

# PHP: Hypertext Preprocessor



A tutorial Introduction

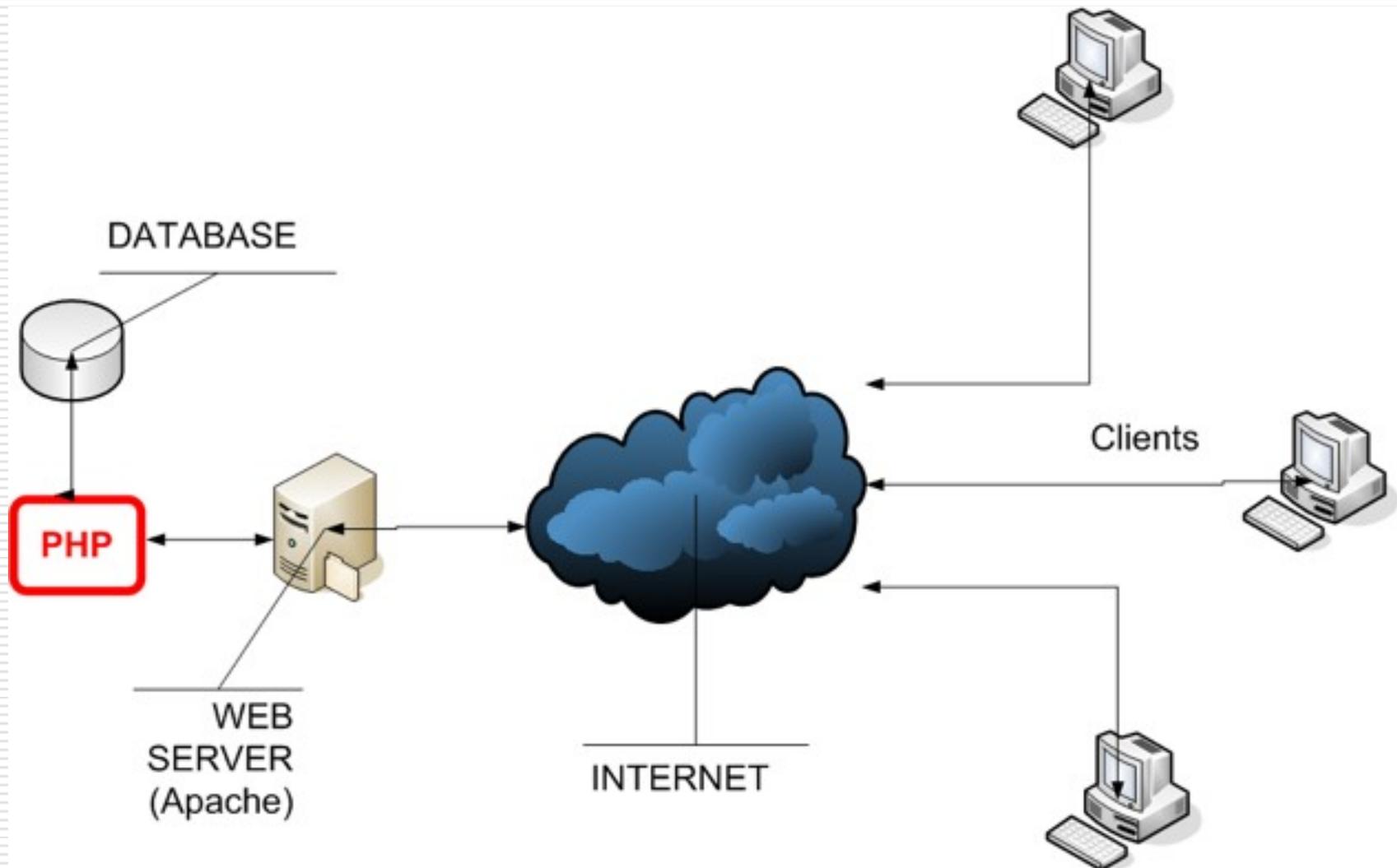
# Introduction

- PHP is a server side scripting language
  - Primarily used for generating dynamic web pages and providing rich web services
  - PHP5 is also evolving as a robust general purpose language that suits a variety of purposes
-

# Overview

- PHP for the web
    - Dynamic content
    - Form processing
    - Database integration
  - PHP on the command line
    - Object oriented programming
    - File handling and system functions
  - PHP for GUI development
    - The PHP-GTK extension
-

# PHP on the Web



# Simple Dynamic Page

- PHP is embedded in HTML
- Expressions are evaluated and HTML is returned

```
<html>
<head>
  <title>Hello World!</title>
</head>
<body>
  <h1>Hello World!</h1>
  <h2>Today is <?php echo date('d-m-Y'); ?></h2>
  <h2>The time is <?php echo date('H-i-s'); ?></h2>
</body>
</html>
```

