IT322 Practical Midterm Exam

In this practical test, you should demonstrate your ability to develop a RESTful API using Laravel. In submitting your output (including your screenshots), you must upload this to your github repository (name your repository with this pattern FAMILY NAME_midterm e.g. llevado_midterm) account and provide the link of the form provided.

Form link: https://forms.gle/hT3evfUAq1BgzcL46

Tasks:

1. **Project Setup:**
   - Clone a Laravel project. (https://github.com/mrodavell/midterm_source.git)
   - Set up a database connection in the `.env` file.
2. **Migration:**
   - Create a migration for a `products` table with the following fields:
     - `id` (Primary Key, Auto-increment)
     - `name` (String, required)
     - `description` (Text, nullable)
     - `price` (Decimal, required)
     - `created_at` & `updated_at` (Timestamps)
   - Run the migration to create the table.
   - Modify the products table:
     - Create a new migration to add a quantity column (Integer, required, default: 0).
   - Run the migration to update the table.
3. **Model:**
   - Create a `Product` model and define fillable properties.
4. **Controller:**
   - Generate a `ProductController` and implement the following methods:
     - `index()` - Retrieve all products.
     - `store(Request $request)` - Validate and store a new product.
     - `show($id)` - Retrieve a single product by ID.
     - `update(Request $request, $id)` - Validate and update a product.
     - `destroy($id)` - Delete a product.
5. **API Routes:**
   - Define API routes in `routes/api.php` for the controller methods.
6. **Testing:**
   - Use Thunder Client to verify the API endpoints.
   - Provide a screenshot of your test

Rubrics for evaluation

Criteria	Excellent (10 pts)	Good (7 pts)	Fair (5 pts)	Needs Improvement (2 pts)
Project Setup	Project is set up correctly with no errors	Minor setup issues but functional	Some major setup issues requiring fixes	Project setup is incomplete or non-functional
Migration	Correct table structure and successful migration	Minor errors in migration	Some incorrect fields but migration runs	Migration is missing or incorrect
Model	Model is correctly implemented with fillable attributes	Model is implemented but missing some fillable fields	Model exists but has errors	No model implemented
Controller	All CRUD methods implemented correctly	Minor issues in one or two methods	Some methods missing or not fully functional	Controller is missing or mostly incorrect
API Routes	All routes correctly defined and functional	Minor issues with route definitions	Some routes missing or incorrect	Routes are missing or non-functional
Testing	All endpoints tested and verified	Minor issues in testing	Some endpoints not tested or failing	No testing provided