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Symfony 7 Training: Core Concept

3 days (21 hours)

Presentation

Symfony is a set of PHP components and a free MVC Framework written in PHP. It provides modular and adaptable functionalities that make website development easier and faster. Symfony 7 is the latest version of the framework, which has established itself on the web development market thanks to its lightness and ease of installation with Symfony Flex.

This new way of developing applications has won over firms such as BlaBlaCar.com and Spotify.com, who now use Symfony. Other frameworks such as Laravel and Magento rely on Symfony components. In 2017, Symfony passed the one billion downloads mark.

In this Symfony training course, you'll discover this framework from every angle, using best practices from installation to the implementation of concrete projects. Users of versions prior to Symfony 7 will also be able to migrate their projects. What's more, the inclusion of unit and functional tests will enable you to manage this framework in its entirety, from its architecture to its implementation in a Web application.

As with all our training courses, we'll be using the latest stable version of [Symfony 7](#).

Objectives

- Understand the concepts and architecture of the framework
- Master the various development tools related to Symfony 6
- Developing a complete Web application with Symfony 6
- Understanding Doctrine and the database link

Target audience

Web project managers , Technical architects, Developers

Prerequisites

- PHP skills
- Mastery of object-oriented programming (OOP)
- HTML and CSS skills

Software prerequisites (in the case of in-house training)

- PHP 8.2 minimum
- Composer (<https://getcomposer.org/>)
- MySQL or MariaDB
- PHPMyAdmin or equivalent
- minimum 8 GB ram (16 GB recommended)
- Windows or MacOS or Linux preferred (Ubuntu 22.04 type, VM of at least 8 GB or Physical).
- in admin mode
- with an Internet connection, without proxy
- we recommend chrome as a browser
- IDE for PHP development (PHPStorm recommended)

Pre-course reading recommendations

- [PHP training](#) exercises
- A complete article to [master the OOP concept](#)
- A guide to [CSS best practice](#)
- [Official Symfony best practices](#)

Note: Ambient IT does not own the technology, Symfony™ is a registered trademark of Symfony SAS.

Our Symfony 7 training program

Introduction

- What is Symfony 7.x and why use it?
- The evolution of the framework
- The PHP framework ecosystem
- Identify and find Symfony resources
- Fundamental concepts

Setting up Symfony

- Symfony installation
 - Symfony Flex
 - Symfony Full Stack Framework
- Setting up the structure of a Symfony project
- The basics of the MVC concept (Models, Views, Controllers)
- Configuration of your Symfony framework (XML, YAML, PHP)
- Understanding the flow of an HTTP request in Symfony
- Basic concepts of Symfony :
 - Autoloader
 - Services and dependency injections
 - Routing and url management

Architecting a Symfony 7 project

- Project organization
- Dependency management (compose)
- Page creation

The MVC structure in Symfony

The model layer with Doctrine

- Introduction to the ORM (Object Relational Mapping) concept
- Generate a database and associated ORM layer classes
 - Database and Entity creation
 - Create - Read - Update - Delete
 - Improve queries with criteria
- The Doctrine Query Builder

The Vue layer with Twig

- Overview of the View layer
- Creating your templates
- Modular templates
- Template inheritance
- Blocks
- Syntax (variable, loop and condition)
- Global layout and bundle layouts

The controller layer

- Page routing management
- Manage settings
- Handling Request and Response objects

Forms with Symfony

- Set up simple forms
- Define validation rules for your forms
- Discover FormBuilder: the form builder
- Forms with Twig
 - Create ad creation page
 - Displaying a Symfony form
 - Form display functions
 - Form layout
 - Form themes
 - The Bootstrap form theme

Testing and quality

- Unit testing overview
- Unit testing with PHPUnit
- Functional test presentation
- Functional testing
- Production start-up operations

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Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level on different types of technology, as well as his or her expectations and personal objectives with regard to the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.