

PHP Lecture 1 Summary

1. What is PHP?

PHP (Hypertext Preprocessor) is a popular **open-source scripting language** especially suited for **web development**. It runs on the **server** and outputs **HTML** to the browser.

Example:

PHP

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

2. PHP Syntax

PHP code is written inside `<?php . . . ?>` tags. Statements end with a **semicolon ;**.

Example:

PHP

```
<?php
    $x = 5;
    echo $x;
?>
```

3. Comments in PHP

- **Single-line:** `// comment` or `# comment`
 - **Multi-line:** `/* comment */`
-

4. Variables and Constants

- **Variables** start with \$, like \$name, \$age.
- **Constants** are defined using `define()` and cannot be changed.

Example:

PHP

```
$name = "John";
define("PI", 3.14);
```

5. Data Types

- String
- Integer
- Float
- Boolean
- Array
- Object
- NULL

Example:

PHP

```
$string = "Hello";  
$int = 10;  
$float = 3.14;  
$bool = true;
```

6. Type Casting

Changing data from one type to another.

Example:

PHP

```
$val = "10";  
$intVal = (int)$val;
```

7. Common Functions

`strlen()`, `strtoupper()`, `var_dump()`, `isset()`

Example:

PHP

```
echo strlen("Hello"); // Outputs: 5
```

8. Operators

- **Arithmetic:** +, -, *, /, %
- **Assignment:** =, +=, -=, etc.
- **Comparison:** ==, ===, !=, <>, <, >
- **Logical:** &&, ||, !

9. Conditional Statements

if

PHP

```
if ($x > 5) {  
    echo "x is greater than 5";  
}
```

if-else

PHP

```
if ($x > 5) {  
    echo "greater";  
} else {  
    echo "less or equal";  
}
```

switch

PHP

```
switch($color) {  
    case "red": echo "Color is red"; break;  
    default: echo "Unknown color";  
}
```

10. Loops

while

PHP

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

for

PHP

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

foreach

PHP

```
$arr = ["apple", "banana"];  
foreach ($arr as $item) {  
    echo $item;  
}
```

```
}
```

11. Arrays

- Indexed
- Associative
- Multidimensional

Example:

PHP

```
$arr = [1, 2, 3];  
$assoc = ["name" => "Ali", "age" => 20];
```

12. Array Operators

- + to merge arrays
 - ==, ===, !=, etc. for comparisons
-

13. Array Functions

`count()`, `array_merge()`, `in_array()`, `array_push()`

14. Functions

PHP

```
function greet($name) {  
    return "Hello, $name";  
}  
echo greet("Ali");
```