

INFOSOFT IT SOLUTIONS

Training | Projects | Placements

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LARAVEL FRAME WORK TRAINING

Introduction to Laravel

1. Introduction

- Overview of Laravel
- History and benefits
- Laravel ecosystem

2. Installation and Setup

- Installing Laravel via Composer
- Laravel Homestead or Valet setup
- Project structure and basic configuration

Laravel Basics

3. Routing

- Route definitions
- Route parameters and naming routes
- Route groups and middleware

4. Controllers

- Creating controllers
- Dependency Injection in controllers
- Resource controllers

5. Views

- Blade templating engine
- Passing data to views
- Blade directives and layouts

6. Models and Eloquent ORM

- Creating and using models
- Eloquent relationships (one-to-one, one-to-many, many-to-many)
- Querying with Eloquent

7. Middleware

- Middleware introduction
- Creating custom middleware
- Middleware groups

Advanced Laravel Features

8. Authentication

- Laravel Passport for API authentication
- Authentication scaffolding
- Customizing authentication

9. Authorization

- Policies and Gates
- Role-based access control (RBAC)

10. Validation

- Form requests
- Custom validation rules
- Validation with Ajax requests

11. File Uploads

- Handling file uploads
- Validation for file uploads
- File storage options (local, S3, etc.)

12. Error Handling

- Exception handling
- Custom error pages
- Logging errors

Laravel APIs and Services

13. API Development

- Building APIs with Laravel
- API authentication with tokens
- API rate limiting

14. Queues and Jobs

- Introduction to queues
- Creating jobs
- Running queues with workers

15. Testing

- Unit testing with PHPUnit
- Testing controllers and models
- Laravel Dusk for browser testing

Deployment and Optimization

16. Environment Configuration

- .env file usage
- Environment-based configuration

17. Deployment Strategies

- Deploying Laravel applications
- Using Laravel Forge or Envoyer
- Continuous Integration/Continuous Deployment (CI/CD)

18. Performance Optimization

- Caching strategies (Redis, Memcached)
- Query optimization
- Profiling and debugging

ADVANCE TOPICS :-

• 1 Service Providers and Dependency Injection

- Creating custom service providers
- Registering bindings and singletons
- Understanding Dependency Injection in Laravel

• 2 Events and Listeners

- Creating and firing events
- Creating listeners and subscribers
- Event broadcasting with websockets (using Laravel Echo)

- **3 Notifications**

- Creating and sending notifications
- Using different notification channels (email, SMS, Slack, etc.)
- Customizing notification templates

- **4 Task Scheduling**

- Defining scheduled tasks (cron jobs)
- Task scheduling syntax and options
- Managing scheduled tasks in Laravel

- **5 File Storage and Cloud Storage**

- Using Laravel's Filesystem abstraction
- Configuring cloud storage (Amazon S3, Google Cloud Storage)
- Uploading files directly to cloud storage

- **6 Real-time Communication**

- Implementing real-time features with Laravel Echo
- Broadcasting events with Laravel Echo Server or Pusher
- Using WebSockets and broadcasting channels

- **7 API Authentication with Laravel Passport**

- Setting up Laravel Passport
- Creating OAuth2 endpoints for authentication
- Securing API routes with Passport middleware

- **8 Package Development**

- Creating reusable Laravel packages
- Publishing packages to Packagist
- Using Composer to install and manage packages

- **9 Advanced Eloquent Techniques**

- Query scopes and global scopes
- Eager loading with nested relationships
- Using database transactions effectively

- **10 Performance Optimization and Scaling**

- Database indexing strategies
- Redis caching and caching strategies
- Load balancing and horizontal scaling
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- **11 Advanced Error Handling and Logging**

- Customizing exception handling
- Logging to different channels (database, syslog, etc.)
- Handling and reporting errors in production

- **12 Testing and Test-Driven Development (TDD)**

- Writing unit tests and feature tests
- Mocking dependencies in tests
- Implementing TDD with Laravel

- **13 Continuous Integration/Continuous Deployment (CI/CD)**

- Setting up CI/CD pipelines for Laravel projects
- Automating deployments with tools like GitLab CI, Travis CI
- Running tests and deploying Laravel applications

- **14 Queue Workers and Job Prioritization**

- Scaling queue workers with Supervisor
- Delayed jobs and job chaining
- Prioritizing jobs in queues

- **15 Websockets and Broadcasting**

- Implementing real-time updates with Laravel Websockets
- Broadcasting events and notifications
- Integrating with frontend frameworks for real-time UI updates

- **16 Security Best Practices**

- Cross-site request forgery (CSRF) protection
- Secure authentication practices
- Role-based access control (RBAC) and permissions

- **17 Multi-tenancy and Single Sign-On (SSO)**

- Implementing multi-tenant architecture
- Integrating Laravel with SSO providers (e.g., OAuth, SAML)

- **18 Optimizing Laravel for Production**

- Laravel performance tuning
- Monitoring and logging application metrics
- Handling high traffic and optimizing database queries