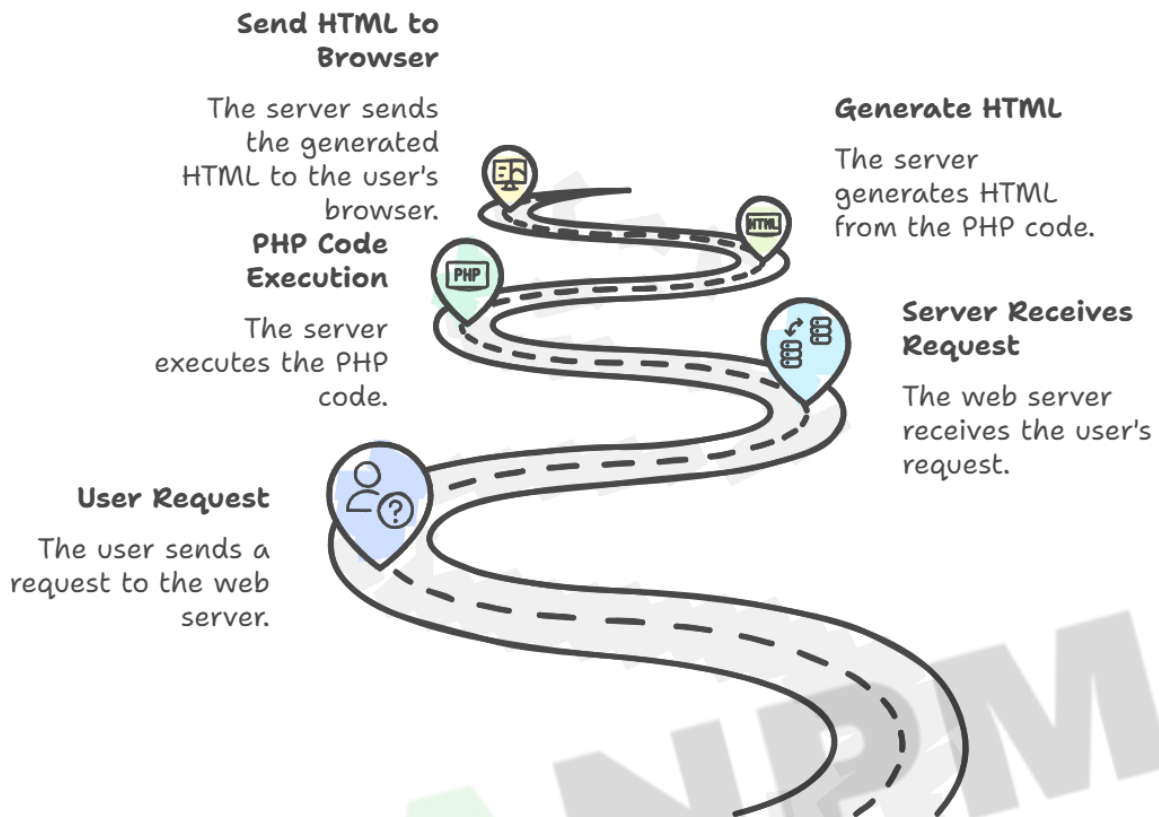
1. Introduction to PHP

PHP (Hypertext Preprocessor) is a popular open-source scripting language primarily used for web development. PHP is server-side, meaning it runs on the web server rather than on the client's device, generating dynamic content and interacting with databases efficiently.

Key Features of PHP:

- **Ease of Use:** PHP is relatively simple, making it beginner-friendly.
- **Cross-Platform:** Works on multiple platforms, including Windows, Linux, and macOS.
- **Compatibility with Databases:** PHP supports various databases, especially MySQL.
- **Embedded in HTML:** PHP can be embedded directly within HTML, making it highly adaptable for web pages.

