

## WEB DEVELOPMENT WITH SYMFONY 4

### BLENDED LEARNING TRAINING PROGRAM

This four-day course dedicated to Symfony is the perfect training to master all the fundamental concepts and the most advanced tools of Symfony 4. At the end of this workshop, we guarantee you will be fully autonomous with the Symfony 4 framework and more.

**Requirements:** Mastering OOP in PHP

### Learning materials

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SensioLabs University has designed the best Symfony training experience by combining in-class sessions and eLearning. In addition to training sessions, access **our eLearning platform** for 1 month to mix various learning practices, validate your skills, track your progress and stay in touch with your trainer throughout the program.

The course materials will be available within the personal space of each participant. SensioLabs trainers are Symfony certified and practice continuous monitoring during face-to-face training. Computers are available to participants on request.

**Learn Symfony with Symfony certified trainers and the SensioLabs University eLearning platform:**



Platform available at  
any time



Read and download your  
course materials



Additional resources:  
exercises, videos, test...



Online chat with  
your trainer

# Program

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## DISCOVERING THE SYMFONY 4 PROJECT

- General overview of the Symfony 4 project (source code, license, documentation, community, philosophy, ecosystem, etc.)
- Understanding the release cycle of new Symfony versions
- Bootstrapping a new Symfony 4 application project with Composer and Flex
- Taming project files and directory structure
- Installing third party modules (bundles, libraries) with Flex
- Finding help and documentation resources on the Internet
- Understanding the HTTP request / response processing workflow
- Discovering the concept of Symfony environments (development, production and test)
- Developing code according to Symfony coding and naming conventions
- Taming the CLI tool and its numerous useful commands

## LEARNING HOW TO DEBUG CODE

- Installing the « Web Profiler » with Symfony Flex
- Enabling errors and incidents logging
- Displaying the « Web Debug Toolbar » on Web pages
- Browsing the « Web Profiler » debugging panels
- Analyzing exceptions stack traces and error messages
- Introspecting a variable contents

## MASTERING THE CONFIGURATION LAYER

- Register new routes definitions (YAML and annotations)
- Constraining routes configuration (HTTP verb, domain name, placeholders, etc.)
- Overloading third party bundles configuration
- Declaring new global configuration parameters
- Extracting sensitive and runtime platform specific global parameters to environment variables
- Understanding the configuration overloading per environment

## RESPONDING TO THE CLIENT'S REQUEST

- Developing controller classes and actions methods
- Transforming a request objet into a response object
- Mapping URLs to controllers with annotations
- Generating a raw response or from a Twig template
- Accessing the request objet to read client's data
- Reading and writing data from/to the user's session
- Reading and writing data from/to a cookie
- Generating a 404 response type page
- Redirecting the user to another page with HTTP redirects

## GENERATING DYNAMIC WEB PAGES

- Discovering the Twig tempate engine
- Designing concise and explicit templates
- Accessing Twig templates global variables
- Mastering the Twig grammar (tags, filters, functions, tests, etc.)
- Building more advanced Web pages with template inheritance
- Refactoring duplicated code thanks to template inclusion
- Performing an action and displaying its result from a view
- Generating URL patterns based on registered routes
- Rendering Symfony forms

## INTERACTING WITH THE USER THANKS TO FORMS

- Designing and processing simple forms
- Applying validation rules to validate submitted data
- Prototyping the rendering of a form with Twig
- Gathering validated data from a form
- Sending an e-mail built from the form submitted data

## INTERNATIONALIZING AND LOCALIZING CONTENTS

- Installing the translation component
- Changing the default application locale
- Defining simple translation keys in Twig views
- Generating translation files skeletons (XLIFF, YAML)
- Translating keys
- Handling translation keys including plural sentences

## INTERACTING WITH A SQL RELATIONAL DATABASE

- Installing and configuring the Doctrine ORM
- Establishing an object-relational mapping with entity classes
- Linking entities together thanks to relationships mapping
- Persisting object entities into the SQL database
- Building dynamic SQL queries thanks to the Doctrine Query Builder object
- Extracting entities from the database
- Hosting custom SQL queries in Doctrine repositories objects
- Encapsulating entities related domain logic into entity classes

