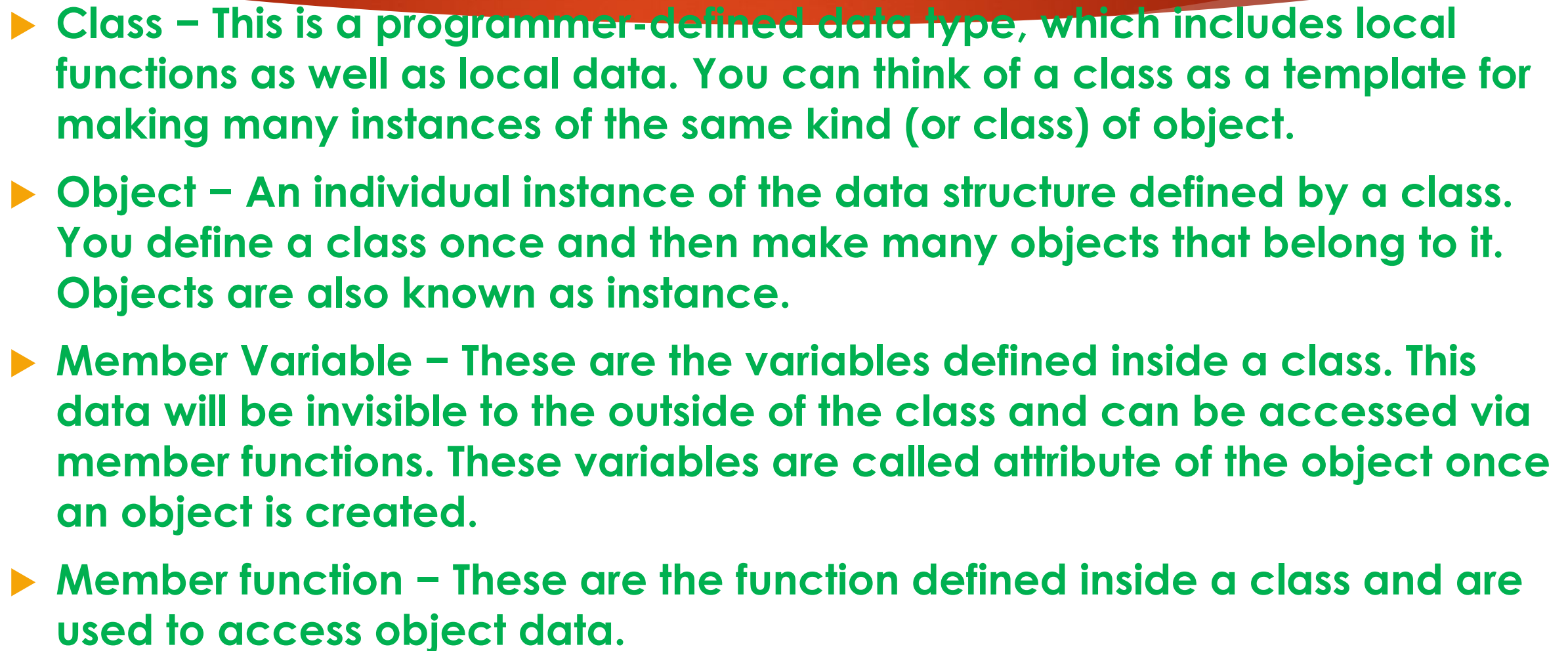# Object Oriented Concept in PHP
