1. Introduction

PHP (Hypertext Preprocessor) is a widely-used, open-source scripting language designed for web development. Scripts are executed on the server, and the result is returned to the browser as plain HTML.

2. Basic Syntax

PHP files have a .php extension.

PHP scripts start with <?php and end with ?>.

```php
<?php
echo "Hello, World!";
?>
```

3. Variables

Variables start with the $ sign, followed by the variable name.

Variable names are case-sensitive.

```php
$greeting = "Hello, World!";
echo $greeting;
```

4. Data Types

PHP supports the following data types:

- Strings: Sequences of characters, like "Hello, World!".
- Integers: Whole numbers.
- Floats: Numbers with a decimal point.
- Booleans: True or false values.
- Arrays: Holds multiple values.

5. Arrays

An array can hold multiple values under a single name.

```php
$colors = array("Red", "Green", "Blue");
echo $colors[0]; // Outputs "Red"
```

6. Functions

A function is a block of statements that can be repeatedly called.

```php
function greet() {
    echo "Hello, World!";
}


greet(); // Calls the function
```

7. Conditional Statements

Used to perform different actions based on different conditions.

```php
if ($a > $b) {
    echo "a is greater than b";
} elseif ($a == $b) {
    echo "a is equal to b";
} else {
    echo "a is smaller than b";
}
```

8. Loops

Execute a block of code repeatedly.

- **while** loop

- **for** loop
- **foreach** loop (used with arrays)

```php
for($i = 0; $i < 5; $i++) {
    echo $i;
}
```

9. Form Handling

Collect form data using the $_GET or $_POST superglobals.

```php
// Assuming a form field with the name "username"
$username = $_POST["username"];
echo "Welcome, " . $username . "!";
```

10. Connecting to a Database

PHP supports various databases. A common choice is MySQL.

```php
$servername = "localhost";
$username = "username";
$password = "password";

// Create connection
$conn = new mysqli($servername, $username, $password);

// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";
```

Resources

For comprehensive documentation and detailed examples, refer to the [official PHP documentation](#).