

Object-Oriented PHP: Essential Constructs

Essential Constructs



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Course Overview



Introduction

Knowledge prerequisite

Installed software requirement

Goals for this module

Knowledge Prerequisites



Basic PHP language data types
Operators
Control statements (if, switch)
Looping (foreach, for, while, do-while)
Functions
Scope

Software Prerequisites



PHP installed as either a web server module, or as a command line version
A web server if using PHP as a server module
An integrated development environment (IDE)

Object-Oriented PHP Module 1

The Class Construct

A Naming Collision

A variable in your application can be redefined later by use of another library or extension.

Best Practice: Encapsulate your code in a protected scope called a class.

The Class Construct



What is a class

Class encapsulation and scope

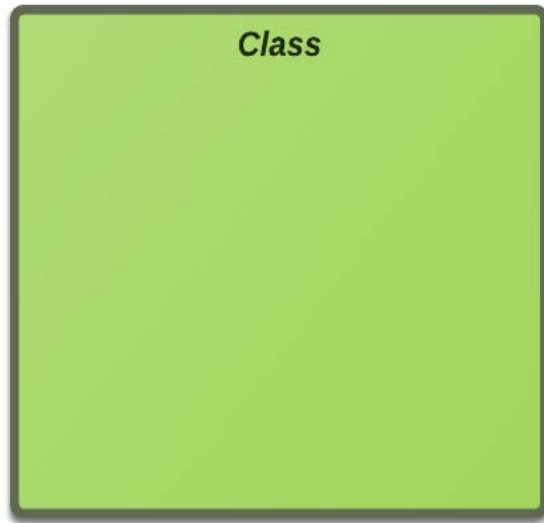
Class properties (variables)

Class methods (functions)

Class constants

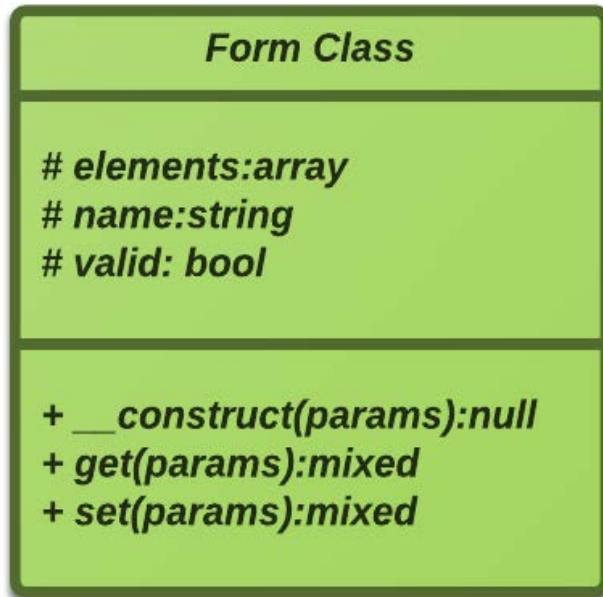
Best practices

What Is a Class?



A container of information
Provides access control to its
contents

Class Encapsulation and Scope



A graphical representation of a class container (UML)
Contains class member properties and methods

Encapsulation

Encapsulation is the packing of data and functions into a single component.

It allows selective hiding of properties and methods in an object by building an impenetrable wall to protect the code from accidental corruption.

Source: [wikipedia.org](https://en.wikipedia.org)

The Class Construct Syntax

This is the basic class construct. In this simplest form, it encapsulates.

Best Practice: Name starts with upper case letter, followed by camel-cased characters.

