
Laravel Full Stack Development – Day 01

Notes

☐ What is Laravel?

Laravel is a **PHP-based full-stack web development framework** used to build modern, secure, and scalable web applications.

Key Stack Components:

- **Frontend** – HTML, CSS, JavaScript (managed via Laravel Mix and Blade templating)
- **Backend** – PHP (Laravel Framework)
- **Database** – MySQL (default, can be changed)

☒ Advantages of Using Laravel

1. **Large Community Support**
If you face issues, chances are someone already did—and shared the fix. Forums, GitHub, StackOverflow are full of Laravel discussions.
2. **Robust Error Handling**
Laravel's built-in error interface pinpoints **exact line and file** where an error occurs, making debugging straightforward.
3. **Strong Security Features**
Laravel uses **token-based authentication** (CSRF Tokens) that blocks unauthorized access, especially from external sources.
4. **Password Hashing**
Laravel stores passwords using **one-way hashing (bcrypt)**, meaning it's encrypted and **cannot be reversed or decrypted**.

☐ Installation Requirements

Before Laravel setup, confirm installation of the following:

Tool	Purpose	Download Link
XAMPP	PHP & MySQL server	Download XAMPP (Recommended: PHP 8.2.12)

Tool	Purpose	Download Link
Composer	PHP dependency manager	Download Composer
Node.js	Laravel Mix, frontend tools	Download Node.js
VS Code	Code editor	Download VS Code

XAMPP Setup (Important Configuration)

1. Install XAMPP (choose version with PHP 8.2.12 or later).
 2. Open XAMPP Control Panel.
 3. Click **Config** → **php.ini** under Apache.
 4. Use `Ctrl+F` to search and **uncomment** (remove semicolon ;) the following lines:
 - o `extension=zip`
 - o `extension=sodium`
 - o `extension=intl`
 - o `extension=gd`
 5. Save the file and close the editor.
 6. Start **Apache** and **MySQL** from the XAMPP Control Panel.
 7. Click **MySQL Admin** – it will open phpMyAdmin to visually manage your database.
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Composer Installation Guide

1. During installation, **tick the following**:
 - o ☒ Developer Mode
 - o ☒ Add this PHP to your PATH?
 2. Do **NOT** tick:
 - o ☒ Use a proxy server to connect to internet
 3. Leave other options as default.
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Laravel Installation Steps

Step 1: Install Laravel Installer

Open **Command Prompt** and run:

```
composer global require laravel/installer
```

This adds `laravel` command to your global environment.

Step 2: Create a New Laravel Project

1. Navigate to the folder where you want your project.
2. **Right-click → Open Command Prompt/Terminal Here**, then run:

```
laravel new project_name
```

3. Just **press Enter** if asked questions (don't keep pressing Enter repeatedly unless needed).
4. Wait for it to finish downloading dependencies.

Visual Studio Code (VS Code) Installation and Setup

☒ During VS Code Installation: Make Sure to Tick These Options

When installing VS Code, **tick the following checkboxes** and leave all others at their default:

1. ☒ **Create a desktop icon**
2. ☒ **Add “Open with Code” action to Windows Explorer context menu**
3. ☒ **Add “Open with Code” action to Windows Explorer directory context menu**
4. ☒ **Register Code as an editor for supported file types**
5. ☒ **Add to PATH (requires shell restart)**

These options enable smoother access to VS Code via right-click and terminal, and allow system-wide use of `code` commands in terminal.


Post-Installation: Extension Setup in VS Code

Install the following extensions (search them in Extensions panel `Ctrl+Shift+X`):

Extension Name	Author	Purpose
Laravel Extension Pack	Winnie Lin	Laravel helper tools
Laravel Pack	MatteDesign	More Laravel tools
PHP IntelliSense	Damjan Cvetko	PHP code intelligence
Material Icon Theme	Philipp Kief	Beautiful folder/file icons

After installing Material Icon Theme, select the theme when prompted at the top.

Terminal Setup in VS Code:

- Open Terminal with: `Ctrl + J`
 - If not showing command prompt:
 - Click dropdown  in terminal
 - Choose **Select Default Profile** → **Command Prompt**
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Node.js and NPM Setup

Sometimes after project creation, Laravel may prompt for:

```
npm install
npm run build
```

Just **press Enter** to allow the commands to run automatically. This sets up frontend assets.

Testing Your Laravel App (Serve Locally)

1. Make sure **XAMPP's Apache and MySQL** are running.
2. Navigate to your Laravel project folder.
3. Open terminal in that folder and run:

```
php artisan serve
```

4. You'll see something like:

```
Starting Laravel development server: http://127.0.0.1:8000
```

5. Open the URL in your browser – You now see the default Laravel welcome page.
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Resources

- Laravel Official Documentation: <https://laravel.com/docs/12.x>
- PHP Manual: <https://www.php.net/manual/en/>
- Composer Docs: <https://getcomposer.org/doc/>