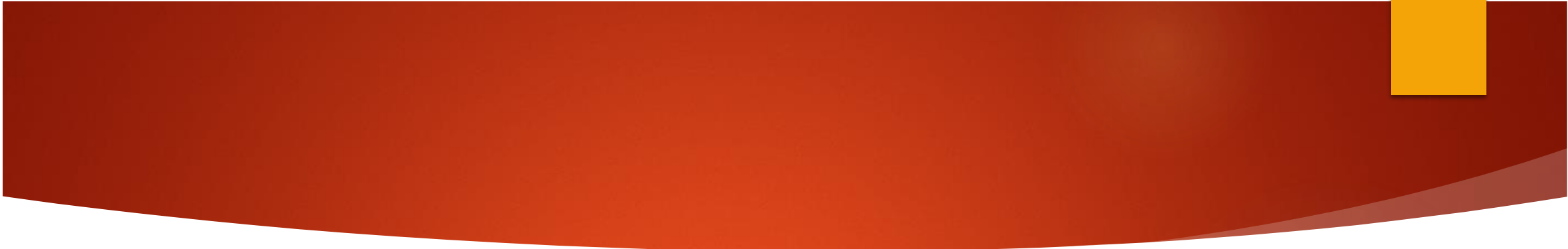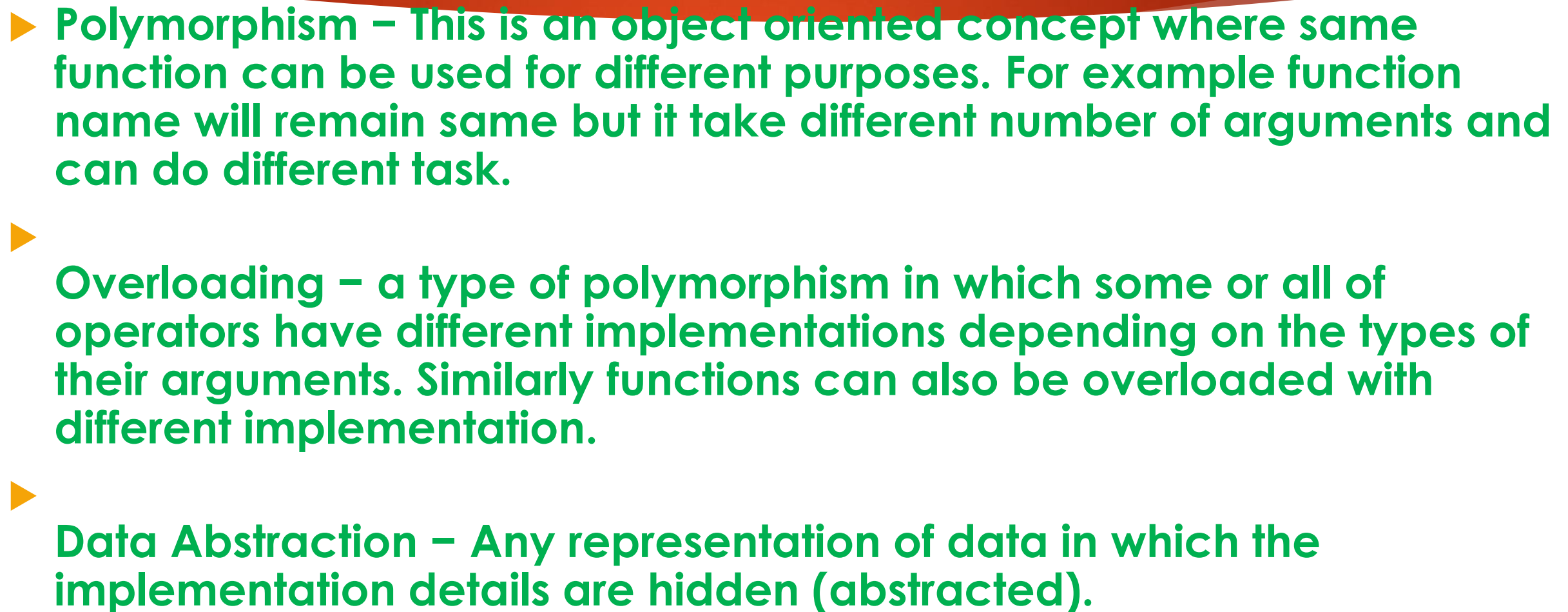
Object Oriented Programming

