

What is an Array in PHP?

An array in PHP is a variable that can store multiple values in a single variable.

Why Use Arrays?

- Store many values using **one variable**
- Easy data management
- Used heavily with **loops, forms, databases**

Types of Arrays in PHP

PHP mainly has **3 types of arrays**:

1. **Indexed Array**
2. **Associative Array**
3. **Multidimensional Array**

1. Indexed Array

Uses **numeric index (0,1,2...)**

Example:

```
<?php  
$colors = array("Red", "Green", "Blue");  
  
echo $colors[0]; // Red  
?>
```

Using Loop:

```
<?php  
$colors = array("Red", "Green", "Blue");  
  
for($i=0; $i<count($colors); $i++) {  
    echo $colors[$i] . "<br>";  
}
```

```
?>
```

2. Associative Array

Uses **key** ⇒ **value** pairs

Example:

```
<?php
$student = array(
    "name" => "Rahul",
    "age" => 21,
    "course" => "MCA"
);

echo $student["name"];
?>
```

Using foreach:

```
<?php
foreach($student as $key => $value) {
    echo $key . ":" . $value . "<br>";
}
?>
```

3. Multidimensional Array

Array inside another array

Example:

```
<?php
$marks = array(
    array(80, 85, 90),
    array(70, 75, 78),
    array(88, 92, 95)
);

echo $marks[1][2]; // 78
?>
```

Array Functions (Very Important)

Function	Use
count()	Count elements
sort()	Sort array
rsort()	Reverse sort
array_push()	Add element
array_pop()	Remove last element
in_array()	Search value

Example:

```
<?php
$nums = array(10, 20, 30);
array_push($nums, 40);
print_r($nums);
?>
```