



TECHNOCATION FREELANCING TRAINING INSTITUTE & SOFTWARE HOUSE

Professional Laravel Course Outline

Module 1: Introduction to Laravel & Setup

- What is Laravel? Features & Advantages
- MVC Architecture in Laravel
- Setting Up Laravel Development Environment
- Understanding Composer & Laravel Installer
- Directory Structure & Laravel Lifecycle

Module 2: Routing & Middleware

- Understanding Laravel Routing
- Route Parameters & Named Routes
- Middleware & Request Handling
- Creating Custom Middleware
- CSRF Protection & Security

Module 3: Controllers & Views (Blade Templating Engine)

- Creating & Using Controllers
- Passing Data to Views
- Blade Template Engine Basics
- Blade Components & Directives
- Layouts & Partials in Laravel

Module 4: Working with Models & Database (Eloquent ORM)

- Introduction to Eloquent ORM
- Database Migrations & Schema Design
- Eloquent Relationships (One-to-One, One-to-Many, Many-to-Many)

- Query Builder & Raw SQL Queries
- Handling Database Transactions

Module 5: Authentication & Authorization

- User Registration & Authentication (Laravel Breeze & Jetstream)
- Role-Based Access Control (RBAC)
- OAuth & Social Authentication (Google, Facebook, GitHub)
- API Authentication with Laravel Sanctum & Passport
- Password Reset & Email Verification

Module 6: Forms, Validation & File Handling

- Handling Forms & CSRF Protection
- Validating User Input (Built-in & Custom Rules)
- File Uploading & Storage (Local, Cloud, S3)
- Image Processing & Resizing

Module 7: RESTful API Development

- Building RESTful APIs with Laravel
- API Resource Routes & Controllers
- Handling JSON Responses & Error Handling
- API Versioning & Throttling
- Consuming APIs with Postman

Module 8: Laravel Livewire & Inertia.js

- Introduction to Laravel Livewire for Real-time Apps
- Building Dynamic UIs Without JavaScript
- Integrating Laravel with Vue.js (Inertia.js)
- Creating Single Page Applications (SPA)

Module 9: Caching, Queues & Event Handling

- Laravel Caching Strategies (Redis, Memcached)
- Queues & Job Handling in Laravel
- Event & Listener Management
- Websockets & Real-time Notifications

Module 10: Testing & Debugging in Laravel

- Unit Testing with PHPUnit

- Feature Testing & API Testing
- Debugging with Laravel Telescope
- Error Handling & Logging

Module 11: Deployment & Performance Optimization

- Deploying Laravel Apps on Shared Hosting & VPS
- Server Optimization for Laravel (Nginx, Apache)
- CI/CD for Laravel with GitHub Actions
- Laravel Horizon & Performance Monitoring
- Security Best Practices & Hardening Laravel Apps

Module 12: Final Project & Certification Preparation

- Building a Full-Stack Laravel Application
- Laravel Code Reviews & Best Practices
- Preparing for Laravel Certification
- Career Paths in Laravel Development