Web Server Interaction with PHP



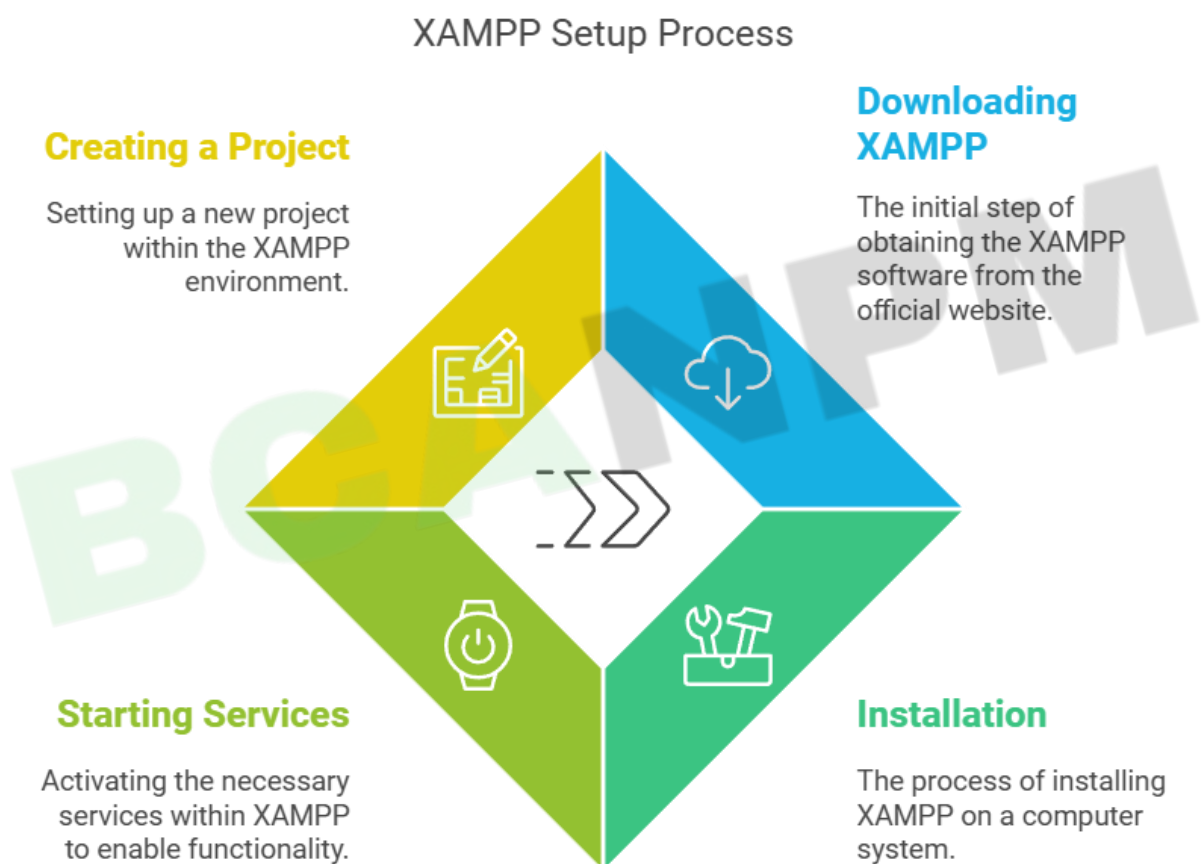
2. Installation and Configuration

To start with PHP, you need to install a **web server** and a **PHP interpreter**. The most common setup is with **XAMPP** (cross-platform), **WAMP** (Windows), or **MAMP** (macOS). These tools come with a web server (Apache) and a database server (MySQL) bundled, making them easy to install.

Steps for Installation:

1. **Download**: Obtain the latest version of XAMPP from the official Apache Friends website.
2. **Install**: Follow the installation wizard to set up XAMPP on your system.

3. **Start Apache and MySQL:** Use the XAMPP control panel to start the Apache web server and MySQL.
4. **Create a PHP File:** Inside the htdocs folder of the XAMPP directory, create a file with a .php extension.
5. **Run PHP Code:** Access your PHP file by navigating to `http://localhost/yourfile.php` in a web browser.



