Scripting Language

Scripts are programs just like any other programming language they can execute on the client side or the server

Scripting languages do not require the compilation step and are rather interpreted.

There are two types of scripting language

(1) Client Side Scripting language

client side script is processed on the browser or local computer

The client side scripting allows changing the contents of the webpage

client side scripting can do the following
(1) interact with temporary storage
(2) make interactive webpages
(3) Interact with local storage
(4) Sending request for data to server
(5) Send request to server
(6) Work as an interface between server and users.

(2) Server side Scripting Language

It is a script that runs on a server dealing with the generation of content of webpages

Server side scripting do the following
(1) Quering the database
(2) Operations over database
(3) Access/write a file on the server
(4) Interact with other servers
(5) Structure web application
(6) process user input

HTML

HTML is the standard markup language for creating web pages. It provides the structural foundation of websites by defining elements such as headings, paragraphs, links, images, forms and multimedia content

Key characteristics

(i) Markup language
(ii) Platform Independent
(iii) Foundation of Web
(iv) Static content.

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Why HTML is Essential Before PHP ?

(1) Output Layer
(2) Form Integration
(3) Template Structure
(4) Client Server Model

HTML Elements and Tags

HTML tags are keywords enclosed in angle brackets

(1) Paired tags (Container Tags)

Most html tags ~~contains~~ come in pairs with opening and closing tags
eg : ...

(2) Self - Closing Tags (Empty Tags)

<img src = ... " >

Block level vs Inline Elements

Block level elements

eg. ...
 ...
<table> ... </table>

Inline Elements

eg. ...
<a href ... /a>
 ...

Text Content and Formatting

Headings

eg <h1> ... </h1>
<h2> ... </h2>

Hyperlinks

Basic link Syntax

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Images

```
<img src="image.jpg" alt="Description of Image">
```

Lists

(1) Unordered Lists (Bulled Points)

```
<ul>
    <li> ... </li>
</ul>
```

(2) Ordered lists (Numbered)

```
<ol>
    <li> ... </li>
</ol>
```

Tables

Basic table structure

```
<table border="1">
  <tr>
    <
```

HTML Forms

Forms are the primary method for collecting the ~~input~~ user input on websites. In PHP that is processed on the server

Basic syntax

```
<form action = " process.php " method = "post">
</form>
```

Form attributes

action - URL where form data is sent
method - HTTP method for sending the data
name - Form identifier
target - where to display response
enctype - Encoding type for file uploads.

Form Input Types

Text Input Types

```
<!-- Single line Text -->
<input type = "text" name = "username" placeholder =
    " Enter username " >
```

```
<!-- Place holder Chidden -->
<input type = "password" name: "password"
  placeholder = "Enter password" >

<!-- Email with Vadidation -->
<input type= "email" name: "email" placeholder =
      "user @ example.com" >

<!-- Number input -->
<input type = "number" name = "age" min = "1"
    max = "100" step "1" >

<!-- Telephone -->
<input type = "tel" name = "phone" placeholder = "1234567890">

<!-URL . . .>
<input type = "~~URL~~ url" name = "website" placeholder =
      "https.example.com" >

<!-- Date Picker -->
<input type = "date" name = "birthdate" >

<!-- Time Picker -->
<input type = "time" name = "appointment" >

<!-- Colon Picker -->
<input type = "color" name = "themecolor" >

<!-- File upload -->
<input type = "file" name = "document>
<!-- Hidden Field -->
<input type = "hidden" name = "user_id" value = "101" >
```

Radio Button (Single selection)

```
<p> Gender </p>
<input type="radio" name="Gender" value="male"
    id="male">
<label for="male">Male</label>
```

Check Box (Multiple selection)

```
<p> Select your skills </p>
<input type="checkbox" name="skills
```

Dropdown Lists (Select Menu)

```
<label for="country">Country</label>
<select name="country" id="country">
  <option value="">-- Select Country --</option>
```

Text area (Multi line Text)

```
<label for="message">Message</label>
<textarea name="message" id="message" row="5"
```

Buttons

```
<!-- Submit button -->
```

```
<!-- Reset button -->
```

```
<!-- Regular button -->
```

Form Elements and attributes

Labels

```
<!-- Method 1: Using 'for' attribute -->
```

What is PHP

The PHP Hypertext preprocessor (PHP) is a server side scripting language that allows web developers to create dynamic content that interacts with databases.

PHP is a server-side scripting language that is embedded in HTML.

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

Basic Syntax of PHP

- A PHP script can be placed anywhere in the document
- A PHP script starts with

```
<? php
  echo "Hello, I am Rajib";
  print "Hi, I'm Rohan";
  ?>
```

- The default extension of PHP files is ".php"
- PHP statements end with semicolon

Comments in PHP

// single line
also single-line
/* Multi
Line */

- In PHP, all keywords are NOT case sensitive

- All variables are case-sensitive

Variables

PHP is loosely typed, which means we dont have to explicitly state the type of variable

Variable starts with $ sign, followed by the variable name

A variable name cannot start with number.

```
<?php
$txt = "Rohan";
$x = 5;
$y = 6.7;
$X = 20;
?>
```

Output Variables

The PHP echo and print statement are used

Example : addition of 2 variables

```
<? PHP
   $ x = 10;
   $ y = 20;
   echo $ x + $ y;
? >
```

Scope of Variable

- PHP has three different variable scopes:

(1) LOCAL : A variable declared within a function has a LOCAL SCOPE and can only be accessed within that function.

```
<? php
 function myfunction ( )
{
   $ x = 10 ; // local
   echo " x is accessible inside function $ x ";
   x ++ ;
}
my function ( ); // calling stmt
my function ( );
//echo " X is not accessible outside function $ x ";
 ?>
```

(2) GLOBAL : A variable declared outside a function has a GLOBAL SCOPE and can only be accessed outside a function.

```
<?php
$x = 10;
function myFunction()
{
// echo "x is not accessible inside function $x";
}
myFunction();
echo "x is accessible outside function $x";
?>
```

The "global" keyword and $GLOBALS super global variables imports variables from the global into the local scope of function.

```
<?php
$x = 5;
$y = 5;
function add()
{
global $x;
global $y;
return $x + $y;
}
echo "$x + $y =", add();
?>
```

(3) STATIC : Sometimes we want a Local variable NOT to be deleted, use the static keyword when you first declare a variable

Static variable is initialized only once

Its scope is local to the function it is declared in, but its value persists between calls to that function.

Program : static.php.

```
<? PHP
function mytest().()
{
static $x = 0;
  echo $x = "<br>";
  $x++;
}
mytest(); // First function.
my test();
my test();
?>
```