Full Stack Development with PHP

Duration:- 360hrs   Course Fee:-16500

FRONT-END DEVELOPMENT

1. HTML (Structure)

- Introduction to Web & HTML
- HTML syntax, elements, attributes
- Headings, paragraphs, text formatting
- Links, images, audio, video, iframe
- Lists (ul, ol, dl)
- Tables
- Forms: input types, textarea, select, label, fieldset, validation attributes
- Semantic HTML tags (header, footer, nav, section, article)
- HTML5 features: canvas, localStorage, video/audio controls

2. CSS (Styling)

- CSS types: inline, internal, external
- CSS syntax, selectors (class, id, element, attribute)
- Combinators & pseudo-classes
- Box model: margin, border, padding
- Positioning: static, relative, absolute, fixed, sticky
- Display property: block, inline, flex, grid
- Colors, fonts, background properties
- CSS Flexbox & CSS Grid
- Responsive design: media queries
- CSS transitions, transforms, animations
- CSS variables

3. JavaScript (Logic and Interactivity)

- Introduction & syntax
- Variables (let, const, var)
- Data types, operators
- Conditional statements (if-else, switch)
- Loops (for, while, do-while)
- Functions & arrow functions
- Arrays and array methods (map, filter, reduce)
- Objects
- DOM manipulation (querySelector, events, style, innerHTML)
- Event handling (click, keypress, submit)
- Form validation with JS
- ES6+ features: template literals, destructuring, modules

- LocalStorage & SessionStorage
- Fetch API, JSON basics

4. Bootstrap (UI Framework)

- Introduction to Bootstrap
- Grid system: containers, rows, columns
- Breakpoints and responsive design
- Components: Navbar, Buttons, Cards, Modals, Alerts, Forms
- Utilities: spacing, colors, text, display
- Icons (Bootstrap Icons)
- Responsive layout design projects

BACK-END DEVELOPMENT WITH PHP

5. Core PHP

- Introduction to PHP & installing XAMPP
- PHP syntax & embedding in HTML
- Variables, constants, data types
- Operators
- Control structures (if, switch, loops)
- Functions
- Arrays (indexed, associative, multidimensional)
- Strings and string functions
- Include and require
- PHP superglobals ($_GET, $_POST, $_REQUEST, $_SERVER)

6. PHP with Forms

- Handling form data
- Form validation (client & server side)
- File uploads
- Working with cookies & sessions
- Sending emails with PHP (mail function / PHPMailer)

7. PHP with MySQL (Database)

- Introduction to MySQL
- Creating databases and tables
- Data types in MySQL
- INSERT, SELECT, UPDATE, DELETE queries
- Connecting PHP with MySQL (MySQLi / PDO)
- Prepared statements (prevent SQL injection)
- Fetching data & displaying in HTML tables
- Login and registration system
- CRUD operations (Create, Read, Update, Delete)

ADVANCED PHP CONCEPTS

8. PHP Advanced Topics

- PHP file handling (read/write)
- PHP date & time functions
- PHP error handling (try/catch)
- PHP filters & regular expressions
- PHP OOP (Object Oriented Programming):
  - Classes & objects
  - Constructors & destructors
  - Inheritance, polymorphism
  - Interfaces & traits
  - Namespaces & autoloading
- PHP MVC architecture
- Introduction to Composer (dependency manager)
- Building REST APIs with PHP

DATABASE DESIGN

9. MySQL (Detailed)

- Database normalization
- Primary key, foreign key, constraints
- Joins (INNER, LEFT, RIGHT, FULL)
- Aggregate functions (SUM, AVG, COUNT, MAX, MIN)
- GROUP BY, HAVING
- Subqueries, Views, Indexes
- Transactions
- phpMyAdmin usage

10. Mini Projects

- User login & signup system
- Contact form with email
- CRUD system (with PHP & MySQL)
- File upload & gallery
- Blog application (admin + user side)
- E-commerce mini site (cart, checkout)

11. Laravel

1. Introduction to Laravel

- What is Laravel? Why use it?
- Laravel architecture (MVC structure)
- Installing Laravel (Composer, Artisan)
- Folder structure overview
- Laravel Request Lifecycle
- Artisan CLI basics (php artisan commands)

■ 2. Laravel Basics (Routing & Views)

- Basic routing (Route::get, Route::post)
- Route parameters and constraints
- Named routes and route groups
- Views and Blade templates
- Passing data to views
- Blade syntax: {{ }}, @if, @foreach, @include, @extends, @section, @yield

3. Laravel Controllers

- Creating controllers (php artisan make:controller)
- Controller methods
- Route-Controller binding
- Resource controllers
- Dependency injection in controllers

4. Laravel Models & Eloquent ORM

- Introduction to Eloquent ORM
- Creating models (php artisan make:model)
- Database configuration (.env)
- Migrations (create, rollback, refresh)
- Eloquent CRUD: create, read, update, delete
- Mass assignment, fillable & guarded
- Eloquent relationships:
  - One-to-One
  - One-to-Many
  - Many-to-Many
  - HasManyThrough
  - Polymorphic relations
- Eager loading vs lazy loading

5. Database & Migrations

- Laravel database configuration
- Running migrations
- Rolling back and resetting migrations
- Database seeding & factories
- Using tinker for quick testing

6. Laravel Authentication & Authorization

- Laravel Breeze / Laravel UI / Jetstream (authentication starter kits)
- User registration and login
- Password hashing & resets
- Authentication guards
- Authorization via Gates & Policies
- Role-based access control

7. Forms & Validation

- Creating and submitting forms
- CSRF protection
- Request validation (manual & FormRequest classes)
- Old input, error messages
- File uploads

8. Laravel Middleware

- What is middleware?
- Creating custom middleware
- Applying middleware to routes and groups
- Global middleware

9. APIs in Laravel

- Building REST APIs
- API routes (routes/api.php)
- API Resource classes (php artisan make:resource)
- Returning JSON responses
- API authentication with Sanctum / Passport
- Versioning APIs

10. Advanced Laravel Features

- Laravel Service Container (IoC)
- Laravel Service Providers
- Events & Listeners
- Queues & Jobs (background tasks)
- Notifications (email, SMS)
- Laravel Scheduler & Task Scheduling
- Logging and Debugging (Laravel Log, Telescope, Debugbar)

11. Laravel Packages & Tools

- Composer basics (installing packages)
- Laravel Mix (Asset bundler)
- Laravel Scout (Search)
- Laravel Horizon (Queue management)
- Laravel Socialite (OAuth login)
- Laravel Cashier (Stripe payments)

12. Testing in Laravel

- PHPUnit basics
- Feature tests vs Unit tests
- Testing controllers, routes, models
- Mocking data

13. Deployment & Optimization

- Environment configuration (.env)
- Laravel config caching, route caching
- Deploying on shared hosting / VPS
- Laravel Forge (cloud deployment)
- Database migrations on production
- Security best practices (XSS, CSRF, SQL Injection prevention)

14. Laravel Project Development

Example Project Ideas:

- Blog CMS (CRUD + Auth)
- E-commerce website (cart, checkout, admin panel)
- Online job portal
- School management system
- REST API backend for mobile app