
Project E-commerce Platform

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To: webdevnarayan@gmail.com

Hello Narayan Patel ,

You are tasked with developing a backend application that supports JWT (JSON Web Token) authentication, product CRUD (Create, Read, Update, Delete) operations, and order management functionalities. The application will serve as the backend for an e-commerce platform.

Requirements:

JWT Authentication:

Implement JWT-based authentication to secure the API endpoints.
Users should be able to register an account, log in, and obtain a valid JWT token.
Validate incoming JWT tokens to authenticate and authorize user requests.
Include mechanisms for token expiration and refresh.

Product CRUD Operations:

Implement endpoints to manage products in the system.
Create an API endpoint to add a new product with details such as name, description, price, and stock quantity.
Implement an API endpoint to retrieve a list of all products.
Include an endpoint to retrieve a specific product by its unique identifier.
Enable updating the details of a product (name, description, price, stock quantity).
Implement an endpoint to delete a product from the system.

Order Management:

Create endpoints to manage customer orders.
Implement an API endpoint to place a new order, which includes the selected products and quantities.
Provide an endpoint to retrieve a list of all orders.
Implement an endpoint to retrieve a specific order by its unique identifier.
Include functionality to update the status of an order (e.g., pending, shipped, delivered).
Implement an endpoint to cancel an order.

Error Handling and Validation:

Implement proper error handling and validation for requests.
Ensure that appropriate error messages are returned for invalid requests or failed operations.
Validate incoming data to maintain data integrity and consistency.

Database and Persistence:

Design and implement a database schema to store products, orders, and user information.
Choose a suitable database system (e.g., MySQL, PostgreSQL, MongoDB) and integrate it into the application.
Use an ORM (Object-Relational Mapping) library or similar tools to interact with the database.

Security and Best Practices:

Implement secure coding practices and protect against common web vulnerabilities (e.g., SQL injection, cross-site scripting).
Use appropriate encryption techniques for sensitive data such as passwords and JWT tokens.
Apply best practices for code organization, maintainability, and scalability.
Note: You can choose the programming language and framework of your choice, considering your familiarity and the project's requirements.

Deliverables:

Complete backend application code with proper organization and documentation.
API documentation detailing the available endpoints, their request/response formats, and required authentication.

A brief document describing the overall architecture and design choices made.

Good luck with the project! Feel free to ask any questions if needed.

Best regards

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