

Laravel 9: The Big Picture

GETTING TO KNOW LARAVEL



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Overview



What Are Web Frameworks?

Frameworks vs Content Management Systems

Frameworks vs Library

What is Laravel?

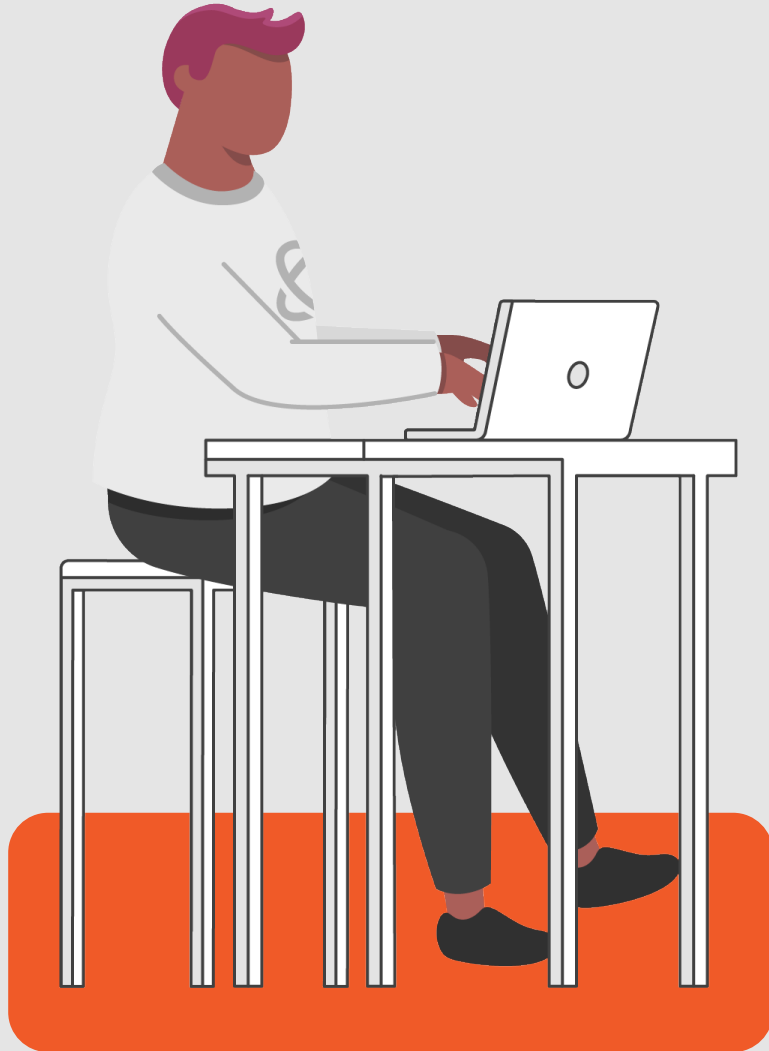
The Laravel Ecosystem

Who is Using Laravel?

What is New in Laravel?



The Story



You are a freelance web developer that knows HTML, CSS, and PHP. You are looking to join an organization as a full-time employee and work on larger web development projects.

You know that learning a PHP framework is a skill that will help you land the job and enhance your development abilities.

You have heard about Laravel and know some of the most well-known companies use Laravel for building their web applications.

You want to get a better idea of what Laravel is & to know if it is the right fit for you on your journey to learn a PHP framework.



Version Check



This course applies to version:

- Laravel 9.12.0



What Are Web Frameworks?



What is a Web Framework?

It is a software code libraries & tooling providing a standard way to build & deploy web apps

