Project Title

E-Commerce Web Application

Objective

To design and develop a full-stack e-commerce website where:

- Users can sign up, login, view products, add items to cart, and checkout
- Admin can add, update, and delete products
- Backend APIs communicate with frontend using JSON and JWT authentication

Tech Stack

Area	Technology
Frontend	ReactJS
Backend	Node.js
Database	MongoDB
State/Requests	Axios
Authentication	JWT
Version Control	Git & GitHub

Database Schema

Users

Field	Type
name	String
email	String (unique)
password	Hashed
role	user/admin
cart	Array of product + qty

Products

Field	Type
name	String
price	Number
description	String
stock	Number

Orders

Field	Type
user	ObjectId
items	product + qty + price
total	Number
status	placed/shipped

Frontend UI

Page	Purpose
Home	Landing screen
Signup	Create user account
Login	Authentication
User Dashboard	Browse products
Cart Page	View and checkout
Admin Dashboard	CRUD Products

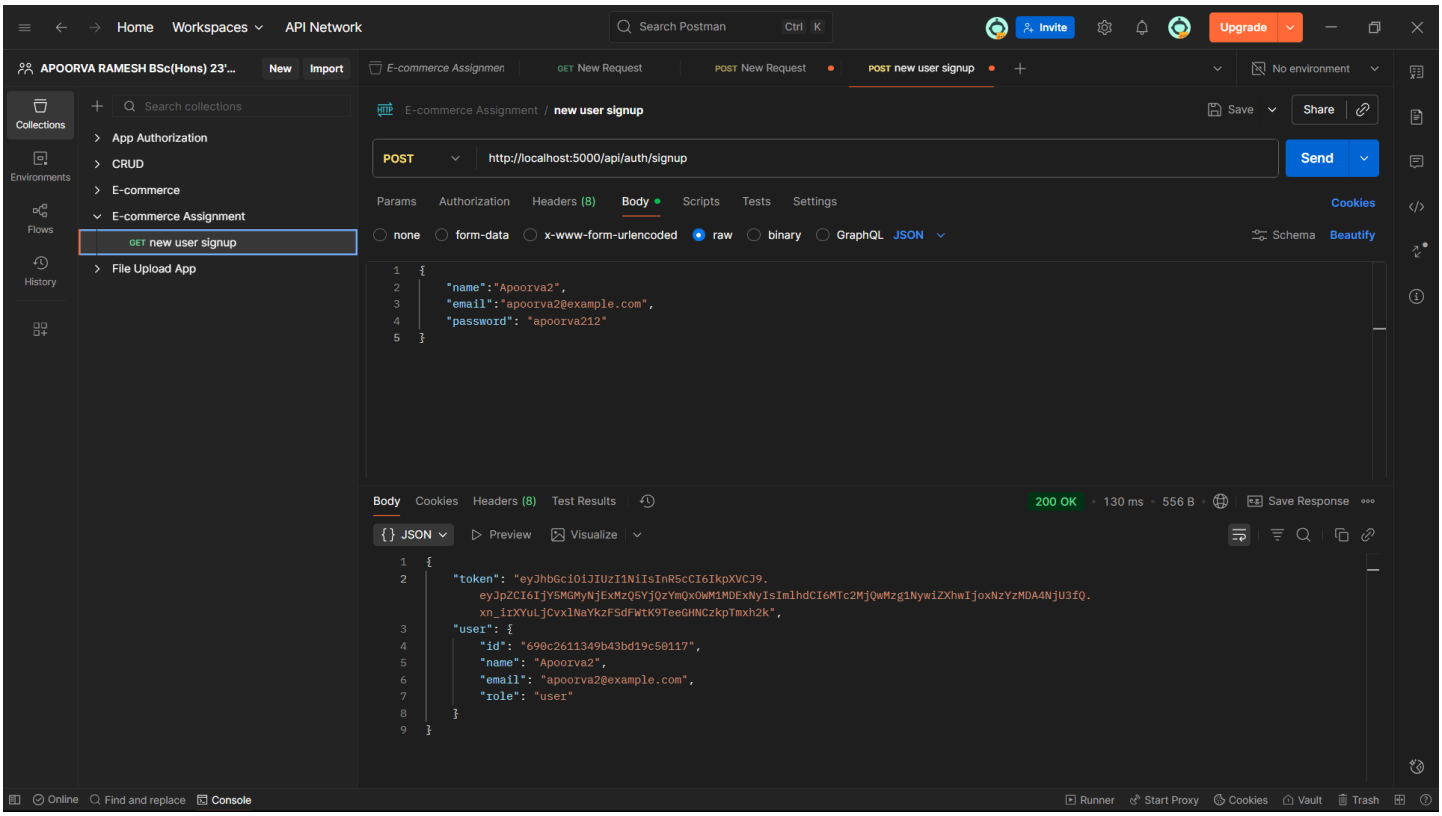
Backend & API Integration

Key Routes

Endpoint	Function
POST `/auth/signup`	User signup
POST `/auth/login`	JWT login
GET `/products`	Fetch products
POST `/products`	Admin add product
PUT `/products/:id`	Update product
DELETE `/products/:id`	Delete product
POST `/cart/add-to-cart`	Add to cart
POST `/orders`	Checkout order