3. Variables in PHP

Variables in PHP are containers for storing data, which can be used and manipulated throughout the script. PHP is a loosely typed language, meaning you don't need to declare the data type; it is assigned automatically based on the value.









Key Points:

- **Declaration:** Variables in PHP start with a \$ symbol followed by the variable name, e.g., \$name.
- **Naming Rules:** Variable names must start with a letter or underscore and can contain letters, numbers, and underscores.
- **Scope:** PHP variables have a specific scope (local, global, static, and parameter), determining where the variable is accessible.

Types of Variables:

1. **String:** Holds textual data.
2. **Integer:** Holds whole numbers.
3. **Float:** Holds decimal numbers.
4. **Boolean:** Represents true or false.
5. **Array:** Stores multiple values in a single variable.
6. **Object:** Represents an instance of a class.

DIFFERENCE BETWEEN LOCAL VS GLOBAL VARIABLE

Specifications for Comparison	Local Variable	Global Variable
 Scope	Within the function in which they are declared	Throughout the program it works as a master file, declared outside the function.
 Value	Garbage value is stored when it is not initialized.	Zero is stored by default when not initialized.
 Durability	It's created as the function initiates and ends automatically as soon as it ends.	Its existence is universal till the program is executed.
 Sharing of data	Sharing of data is impossible as it works within one function only.	Data sharing is possible among different functions to access the same global variable across the
 Specifications	Necessarily required	Not required for global variables
 Modifications	Any change in variable value does not affect the program's other functions as this operates within a function.	Any change in the global variable results in a change in the whole program.
 Storage	Stored on stacks unless specified.	Stored in fixed locations decided by the compiler
 Accessed by	Accessed only by the statements within the function they're declared.	One can access it by any statement within the entire program.

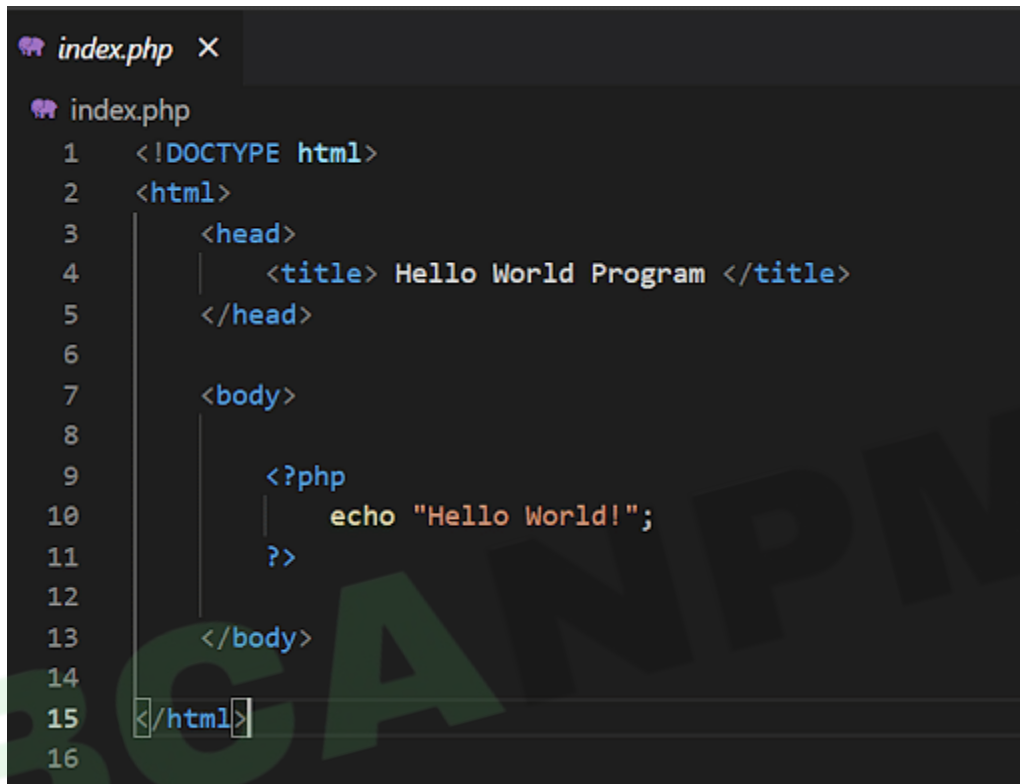
4. String Functions

String functions in PHP are used to manipulate and handle text data, such as concatenation, finding lengths, and replacing parts of a string. PHP offers a wide variety of built-in string functions for efficient text processing.