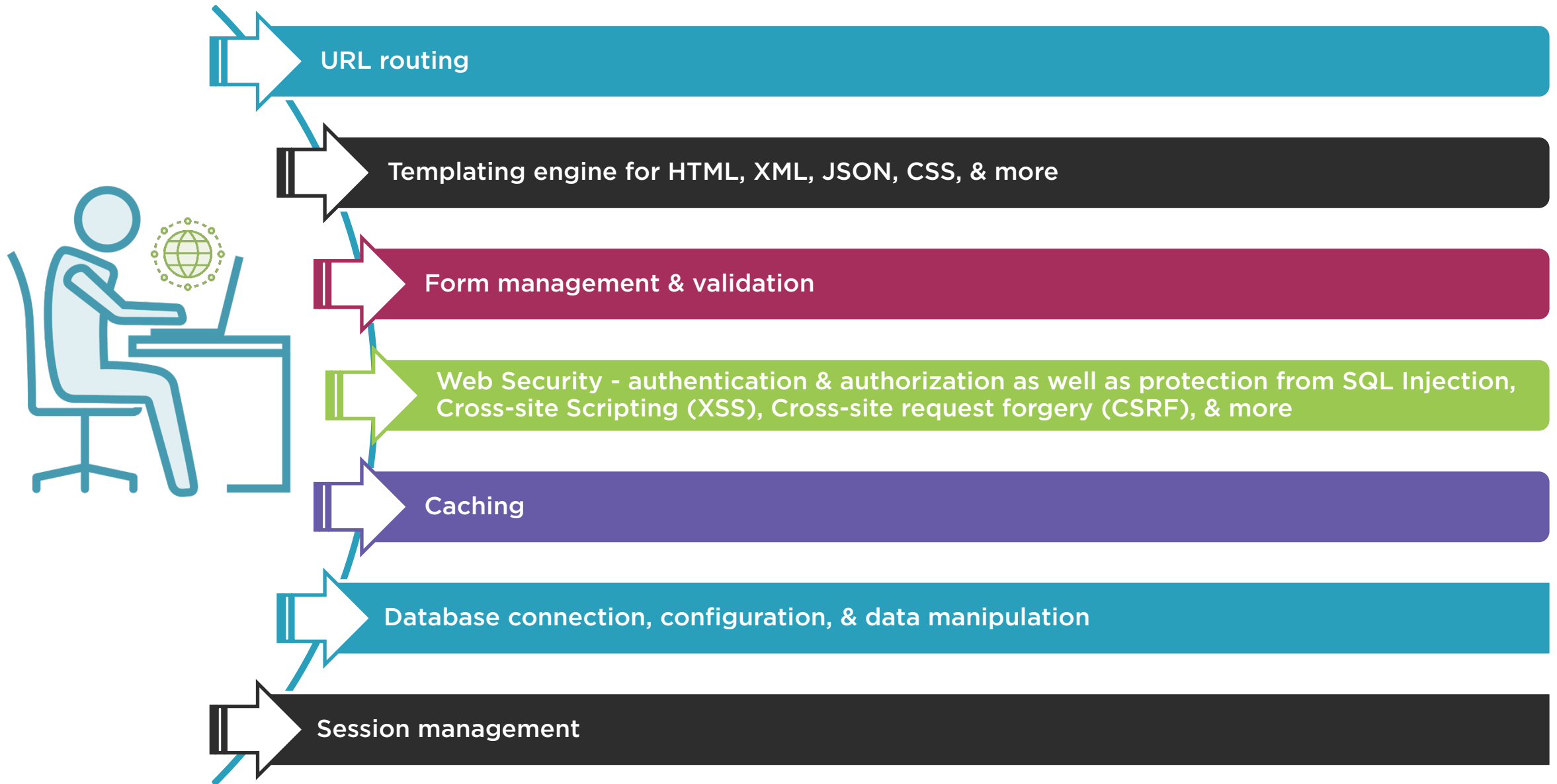
It abstracts repetitive tasks away & provides code reusability

It consists of pre-built structures & patterns for building reliable, scalable & maintainable web apps

Overall a web framework reduces overhead & simplifies building web apps



Common Web Framework Functionalities



Frontend & Backend

Frontend web framework

- runs on client computer in web browsers providing content & interactivity to end users

Backend web framework

- Runs on server/s & serves web sites, web apps, & APIs



Framework Architectures

Model View Controller (MVC)

Separates the data model into business rules (the "controller") and the user interface (the "view"). This architecture modularizes code, promotes code reuse & permits various interfaces. Most frameworks for web apps today work on Model View Controller (MVC) models.

Model-View-ViewModel (MVVM)

This architecture sets the view layer to act as a controller & converts the data objects from the Model layer into manageable components

Three-tier organization

This architecture separates into three physical tiers: application, database, and client-side. This database is usually a relational database. The application possesses business logic that runs on a server and corresponds with the client utilizing HTTP. The client uses a web browser that runs the HTML code developed by the application layer