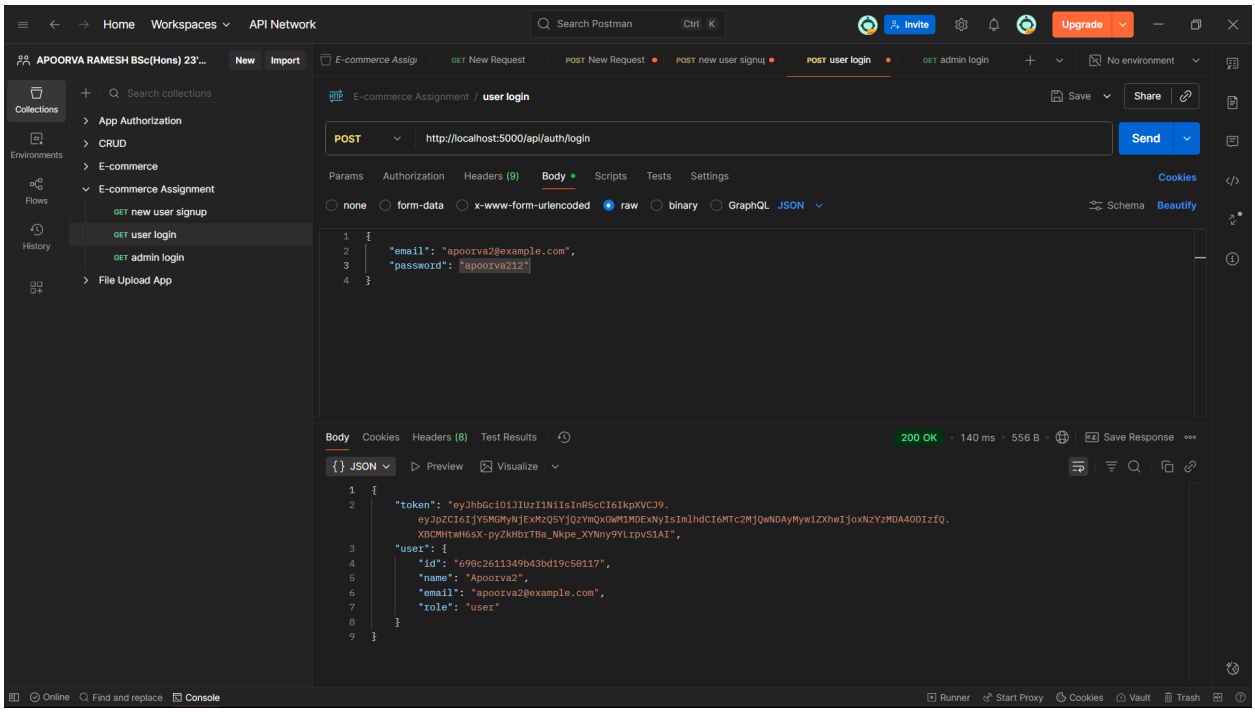
API Testing Using Postman

1. Signup request success JSON