The Class Construct Summary



The problem with naming collisions
Encapsulation and scoping
Introduction of the class construct
Best practices

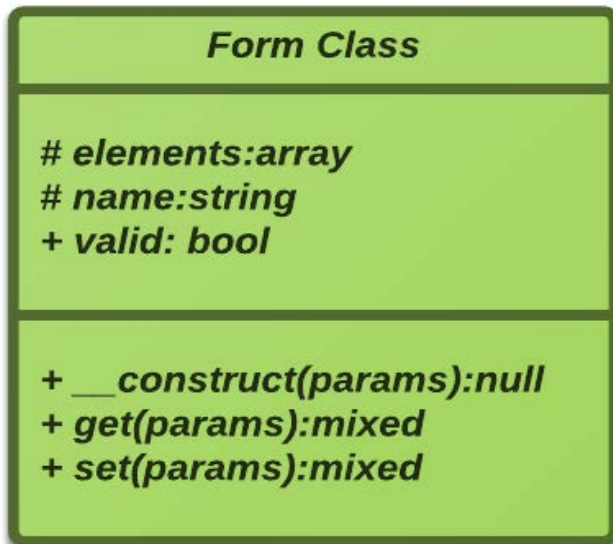
IDE place holder

Class Properties



What is a class member property
Property visibility and declaration
Setting default values

Class Properties (variables)



Class properties belong to the class
Contain changeable (malleable)
values

Other names: “variables”,
“attributes” or “fields”

Property Visibility

Public

Protected

Private

Class Properties

Prefixing the property declaration with one of three visibilities: public, protected or private.

Setting default values.

Class Properties Summary



Class properties

Visibility

Assigning default values

Best practices

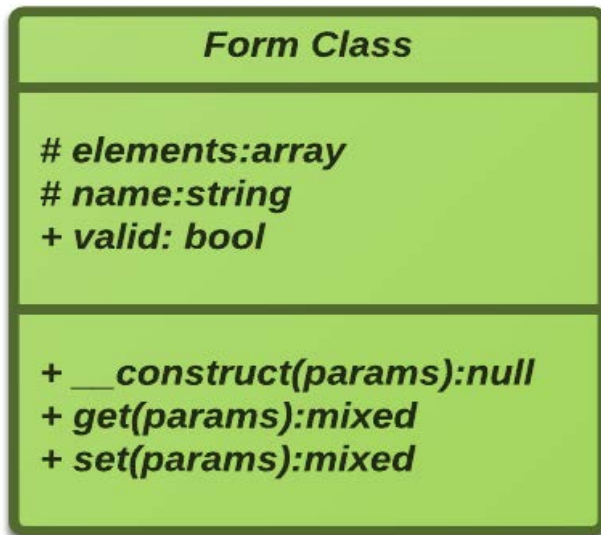
Slide Deck Clip Break

Class Methods



What is a class member method
Method visibility and declaration
Method scope

Class Methods (functions)



Class methods belong to the class
Class methods have visibility
Other name: "class function",
Can take parameters
Has a scope

Method Visibility

Public

Protected

Private

A Class Method

```
class Form{  
    ...  
    public function getStartTag($attributes = null){  
        if(!$attributes) return '<form>';  
        $tag = '<form';  
        foreach($attributes as $key => $value){  
            $tag .= " $key=\"\$value\"";  
        }  
        $tag .= '>';  
        return $tag;  
    }  
    ...  
}
```

