Product Management System

A full-stack web application for managing products with secure authentication, built using React (frontend) and Node.js/Express/MongoDB (backend).

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Features

- User registration and login (JWT authentication)
- Add, edit, delete, and list products (per user)
- Responsive UI with Tailwind CSS
- Protected routes for product management

Tech Stack

- **Frontend:** React, Redux Toolkit, React Router, Axios, Tailwind CSS, Vite
- **Backend:** Node.js, Express, MongoDB, Mongoose, JWT, bcryptjs

Project Structure

```
Backend/
  controllers/
  middleware/
  models/
  routes/
  config/
  .env
  index.js
  package.json

frontend/
  public/
  src/
```

```
   api/
   app/
   assets/
   components/
   features/
   pages/
   App.jsx
   main.jsx
   index.css
package.json
vite.config.js
...
```

Setup & Installation

Backend

1. **Install dependencies:**

```
cd Backend
npm install
```

2. **Configure environment variables:**

   - Copy `.env` and set your `MONGO_URI` and `JWT_SECRET`.

3. **Start the backend server:**

```
npm run dev
```

The server runs on `http://localhost:5000` by default.

Frontend

1. **Install dependencies:**

```
cd frontend
npm install
```

2. **Start the frontend dev server:**

```
npm run dev
```

The app runs on `http://localhost:5173` by default.

production link `https://task-frontend-brown.vercel.app/`

API Endpoints

Auth

- `POST /api/auth/register`
  Register a new user.
  Body: `{ username, password }`

- `POST /api/auth/login`
  Login and receive JWT token.
  Body: `{ username, password }`

Products (Protected, require `Authorization: Bearer <token>`)

- `GET /api/products`
  Get all products for the logged-in user.

- `POST /api/products`
  Create a new product.
  Body: `{ name, price, description }`

- `PUT /api/products/:id`
  Update a product by ID.

- `DELETE /api/products/:id`
  Delete a product by ID.

Usage

1. Register a new account or login.
2. After login, manage your products (add, edit, delete).
3. Each user can only see and manage their own products.

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