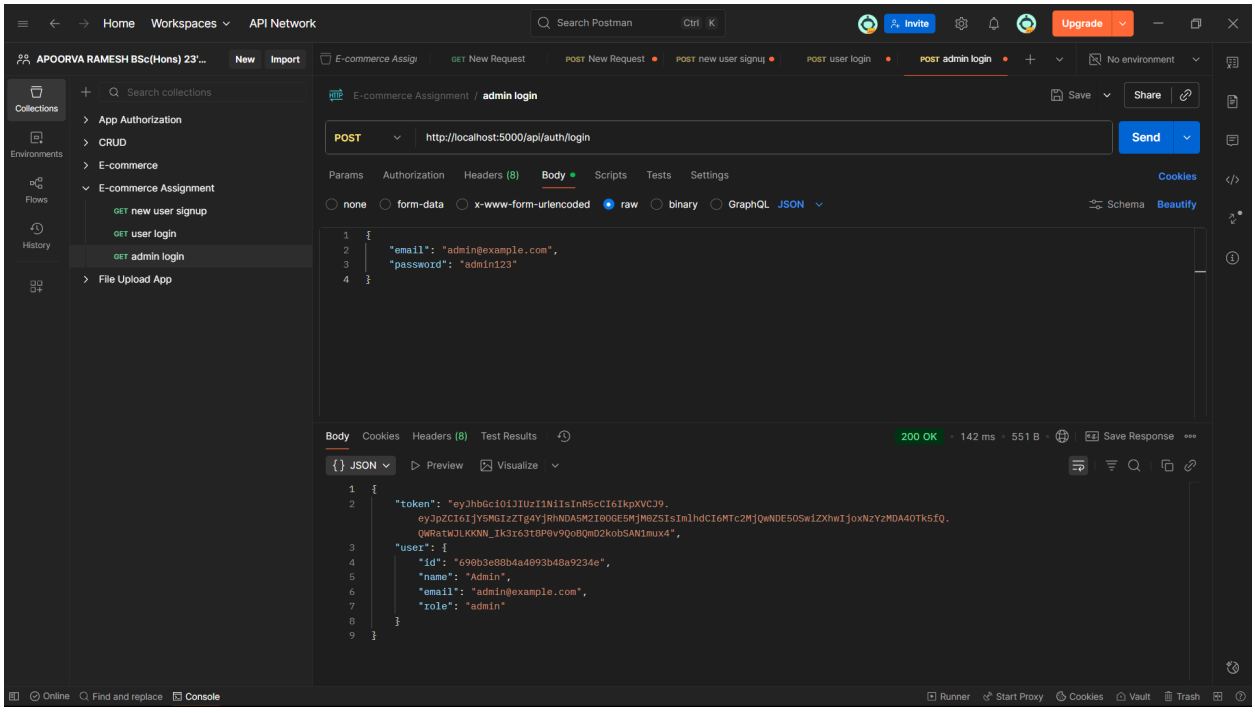


2. Login returning JWT

User login

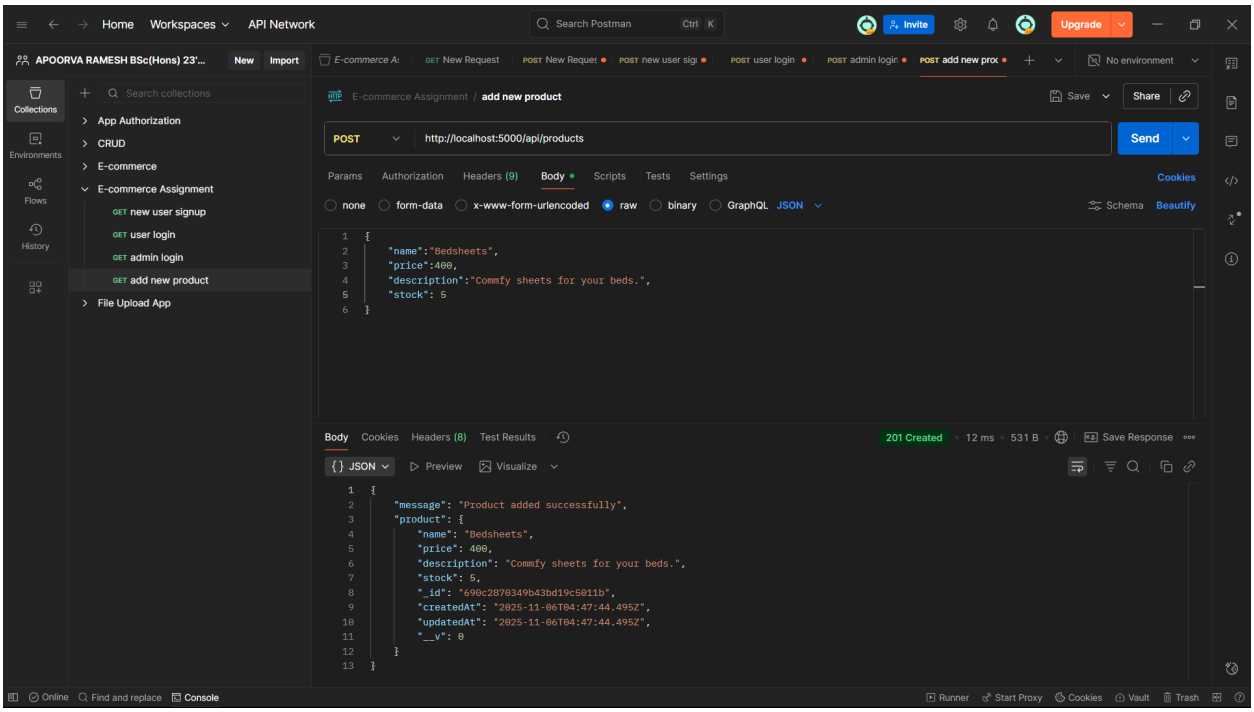


