



Waterford Institute of Technology



INTRODUCTION TO PHP

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CLIENT/SERVER ON THE WWW

- Standard web sites operate on a request/response basis
- A user requests a resource E.g., HTML document
- Server responds by delivering the document to the client
- The client processes the document and displays it to user

SERVER-SIDE PROGRAMMING

- Provides web site developers to utilise resources on the web server
- Non-public resources do not require direct access from the clients
- Allows web sites to be client agnostic (unless JavaScript is used also)
- Most server side programming script is embedded within markup (although does not have to be, sometimes better not to)



PHP



INTRODUCTION TO PHP

“PHP is a server-side scripting language designed specifically for the Web. Within an HTML page, you can embed PHP code that will be executed each time the page is visited. Your PHP code is interpreted at the Web server and generates HTML or other output that the visitor will see” (“PHP and MySQL Web Development”, Luke Welling and Laura Thomson, SAMS)

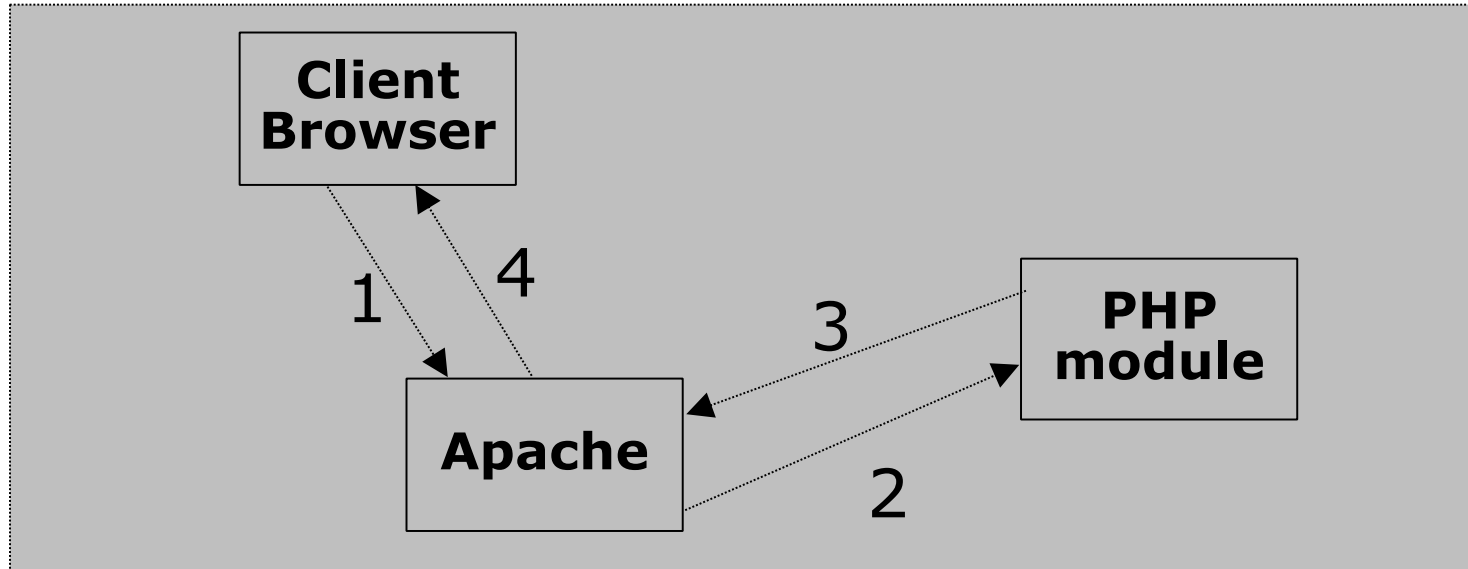
ALTERNATIVES TO PHP

- Practical extraction and Report Language (Perl)
- Active Server Pages (ASP)
- Java server pages (JSP)
- Ruby