Push-based vs Pull-based

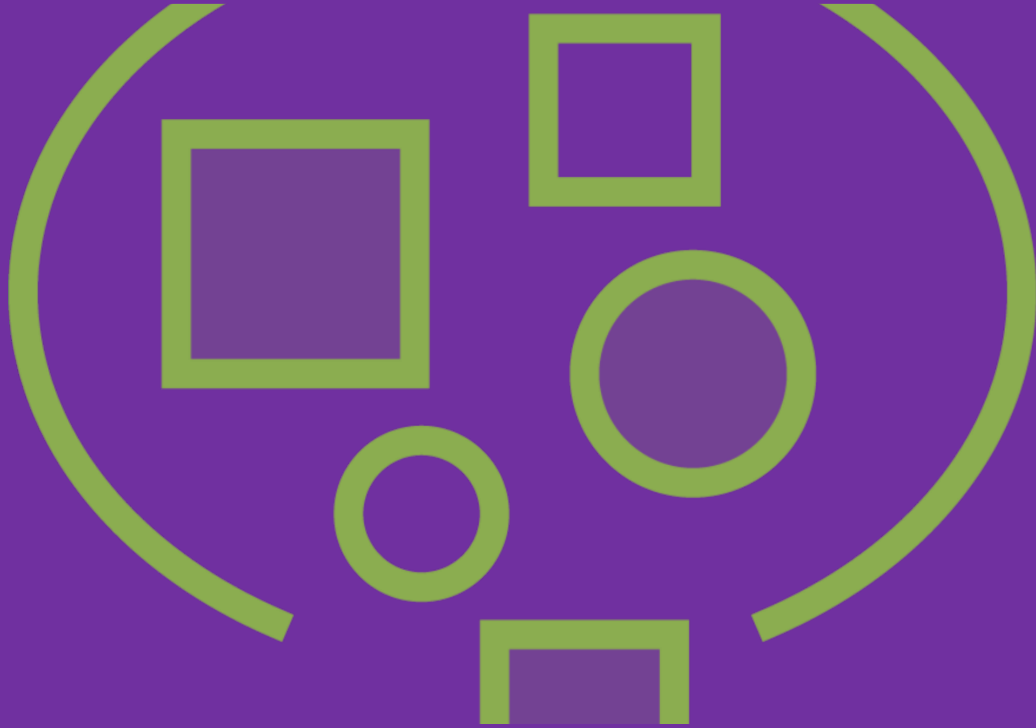
These use actions to perform required processing, then they "push" the data to the view layer rendering the results



Frameworks vs Content Management Systems



Examples of Frameworks & Content Management Systems



Framework

- Laravel JS (JavaScript)
- Laravel (PHP)
- Rails (Ruby)
- Django (Python)



CMS

- Drupal
- Joomla
- WordPress
- Umbraco



How Frameworks & Content Management Systems are Similar

Frameworks & CMS's both:

- **Based on a language i.e. Laravel & Drupal both based on PHP**
- **Require some programming skills**
- **Have plugins/add-ons**



How Frameworks & Content Management Systems Differ

Frameworks are:

- A set of libraries and tools
- CMD line/code driven
- Require higher programming skills
- Offer more freedom for implementation from scratch

Content Management Systems are:

- Configuration & GUI driven vs CMD line/code driven
- Can get by with lighter programming skills
- Pre-set features & styled themes
- May hit limitations when customizing a CMS



Frameworks vs Library



Frameworks vs Library

Framework

A library performs specific, well-defined operations

When using a library you are in charge of the flow of the app

You the developer calls the library where & when you need it

Examples of a library:

Caching, compression, Network protocols, image manipulation, regular expression evaluation

Library

A framework is a skeleton where the app defines the “core” of operations building out the skeleton

When using a framework it is in charge of the flow of the app
It tells the you the developer what you need

Examples of a framework:

Contains libraries, Web app system, Plug-in/addon manager, GUI system, authentication system, security system, data management system



What is Laravel?



Laravel

Laravel is a free, open-source PHP web framework, intended for the development of web apps following the model-view-controller architecture & based on Symfony.

It allows developers to write organized & structured code utilizing a component-service pattern.

Laravel is a complete solution containing a CLI, a modular packaging system, database abstraction, Query builder, authentication, Restful controllers, templating engine, testing, forms, & more.

In short Laravel has everything needed to start building web apps on day one and continue shipping updates to the web apps for years to come.



The Laravel Ecosystem

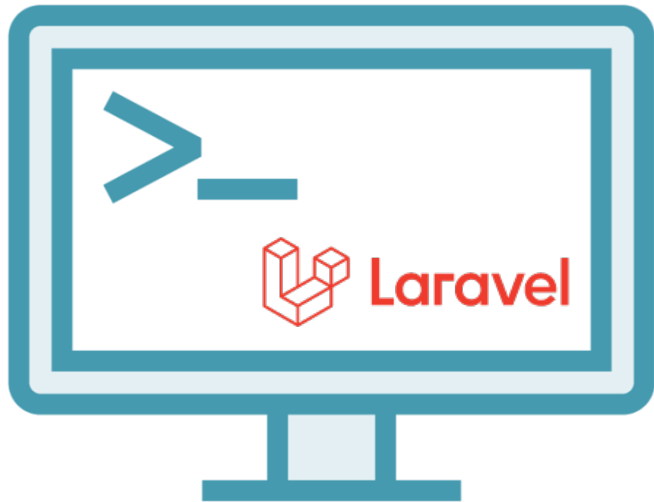


The Laravel Ecosystem

Packages are the primary way of adding additional functionality to Laravel.

