In PHP, arrays can be created in a couple of ways: using the array() construct or the shorthand square bracket syntax []. Here’s a quick overview of both syntaxes.

Indexed Arrays:

1. Using array()

$array = array("value1", "value2", "value3");

2. Using Short Array Syntax (recommended)

$array = ["value1", "value2", "value3"];

Certainly! The line of code $array = ["value1", "value2", "value3"]; is creating a numerical array in PHP. Here's a breakdown of its components:

Breakdown

Variable Assignment:

$array: This is the variable name where the array is being stored. In PHP, variables start with a dollar sign ($).

Array Syntax:

[...]: This is the shorthand syntax for creating an array. It’s a concise and modern way to define arrays, introduced in PHP 5.4.

Array Elements:

Inside the brackets, you have the elements of the array: "value1", "value2", and "value3".

Each of these elements is a string, but an array can hold various data types, including integers, booleans, or even other arrays.

Resulting Structure

The resulting structure is a numerical array where:

"value1" is at index 0

"value2" is at index 1

"value3" is at index 2

Accessing Elements

You can access the elements using their indices:

echo $array[0]; // Outputs: value1

echo $array[1]; // Outputs: value2

echo $array[2]; // Outputs: value3

Associative Arrays:

You can also create associative arrays, which use named keys:

$assocArray = array(

"key1" => "value1",

"key2" => "value2",

);

Or with the shorthand syntax:

$assocArray = [

"key1" => "value1",

"key2" => "value2",

];

Multidimensional Arrays

PHP also supports multidimensional arrays:

$multiArray = [

["value1", "value2"],

["value3", "value4"],

];

To store marks for multiple students, you can use a multidimensional array in PHP. This allows you to associate each student with their respective marks in a structured way.

### Example: Storing Multiple Students' Marks

Here’s how you can create a multidimensional associative array to store marks for several students across multiple subjects:

<?php

$studentsMarks = [

"Alice" => [

"Math" => 85,

"Science" => 90,

"English" => 78

],

"Bob" => [

"Math" => 92,

"Science" => 88,

"English" => 81

],

"Charlie" => [

"Math" => 75,

"Science" => 85,

"English" => 80

],

"Diana" => [

"Math" => 95,

"Science" => 91,

"English" => 89

],

];

// Displaying the marks

foreach ($studentsMarks as $student => $marks) {

echo $student . "'s Marks:\n";

foreach ($marks as $subject => $mark) {

echo " $subject: $mark\n";

}

echo "\n"; // Blank line for better readability

}

?>