ADVANTAGES OF PHP

- Open-source
- Easy to use (C-like and Perl-like syntax)
- Stable and fast
- Multiplatform
- Many databases support
- Many common built-in libraries
- Pre-installed in Linux distributions

HOW PHP WORKS



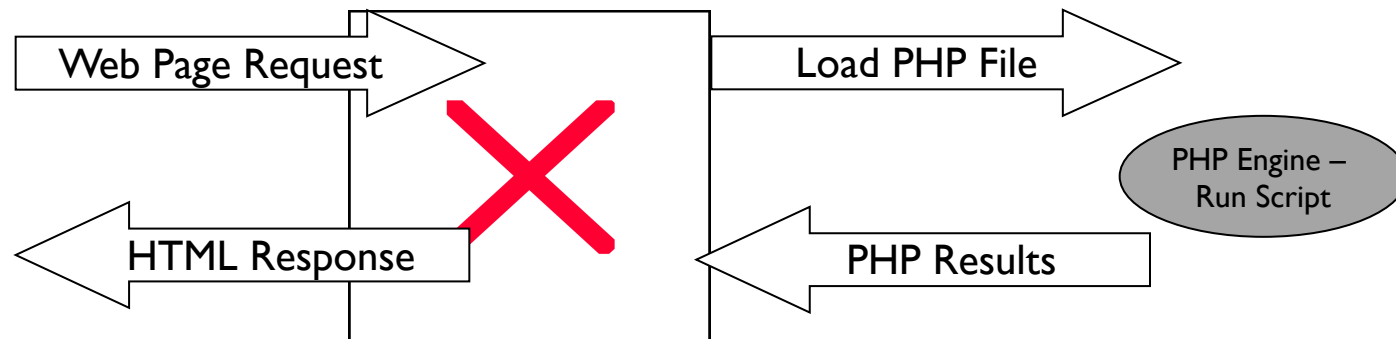
- Client from browser send HTTP request (with POST/GET variables)
- Apache recognizes that a PHP script is requested and sends the request to PHP module
- PHP interpreter executes PHP script, collects script output and sends it back
- Apache replies to client using the PHP script output as HTML output

PHP - WHAT IS IT / DOES IT DO?

- PHP: PHP Hypertext Pre-processor
- Programming language that is interpreted and executed on the server
- Execution is done before delivering content to the client
- Contains a **vast** library of functionality that programmers can harness
- Executes entirely on the server, requiring no specific features from the client

PHP - WHAT IS IT / DOES IT DO?

- Static resources such as regular HTML are simply output to the client from the server
- Dynamic resources such as PHP scripts are processed on the server prior to being output to the client
- PHP has the capability of connecting to many database systems making the entire process transparent to the client



SIDE-BY-SIDE

PHP File:

```
<html>
<head>
<title> PHP Introduction </title> </head>
<body>
This is HTML! <br />
<?php
echo 'This is PHP! <br />';
?>
</body> </html>
```

Output: resulting HTML

```
<html>
<head>
<title> PHP Introduction </title> </head>
<body>

This is HTML! <br />
This is PHP! <br />

</body>
</html>
```

PHP LANGUAGE BASICS

- Look at the building blocks of the PHP language
 - Syntax and structure
 - Variables, constants and operators
 - Data types and conversions
 - Decision making IF and switch
 - Interacting with the client application (HTML forms)

PHP - SYNTAX AND STRUCTURE

- PHP is similar to C
- All scripts start with `<?php` and end with `?>`
- Line separator: `;` (semi-colon)
- Code block: `{ //code here }` (**brace brackets**)
- White space is generally ignored (not in strings)
- Comments are created using:
 - `//` single line quote
 - `/*` Multiple line block quote `*/`

PHP - VARIABLES

- Prefixed with a \$
- Assign values with = operator
- Example: **\$author = “Trevor Adams”;**
- No need to define type
- Variable names are case sensitive
 - **\$author** and **\$Author** are different

PHP - EXAMPLE SCRIPT

```
<?php
    $author = "Trevor Adams";
    $msg = "Hello world!";
    echo $author . " says " . $msg;
?>
```