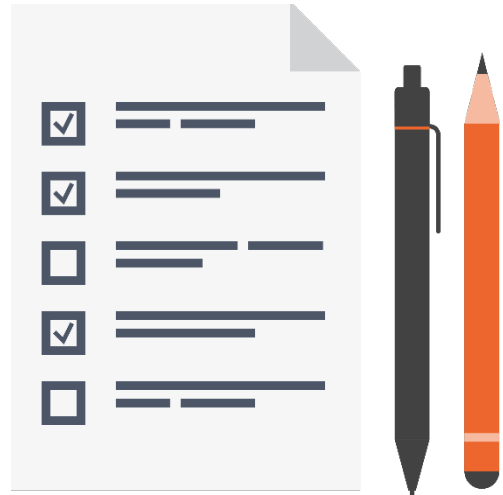
Class Methods Summary



Class methods
Visibility
Scope
Best practices

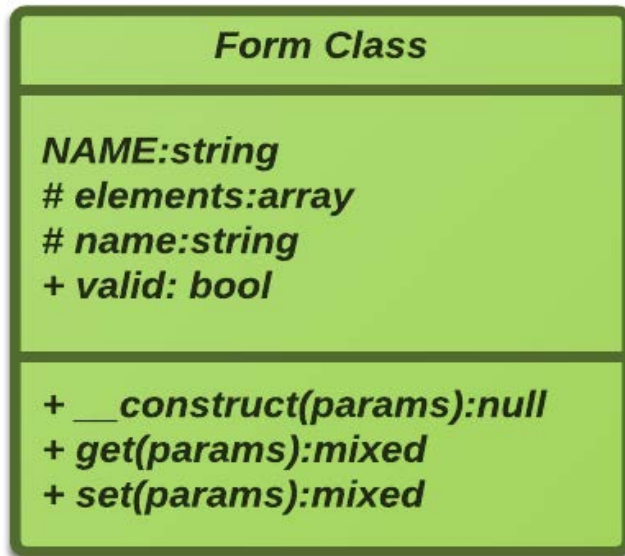
IDE place holder

Class Constants



What is a class member constant
Constant visibility and declaration
Assigning default values
Constant scope
Best practices

Class Constants



Class constants belong to the class
Are always publicly visible
Do not use a dollar sign (\$)

The Class Constant Syntax

This basic syntax assigns a hard-coded value to the constant name.

Use constants as a single edit point for multiple class references.

Best Practice: Name with upper case letters.

Class Constants Summary



Class constants

Visibility as it relates to constants

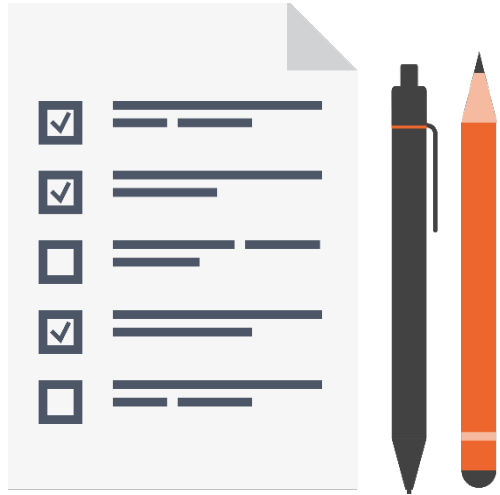
Defining a default value

Scope

Best practices

IDE place holder

The Form Class



What will the Form class do
Features of the Form class
Look over the Form class as built

A Blueprint to Build Something

Like an HTML Form



Email

Please note all entries with an * are required.

Name *

Email *

Subject *

Message *

Send copy to yourself (optional)

LOX ASADAS "EL JAROCHO"

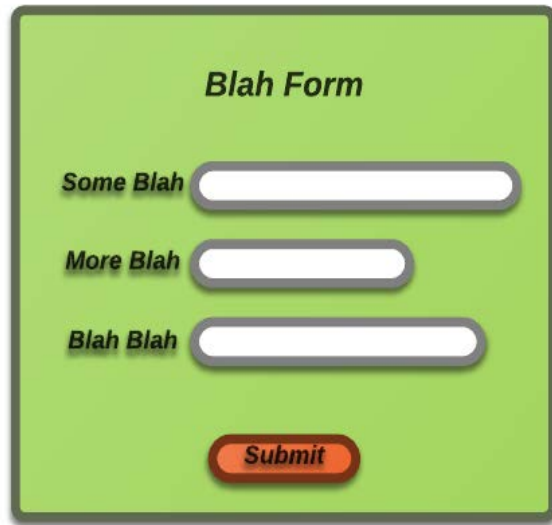
Type the text

Privacy & Terms

Image entries above do not require capital letters or spaces.

Send Email

Features of The Form Class



The image shows a green rectangular form with a dark green border. At the top, it is titled "Blah Form" in a bold, italicized font. Below the title, there are three input fields, each preceded by a label: "Some Blah", "More Blah", and "Blah Blah". The input fields are white with a gray border and a slight shadow. At the bottom of the form, there is a red "Submit" button with a white border and a slight shadow.

- Provide for object-oriented form creation
- Built as a single concern
- Integrate various HTML form inputs
- Provide form input validation
- Integrate input security

IDE place holder

Form Class Summary



Built the Form class foundation
Form class usage
Form class code review