Common String Functions:

- **strlen()**: Returns the length of a string.
- **strtolower()** and **strtoupper()**: Convert strings to lowercase and uppercase, respectively.

- **str_replace()**: Replaces occurrences of a substring within a string.
- **substr()**: Returns a portion of a string.



```
index.php X
index.php
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <title> Hello World Program </title>
5 </head>
6
7 <body>
8
9 <?php
10 echo "Hello World!";
11 ?>
12
13 </body>
14
15 </html>
16
```

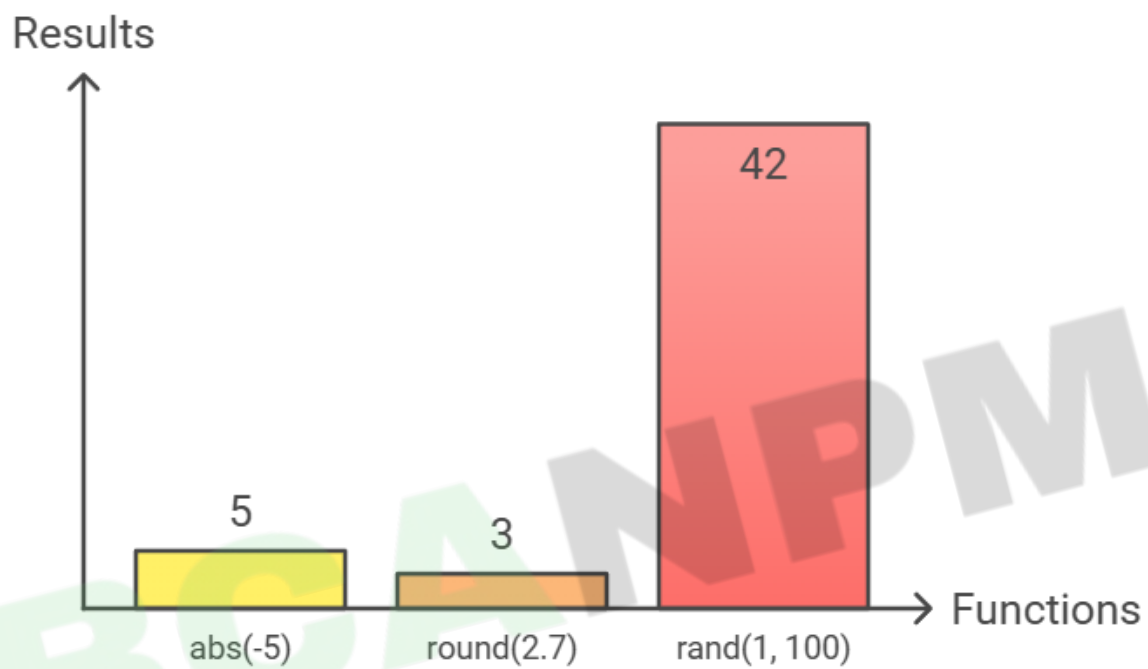
5. Numeric Functions

PHP provides **numeric functions** to perform calculations and manage numbers. These functions are useful for arithmetic operations, rounding, and random number generation.

Common Numeric Functions:

- **abs()**: Returns the absolute value of a number.
- **round()**: Rounds a number to the nearest integer or to specified decimal places.

- **max()** and **min()**: Return the highest and lowest values from a set of numbers.
- **rand()**: Generates a random integer within a specified range.



Results of Mathematical Functions