CGI Application
PHP Introduction

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Introduction

The Common Gateway Interface (CGI) is not a programming language. Rather, it is a simple standard governing

how a Web server interacts with and runs scripts to process forms and complete Web requests.

Introduction

Any program in any language that outputs a Web page can be a CGI program.

For the purpose of this class we will be looking at PHP.

What is PHP?

Definition

- PHP is a recursive acronym for "PHP: Hypertext Preprocessor".
- PHP is a server side scripting language that is used to manage dynamic content, databases, session tracking, etc.

Definition

- It is integrated with a number of popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.

Common uses of PHP

- PHP performs system functions, i.e. from files on a system it can create, open, read, write, and close them.
- PHP can handle forms, i.e. gather data from files, save data to a file, through email you can send data, return data to the user.

Common uses of PHP

- You can add, delete, modify elements within your database through PHP.
- Access cookie variables and set cookies.
- Using PHP, you can restrict users to access some pages of your website.
- It can encrypt data.

PHP Environment PHP

In order to develop and run PHP Web pages three vital components need to be installed on your computer system.

These components are:

- Web Server
- Database
- PHP Parser

PHP Basic Syntax

Escaping to PHP

The PHP parsing engine needs a way to differentiate PHP code from other elements in the page. The mechanism for doing so is known as **'escaping to PHP.'** There are four ways to do this:

Escaping to PHP

- The most universally effective PHP tag style is:

<?php...?>

- Short or short-open tags look like this: <?...?>
- ASP-style tags look like this: <%...%>
- HTML script tags look like this: <script language="PHP">...</script>

PHP Data Types

There are two data types in PHP

- Simple or scalar data types
- Compound data types
- Special data types

Simple or Scalar Types

- **Integers:** are whole numbers, without a decimal point, like 4195.
- **Doubles:** are floating-point numbers, like 3.14159 or 49.1.
- **Booleans:** have only two possible values either true or false.

Simple or Scalar Types

- **Strings:** are sequences of characters, like 'PHP supports string operations.‘

Compound Types

❖ **Objects:** An object is a data type which stores data and information on how to process that data. First we must declare a class of object. For this, we use the class keyword. A class is a structure that can contain properties and methods:

Compound Types

```
E.g  class Car {
    function Car() {
        $this->model = “2.2";
       $this->type=“suv”;
    }
}
// create an object
$camry = new Car();

// show object properties
echo $camry->model;
echo $camry->type;
```

Compound Types

❖ **Arrays:** are named and indexed collections of other values. An array stores multiple values in one single variable.

Eg. $cars = array("Volvo","BMW","Toyota");

Special Types

- **Resources:** are special variables that hold references to resources external to PHP (such as database connections).
- **NULL:** is a special type that only has one value: NULL.

Things to Know About PHP

Things to Know

PHP echo and print Statements

In PHP there are two basic ways to output/render data to the screen: echo and print.

The main difference between them is that echo is marginally faster than print.

Things to Know

PHP echo Statement

```
<?php
$txt1 = “This is scary";
$txt2 = “Digital Dreams!!";
$x = 5;
$y = 4;
```

Things to Know

```
echo "<h2>$txt1</h2>";
echo "Study PHP at $txt2<br>";
echo $x + $y;
?>
```

Now do for the print statement…

Things to Know

PHP is Whitespace Insensitive

In PHP, one whitespace character is the same as many such characters.

For example, each of the following PHP statements that assigns the sum of 2 + 2 to the variable $four are equivalent:

Things to Know

```
$four = 2 + 2; // single spaces

$four <tab>=<tab>2<tab>+<tab>2 ; // spaces and tabs

$four =

2+

2;
```

Things to Know

PHP Case Sensitivity

In PHP, all keywords (e.g. if, else, while, echo, etc.), classes, functions, and user-defined functions are NOT case-sensitive.

The following will give you the same output;

Things to Know

```
<!DOCTYPE html>
<html>
<body>
<?php
ECHO "Hello World!<br>";
echo "Hello World!<br>";
EcHo "Hello World!<br>";
?>
</body>
</html> .
```

Things to Know

PHP Case Sensitivity

However; all variable names are case-sensitive.

Try out the example below;

Things to Know

```
<html>
<body>
<?
$capital = 67;
echo "Variable capital is $capital<br>”;
echo "Variable Capital is $Capital<br>”;
?>
</body>
</html>
```

Questions