PHP Yii Framework

Prerequisite: Strong Knowledge of CORE PHP and OOPS Concept

Day 1: Introduction to Yii Framework and Basic Setup

- Overview of Yii Framework
- Features and benefits of Yii
- Understanding MVC architecture in Yii
- Installing PHP and Composer
- Installing Yii via Composer
- Understanding the project structure
- Configuring the Yii application
- Setting up database connections
- Understanding basic configurations (main.php, db.php)
- Generating code with Gii
- Creating a basic CRUD application
- Running and testing the application

Lab 1: Basic Setup and First Application

- Set up the Yii environment
- Create a simple CRUD application using Gii
- Configure and test the application

Day 2: Working with Models, Views, and Controllers

- Creating and using models
- Active Record pattern
- Validating data with model rules
- Creating and using controllers
- Actions and their configurations
- Passing data to views
- Creating and using views
- Understanding layouts and view files
- Using widgets in views
- Creating and processing forms
- Form validation rules
- Displaying validation errors and handling user input

Lab 2: Models, Views, and Controllers

- Create models, views, and controllers for a sample application
- Implement form handling and validation
- Display data in views and process user input

Day 3: Database Operations and Advanced Topics

- Performing CRUD operations
- Query building and filtering data
- Handling relational data with Active Record
- Introduction to database migrations
- Creating and running migrations
- Managing database schema changes
- Understanding DAO in Yii
- Performing database operations with DAO
- When to use Active Record vs. DAO
- Using query builder
- Lazy loading and eager loading
- Caching query results

Lab 3: Database Operations and Migrations

- Perform CRUD operations using Active Record
- Create and apply database migrations
- Implement advanced queries and data access techniques

Day 4: Security, Authentication, and Authorization

- Data sanitization and validation
- Preventing SQL injection and XSS
- Using CSRF protection
- Creating a user authentication system
- Login and registration processes
- Managing user sessions
- Role-Based Access Control (RBAC)
- Configuring roles and permissions
- Implementing access control filters
- Configuring error logging
- Handling exceptions
- Debugging techniques and tools

Lab 4: Security and Authentication

- Implement user authentication and secure the application
- Set up and configure RBAC
- Test error handling and debugging practices

Day 5: RESTful API Development and Deployment

- Understanding REST architecture
- Creating RESTful controllers
- Handling JSON data
- Setting up API routes

- Implementing CRUD operations for API endpoints
- Testing APIs with Postman
- Writing unit tests with Codeception
- Performance optimization techniques
- Using Yii's built-in caching mechanisms
- Preparing the application for deployment
- Deploying to a web server (Apache, Nginx)
- Best practices for Yii development

Lab 5: Final Project

- Build a comprehensive RESTful API
- Implement testing and optimization strategies
- Deploy the application to a live server