▶ **PHP is a server-side scripting language, mainly used for web development but also used as a general-purpose programming language.**

▶ **Object-Oriented Programming (PHP OOP), is a type of programming language principle added to php5, that helps in building complex, reusable web applications.**
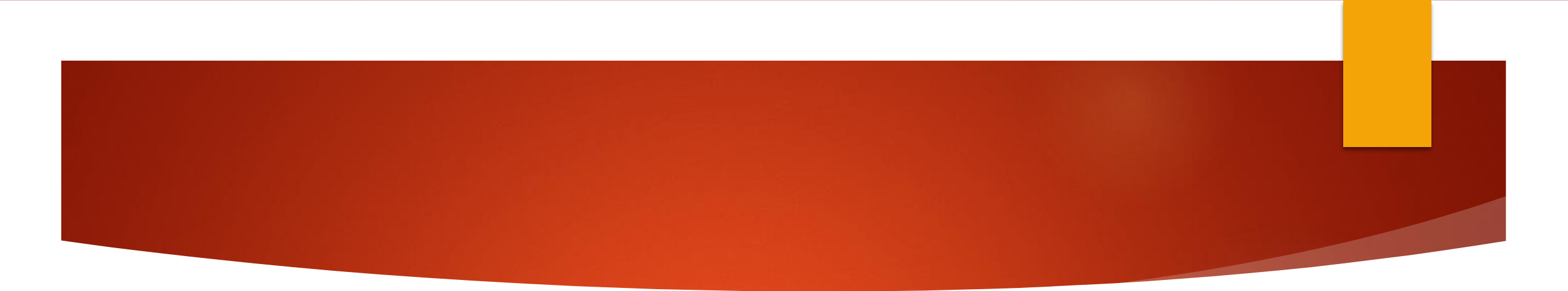
The PHP Object-Oriented Programming concepts are:

- **Class**
- **Objects**
- **Inheritance**
- **Interface**
- **Abstraction**
- **Magic Methods**

- **Class** – This is a programmer-defined data type, which includes local functions as well as local data. You can think of a class as a template for making many instances of the same kind (or class) of object.

- **Object** – An individual instance of the data structure defined by a class. You define a class once and then make many objects that belong to it. Objects are also known as instance.

- **Member Variable** – These are the variables defined inside a class. This data will be invisible to the outside of the class and can be accessed via member functions. These variables are called attribute of the object once an object is created.

- **Member function** – These are the function defined inside a class and are used to access object data.

▶ **Inheritance − When a class is defined by inheriting existing function of a parent class then it is called inheritance. Here child class will inherit all or few member functions and variables of a parent class.**

▶

  Parent class − A class that is inherited from by another class. This is also called a base class or super class.

▶

  Child Class − A class that inherits from another class. This is also called a subclass or derived class.

- **Polymorphism – This is an object oriented concept where same function can be used for different purposes. For example function name will remain same but it take different number of arguments and can do different task.**

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  Overloading – a type of polymorphism in which some or all of operators have different implementations depending on the types of their arguments. Similarly functions can also be overloaded with different implementation.

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  Data Abstraction – Any representation of data in which the implementation details are hidden (abstracted).

Encapsulation – refers to a concept where we encapsulate all the data and member functions together to form an object.

Constructor – refers to a special type of function which will be called automatically whenever there is an object formation from a class.

Destructor – refers to a special type of function which will be called automatically whenever an object is deleted or goes out of scope.

Class & Object:

▶ **Class is a programmer-defined data type, which includes local methods and local variables.**

▶ **Class is a collection of objects. Object has properties and behaviour.**

▶ **First we have to define a php class, where classname should be same as filename.**

Example for simple class:

```php
<?php
class Books
{
  public function name()
  {
        echo "Drupal book";
  }
   public function price()
  {
        echo "1000 Rs/-";
  }
}//To create php object we have to use a  new operator. Here php object is the object of the Books Class.
$obj = new Books();
$obj->name();
$obj->price();
?>
```

Creating Objects in PHP

▶ **Once you defined your class, then you can create as many objects as you like of that class type. Following is an example of how to create object using new operator.**

▶ **$physics=new Books();**

▶ **$maths=new Books();**

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