

Project Documentation:

Product Management API with Authentication

Overview

This project is a **secure Product Management API** built with **Laravel** and **Laravel Passport** for user authentication. It enables registered users to manage product data via API endpoints, supporting:

- **CRUD operations**
- **Filtering**
- **Sorting**
- **Pagination**

Note: Only **authenticated (logged-in)** users can access product-related endpoints.

Authentication System (Laravel Passport)

Features:

- **User Registration**
- **User Login**
- **Access Token Generation** via Laravel Passport
- **Protected Routes:** Only logged-in users can access product features

Flow:

1. **User Registration** with name, email, and password.
2. **User Login** returns an **access token** (a digital key).
3. Every API request to protected routes must include this token.

Product Management APIs

This API handles all product-related operations:

Available Endpoints:

1. **Create** a product
2. **Show** a single product by ID
3. **List** all products
4. **Delete** a product
5. **Update** an existing product



Product Fields:

Field	Type	Description
id	Integer	Unique product ID
name	String	Product name
category	String	Product category
price	Float	Product price
description	Text	Detailed information
created_at	Date	Product creation date



Filtering, Sorting & Pagination (on List Endpoint):

When listing products, you can:

- **Filter by:**
 - name
 - category
 - price
- **Sort by** (ascending/descending):
 - price
 - created_at
- **Paginate** using the per_page parameter