

PHP OOP :

What is OOP ?

OOP stands for Object-Oriented Programming. It is a programming paradigm that uses the concept of "objects" to organize and structure code. In object-oriented programming, a program is designed as a collection of objects that represent real-world entities, and these objects can interact with each other .

What are Classes and Objects?

A class is a template for objects, and an object is an instance of class.

Define a Class :

A class is defined by using the `class` keyword, followed by the name of the class and a pair of curly braces (`{}`). All its properties and methods go inside the braces:

Syntax

```
<?php
class Fruit {
    // code goes here...
}
?>
```

Define an Object:

Classes are nothing without objects! We can create multiple objects from a class. Each object has all the properties and methods defined in the class, but they will have different property values.

Objects of a class are created using the `new` keyword.

In the example below, `$apple` and `$banana` are instances of the class `Fruit`:

```
$apple = new Fruit();  
$banana = new Fruit();  
$apple->set_name('Apple');  
$banana->set_name('Banana');  
  
echo $apple->get_name();  
echo "<br>";  
echo $banana->get_name();  
?>
```

What is the paradigm of Object-Oriented Programming (OOP)?

The paradigm of Object-Oriented Programming (OOP) is a programming paradigm that is based on the concept of "objects" .

The key principles of OOP include:

- | | |
|------------------|------------------|
| 1) Encapsulation | 3) Encapsulation |
| 2) Encapsulation | 4) Encapsulation |

What is an ORM – The Meaning of Object Relational Mapping ?

Object Relational Mapping (ORM) is a technique used in creating a "bridge" between object-oriented programs and, in most cases, relational databases.

What is an ORM Tool or ORM Object Relational Mapping Database Tools?

An ORM tool is software designed to help OOP developers interact with relational databases. So, instead of creating your own ORM software from scratch, you can use these tools.

An ORM tool is a software framework that facilitates the conversion between the object-oriented representation in your code and the relational representation in a database .

The difference between ORM and ORM Tool ?

So, ORM is the concept, and ORM tools are the practical implementations of that concept in various programming languages.

Examples of ORM Tool used in PHP:

- | | |
|---------------------------|---------------|
| 1) Doctrine | 3) Propel |
| 2) Eloquent (Laravel ORM) | 4) RedBeanPHP |

Conclusion:

Instead of writing SQL queries in our code like we used in PHP procedural , we use ORM in our code in PHP OOP using ORM Tool to simplify this interaction .

By using ORM, we can work with objects in our code, providing a more intuitive and structured way to handle database operations.