

**Introduction to Symfony**

**Course Number:** SYM-100
**Duration:** 2 days

**Overview**

This online or in-person Introduction to Symfony training course teaches attendees how to use the Symfony 6 framework to build dynamic websites and web applications. Students build their projects from scratch and learn official best practices from our expert Symfony developers/trainers.

**Note:** This course is capped at 8 attendees, overriding Accelebrate’s standard 15-attendee cap.

**Prerequisites**

All Symfony training students must know the basics of PHP and object-oriented programming. If attendees don’t have prior PHP experience, please let us know and we will add a PHP primer to the class (extend it by up to a day).

**Materials**

All attendees receive comprehensive courseware.

**Software Needed on Each Student PC**

* Windows PCs or Macs with local administrator rights
* PHP 8 or later
* The following PHP extensions installed: ctype, filter, iconv, intl, json, mbstring, openssl, pdo, pdo\_sqlite, session, simplexml sodium, tokenizer, xml, xmlwriter, and xsl
* SQLite3, MariaDB, or MySQL
* Composer 2.x or later
* Symfony and Symfony CLI
* Npm or Yarn
* GitHub account for each participant, or a private repository + GIT account provided by your organization to our instructor
* Git

**Objectives**

* Become familiar with the Symfony framework
* Create a Symfony project from scratch
* Discover the structure and organization of project directories and files
* Apply the MVC pattern to properly separate concerns in your Symfony applications
* Build your web application’s interface using Twig templates and the Webpack Encore asset manager
* Work with Symfony forms and object persistence via Doctrine
* Apply Symfony best practices

**Outline**

* Introduction
	+ Overview of the Symfony project, including license, releases, roadmap, guidelines with Symfony framework, and useful components
	+ Work environment and Symfony command-line tool
	+ Installation of a Symfony project
* First Steps with Symfony
	+ How to handle a Request-Response flow
	+ Creating your first web page
	+ Fine-tuning your application routes with parameters and requirements
	+ Best practices when using controllers and their helpers
* Introduction to Functional Tests
	+ Explanations about automated tests and functional tests
	+ Get ready with PHPUnit to run automated tests
	+ Writing your first test to check a status code over a web page
	+ Using a data provider to provide URLs to be checked
* Templating with Twig
	+ Introduction to Twig
	+ Twig’s basic syntax
	+ Using the Dot syntax helper in your templates
	+ Using Twig to loop over data from a controller and test some conditions to design your web page
	+ Using layout techniques with inheritance and template inclusions to reduce your template
	+ Best solutions to get help with the Symfony console and the web profiler
	+ Creating dynamic URLs in templates to access another web page or link an asset
* Web Assets with Webpack Encore
	+ Introduction to Webpack Encore and Yarn
	+ Installation and configuration of the required bundle
	+ Optimizing assets with Webpack Encore
* Introduction to Doctrine
	+ The Doctrine ORM and configuration of your project to access the database
	+ Entities and their mapping with the Symfony maker
	+ Migrations to manage the state of your database at anytime
	+ Handling relations between 2 entities
	+ Storing data in the database by using a controller
	+ Retrieving data from the database by using built-in or custom queries
* Forms
	+ Introduction to Symfony forms
	+ Custom types
	+ Handling submitted data
	+ Using Symfony built-in constraints to get validated data
* Conclusion