

PHP & XML



Module Name: **Programming with Java & HTML**

Module Code: **CST 06102**

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Contents

- Explain the concepts of PHP and XML
- Explain procedures to install PHP and XML programming environment
- Use PHP programming/ development environment and XML to create simple web based programs

PHP Concept

- PHP is an acronym for "PHP: Hypertext Preprocessor“, is a widely-used, open source scripting language
- PHP is free to download and use
- PHP files can contain text, HTML, CSS, JavaScript, and PHP code
- PHP code is executed on the server, and the result is returned to the browser as plain HTML
- PHP files have extension ".php"

PHP Concept cont…

- PHP can generate dynamic page content
- PHP can create, open, read, write, delete, and close files on the server
- PHP can collect form data
- PHP can send and receive cookies
- PHP can add, delete, modify data in your database
- PHP can be used to control user-access
- PHP can encrypt data

PHP Coding Environment

- install a web server
- install PHP
- install a database, such as MySQL

Basic PHP Syntax

- A PHP script can be placed anywhere in the document.
- A PHP script starts with <?php and ends with ?>:

```
<?php
  // PHP code goes here
?>
```

PHP with HTML

- A PHP script can be placed anywhere in the HTML document.

```
<!DOCTYPE html>
<html>
  <body>

     <h1>My first PHP page</h1>

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

  </body>
</html>
```

XML Concept

What is XML?

Extensible Markup Language (XML) is a type of markup language that establishes a set of guidelines for encoding texts in a way that is both machine- and human-readable.

- The XML language is a way to structure data for sharing across websites.
- XML is easy to create. It looks a lot like HTML, except that you make up your own tags.

Simple XML Document

Example:

```
<student id="001">
    <name>John Doe</name>
    <age>25</age>
    <grade>A</grade>
</student>
```

Here, <student> serves as the container for student information, with attributes like id providing additional identifiers.

The Difference Between XML and HTML

XML and HTML were designed with different goals:

- XML was designed to carry data - with focus on what data is
- HTML was designed to display data - with focus on how data looks
- XML tags are not predefined like HTML tags are

XML & PHP

- We are going to use mainly two functions in our PHP code:

1. The simplexml_load_file(): This function is used to convert an XML document to an object.

Syntax

```
simplexml_load_file(name of XML file)
```

2. children(): The children() function finds the children of a specified node.

Syntax

```
$xml_data->children()
```

XML & PHP: xml_data.xml

```
<?xml version = "1.0" encoding = "utf-8"?>
<collegedata>
<department category = "IT">
    <subjects lang = "en">Web Design</subjects>
    <sname> Felix Mwaya</sname>
    <age>22</age>
    <marks>98</marks>
    <address>Kibaha</address>
</department>
<department category = “CSE">
    <subjects lang = "en">Computer Architecture</subjects>
    <sname>Maryam Kipacha</sname>
    <age>25</age>
    <marks>78</marks>
    <address>Kinondoni</address>
</department>
</collegedata>
```

XML & PHP: index.php

```
<?php
// Start php code
// Load xml file into xml_data variable
$xml_data = simplexml_load_file("xml_data.xml") or
die("Error: Object Creation failure");
// Use foreach loop to display data and for sub elements access, use children() function
foreach ($xml_data->children() as $data)
{
    //display each sub element in xml file
    echo "Subject name : ", $data->subjects . "<br> ";
    echo "Student name : ", $data->name . "<br> ";
    echo "Student age : ", $data->age . "<br> ";
    echo "Student marks : ", $data->marks . "<br>";
    echo "Student address : ", $data->address . "<br>";
    echo "-----------------------------------";
    echo "<br>";
}
?>
```

Thank you!!