Packages come in two types. The first type works with any PHP framework & the second type is specifically built for Laravel.

Composer is a dependency management tool for PHP packages & is used to create and manage packages for Laravel.



Packalyst (packalyst.com) is a site that curates a list of Laravel packages in a central location to make it easier for discovery.

The site includes the following:

Directory of packages

Package Requests

Discussions

Ratings

Bookmarks

Versions



The Laravel Ecosystem

Laravel has a number of official / default Packages available to cover common needs with web apps



Breeze

Lightweight starter kit scaffolding for new applications with Blade or Inertia.



Cashier

Take the pain out of managing subscriptions on Stripe or Paddle.



Dusk

Automated browser testing to ship your application with confidence.



Echo

Listen for WebSocket events broadcast by your Laravel application.



Envoyer

Deploy your Laravel applications to customers with zero downtime.



Forge

Server management doesn't have to be a nightmare.



Horizon

Beautiful UI for monitoring your Redis driven Laravel queues.



Jetstream

Robust starter kit including authentication and team management.



Mix

Compile your JavaScript and CSS using Webpack with zero configuration.



Nova

Thoughtfully designed administration panel for your Laravel applications.



Octane

Supercharge your application's performance by keeping it in memory.



Sail

Hand-crafted Laravel local development experience using Docker.



Sanctum

API and mobile application authentication without wanting to pull your hair out.



Scout

Lightning fast full-text search for your application's Eloquent models.



Socialite

Social authentication via Facebook, Twitter, GitHub, LinkedIn, and more.



Spark

Launch your next business with our fully-featured, drop-in billing portal.



Telescope

Debug your application using our debugging and insight UI.



Valet

The fastest Laravel local development experience - exclusively for macOS.



Vapor

Laravel Vapor is a serverless deployment platform for Laravel, powered by AWS.



Who is Using Laravel?



Companies Using Laravel



Web Apps/Sites Built with Laravel



What is New in Laravel?



What is New in Laravel 9?



Laravel and its other first-party packages follow Semantic Versioning.

Major framework releases are released every year (~February), while minor and patch releases may be released as often as every week.

Minor and patch releases should never contain breaking changes.



What is New in Laravel 9?

Version	PHP Version	Release	Bug Fixes Until	Security Fixes Until
6 (LTS)	7.2 – 8.0	September 3rd, 2019	January 25th, 2022	September 6th, 2022
7	7.2 – 8.0	March 3rd, 2020	October 6th, 2020	March 3rd, 2021
8	7.3 – 8.1	September 8th, 2020	July 26th, 2022	January 24th, 2023
9 (LTS)	8.0 – 8.1	February 8th, 2022	February 8th, 2024	February 8th, 2025
10	8.0 – 8.1	February 7th, 2023	August 7th, 2024	February 7th, 2025

Breakdown of recent & upcoming Laravel releases



What is New in Laravel 9?

laravel.com/docs/9.x/releases

PHP 8 is the minimum requirement

Symfony Mailer replaced Swift Mailer

Controller route groups

- can now use the controller method of the Laravel 9 Route class to define the controller that will be used for every route in a route group

Better accessors and mutators in Eloquent

Fulltext indexes and where clauses

- Can now use the fulltext method on the column definitions in your migration files to generate full-text indexes

New Scout database engine

- Laravel v9 ships with the new Laravel Scout database engine. It provides full-text search capabilities to Eloquent models

Breeze API with Next.js

- Includes a complimentary Next.js frontend implementation in its Breeze starter kit

Inline Blade rendering

New query builder interface

Implicit route bindings with enums

Forced scope route bindings

Bootstrap 5 pagination views

New helpers

New and improved exception page

Flysystem 3.x support

No more server.php file



Summary



In this module we covered:

- Learned what web frameworks are
- Explored the differences between frameworks, libraries, and content management systems
- Learned about what Laravel is and its ecosystem that is full of packages
- What companies are using Laravel and what well known web apps have been built with it
- We wrapped up going over what is new in Laravel

Why this is important:?

- As you begin your Laravel journey it is critical to have a solid foundational understanding of web frameworks and Laravel

