

Laravel Back-End Developer Test:

Part 1: Coding Exercise You are required to build a RESTful API using Laravel to manage a simple e-commerce system. The system should have the following features:

1. User registration and authentication using JWT tokens.
2. CRUD operations for managing products including fields like name, description, price, and quantity.
3. Ability to place an order with one or multiple products.

You are expected to demonstrate the following skills in your solution:

- Laravel Eloquent for database operations
- JWT authentication and authorization
- API routing and validation
- Proper error handling and response formatting
- Use of database migrations and seeding for demo data

Part 2: Database Design Design the database schema for the e-commerce system considering the relationships between users, products, and orders. Provide the SQL commands necessary to create the database tables.

Part 3: Code Review Given a piece of Laravel code with potential issues (e.g., security vulnerabilities, performance problems, maintainability concerns), you are required to review the code and identify at least three potential issues and provide explanations for each.

Part 4: Documentation Write clear and detailed documentation for the API endpoints including how to register, authenticate, manage products, and place orders. The documentation should be written using OpenAPI (formerly Swagger) specification.

Candidates are expected to submit:

- Laravel project files containing the API implementation
- SQL commands for creating the database tables
- Code review report with identified issues and explanations
- API documentation in OpenAPI format

Note 1: Don't use MVC as Design Pattern.

Note 2: you must use trait and helper function at least.

Note 3: The evaluation of the developer's solution will not only be based on the functionality of the implemented features but also on the cleanliness of the code, adherence to design patterns, use of abstracted methods, integration of helpers and traits, implementation of test units, and comprehensive documentation. Candidates are encouraged to showcase their speed and skills in writing well-structured and maintainable code that follows best practices in software development.