## PERPETUATING THE APPLICATION WITH AUTOMATED TESTS

- Discovering the PHPUnit unit testing framework
- Understanding the pros of automating tests
- Configuring a unit tests suite
- Creating and executing a unit tests suite
- Creating and executing a functional tests suite
- Generating code coverage report

## DECOUPLING CODE WITH EVENT PROGRAMMING

- Introduction to the Mediator design pattern and its implementation in Symfony (the Event Dispatcher)
- Discovering the built-in Symfony kernel events
- Executing custom code whenever an event occurs in the framework
- Propagating custom business events through the service layer
- Connecting custom event listeners / subscribers on the business code

## GOING FURTHER WITH FORMS


- Designing and processing forms
- Rendering configurable forms with the options system
- Triggering custom specific logic when form events arise
- Customizing the rendering of a Symfony form with form themes
- Applying data custom validation logic
- Triggering validation rules according to the form context

## OUTSOURCING THE BUSINESS LOGIC INTO SERVICES

- Understanding the dependency injection principle
- Introducing the Symfony service container
- Listing all existing Symfony framework services
- Registering new business services into the container
- Configuring services with global parameters
- Leveraging the services auto-registration mechanism
- Adapting services configuration manually when needed

## SECURING ACCESS TO THE APPLICATION PROTECTED PAGES

- Introduction to authentication and authorization principles
- Securing a Web site with a traditional login form authentication
- Setting up a form authentication system with the Guard component
- Establishing a security policy based on users' permissions
- Registering custom authorization rules thanks to voters



**Daily test**

Question 1 / 20

Started 22 days ago

### VCS Files

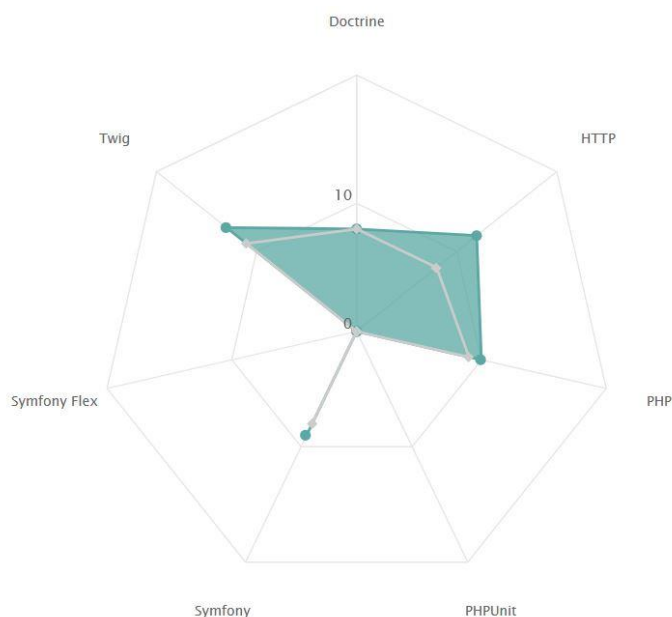
Symfony > Components > Finder

By default, the Finder ignores popular VCS files, what is the method to use them?

Choices

- ☐ `$finder->ignoreVCS(false);`
- ☐ `$finder->enableVCS();`
- ☐ `$finder->ignoreFiles(array('vcs' => false));`
- ☐ `$finder->enableVCSFiles();`
- ☐ `$finder->useTypes(array('vcs' => true));`

**Submit answer**



## DAILY TESTS

- Test yourself once a day on a 20 question multiple choice quiz.
- Find a database of more than 1,200 questions on PHP, object-oriented programming, Doctrine, Twig...

## SKILLS RADAR GRAPH

- Track your level on each theme and component of Symfony.
- Find your results from each test on the skills radar graph.
- Visualize the topics on which you still need to upgrade your skills.

### Details

Duration: 4 days – 28 hours

Price: €1,990.00 / person

Code : SF4C4

Public: PHP web developers

### Sign up

New sessions are announced on [training.sensiolabs.com/en/](https://training.sensiolabs.com/en/) or you can register by sending us an email at [training@sensiolabs.com](mailto:training@sensiolabs.com)

