Project: Build APIs with Node.js and Express.js for Shoppyglobe E-commerce (250 marks)

Objective: Create the backend for the ShoppyGlobe application using Node.js, Express, and MongoDB.

Requirements:

1. Node.js and Express API Setup: (60 marks)

- Set up a Node.js application using Express.
- Create routes for the following:
  - **GET /products**: Fetch a list of products from MongoDB.
  - **GET /products/**
    : Fetch details of a single product by its ID.
  - **POST /cart**: Add a product to the shopping cart.
  - **PUT /cart/**
    : Update the quantity of a product in the cart.
  - **DELETE /cart/**
    : Remove a product from the cart.

2. MongoDB Integration: (50 marks)

- Use MongoDB to store product data and cart items.
- Set up collections for:
  - **Products**: Each product should have fields like name, price, description, and stock quantity.
  - **Cart**: Store items added to the cart, including product IDs and quantities.
- Implement CRUD operations on MongoDB collections for products and cart items.
- Add screenshots from MongoDB Database

3. API Error Handling and Validation: (20 marks)

- Implement error handling for all API routes.
- Validate input data (e.g., check if product ID exists before adding to cart).

4. Authentication & Authorization: (60 marks)

- Implement JWT-based authentication.
- Create routes for **User Registration** and **User Login**.
  - **POST /register**: Register a new user.
  - **POST /login**: Authenticate user and return a JWT token.
- Protect cart routes, so only logged-in users can access them.

5. Testing with ThunderClient : (35 marks)

- Use ThunderClient to test all API routes.

6. Submission Guidelines: (25 marks)

- Ensure the API runs without errors. (10 marks)
- Submit a GitHub link with code and documentation for all API testing screenshots. (5 marks) (10 marks)
- Include comments and proper documentation. (5 marks)