---

# Form Processing

- Can pass information between pages in two ways:
    - URL Encoding (`$_REQUEST` and `$_GET`)
    - HTTP – POST Method (`$_POST`)
  - URL Encoding for insecure data:
    - `www.mnit.ac.in/student.php?id=040860`
  - POST Method for secure data:
    - Registration forms, login forms
-

# Database Integration - mySQL

- ❑ Connect and authenticate to DB
- ❑ Send queries in SQL
- ❑ Parse result received
- ❑ Generate Output to User

```
<?php
```

```
$conn = mysql_connect('localhost', 'username', 'password');  
mysql_select_db('dbname', $conn);
```

```
$result = mysql_query('SELECT * FROM student WHERE branch = CP');
```

```
?>
```

---

# PHP on the Command Line

- Very versatile and easy-to-learn language
  - Weakly typed and hence much faster to code in
  - Can perform a more wide variety of functions than classical languages
  - Only disadvantage is speed, PHP is about 100 times slower than C
-

# Variables

- Prefixed with a '\$' sign
  - No need to declare
    - Boolean, Integer, Float, String – Scalar
    - Array, Object – Compound
    - Resource, NULL – Special
  - Numerous functions available for manipulation of variables
  - Type casting, scope etc. are easier
-

# Strings

- Can include variables inside strings
- ' used most frequently, " used whenever there are special characters
- Again, over 50 string functions available

```
<?php
```

```
$x = "Here's a string with a single quote";
```

```
$y = 'PHP';
```

```
$z = "I \n like \n $y";
```

---

```
?>
```

# Arrays

- Can be referred by both index and key
- Insert delete anywhere
- PHP is very rich in functions, so we hardly have to write code to implement something

```
<?php
```

```
$arr = array("foo" => "bar", 12 => true);  
$arr[] = 'computers';
```

```
?>
```

---

# Variable Variables

- Useful concept, missing in most languages

```
<?php
```

```
$a = 'foo';
```

```
$$a = 'bar';
```

```
?>
```

- Variable 'a' contains 'foo', and variable 'foo' contains 'bar', so 'echo \$foo' will output 'bar'
-

# Variable Functions

- Again, a very useful feature
- Promotes extreme generic programming and dynamism

```
<?php
```

```
func1();
```

```
$x = func2;
```

```
$x();
```

```
?>
```

---

# Generic Functions

- ❑ No need for templates since PHP is weakly typed
- ❑ Any variable may assume any type
- ❑ Variable arguments possible

```
<?php
```

```
function testFunction($param1, $param2 = false)
{
    echo $param1.$param2;
}
```

---

# Object Oriented Programming

- Very similar to the C++ design

```
<?php
class A
{
    protected $var = "Hello!";
    function __construct()
    {echo $var;}
}
class B extends A
{
    function __construct()
    {parent::__construct();}
}
?>
```

---

# Extensions

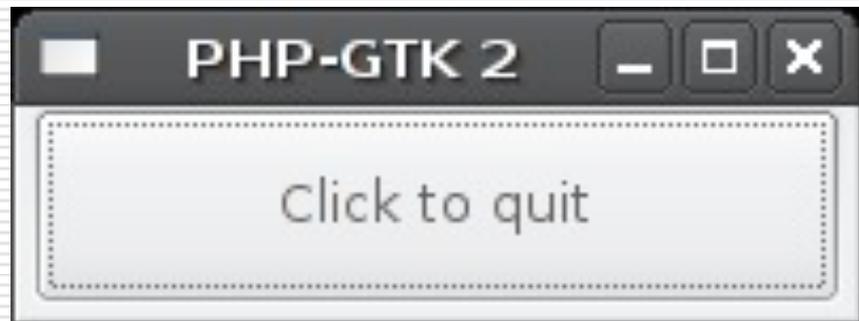
- They add a lot of Value to PHP
  - Over 100 in-built extensions, with each containing over 50 functions
  - Some important ones include: MySQL, File System, XML, IMAP/POP3, Gtk+
  - More feature-packed extensions available at PEAR - The PHP Extended Application Repository!
-

# PHP-GTK 2

- GUI Programming in PHP
- Make it very easy to design interfaces
- Gives the flexibility and power of PHP along with the user-friendliness of Gtk +

# Sample

```
<?php  
  
$window = new GtkWindow();  
  
$button = new GtkButton('Click to quit');  
$button->connect_simple('clicked', array('Gtk', 'main_quit'));  
  
$window->set_title('PHP-GTK 2');  
$window->add($button);  
  
$window->show_all();  
  
Gtk::main();  
  
?>
```



# Thank you!

- Powerful, Flexible, Extensive and Easy
- Excellent documentation and tutorials

<http://www.php.net/>

<http://gtk.php.net/>

- Manuals available, lots of people help

[anant@php.net](mailto:anant@php.net)

---