Admin Login

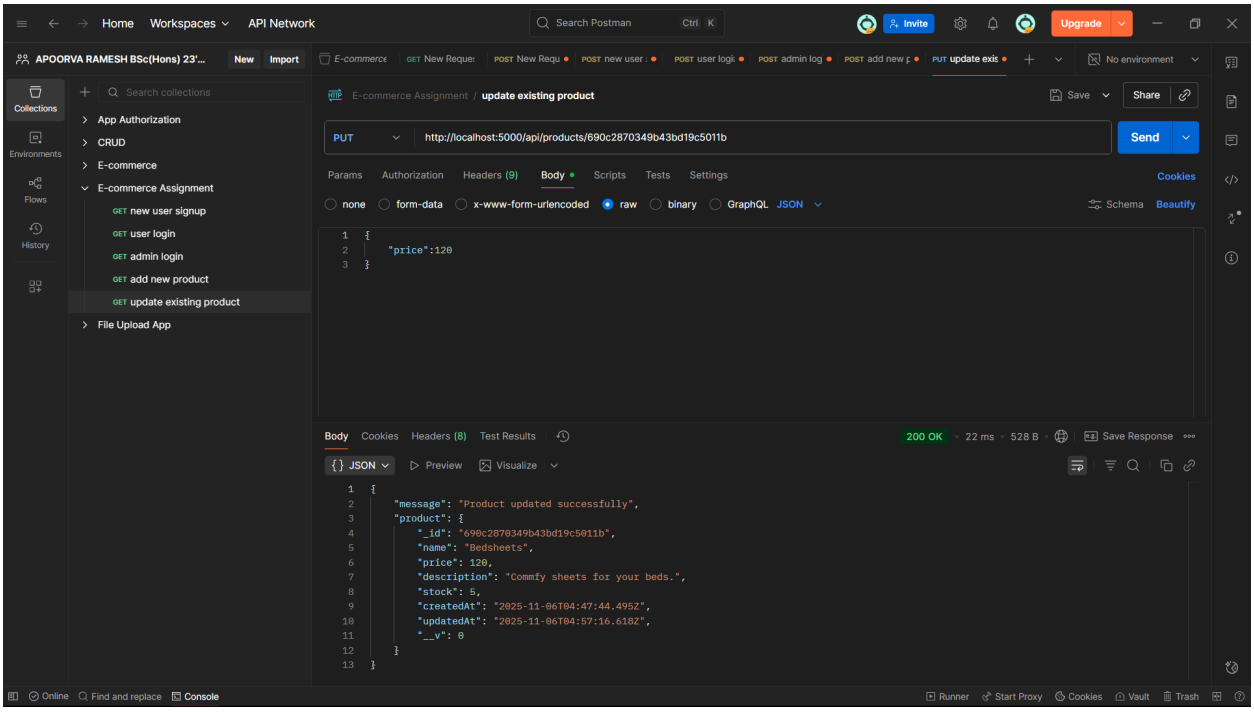


3. CRUD Operations on Products (Admin)

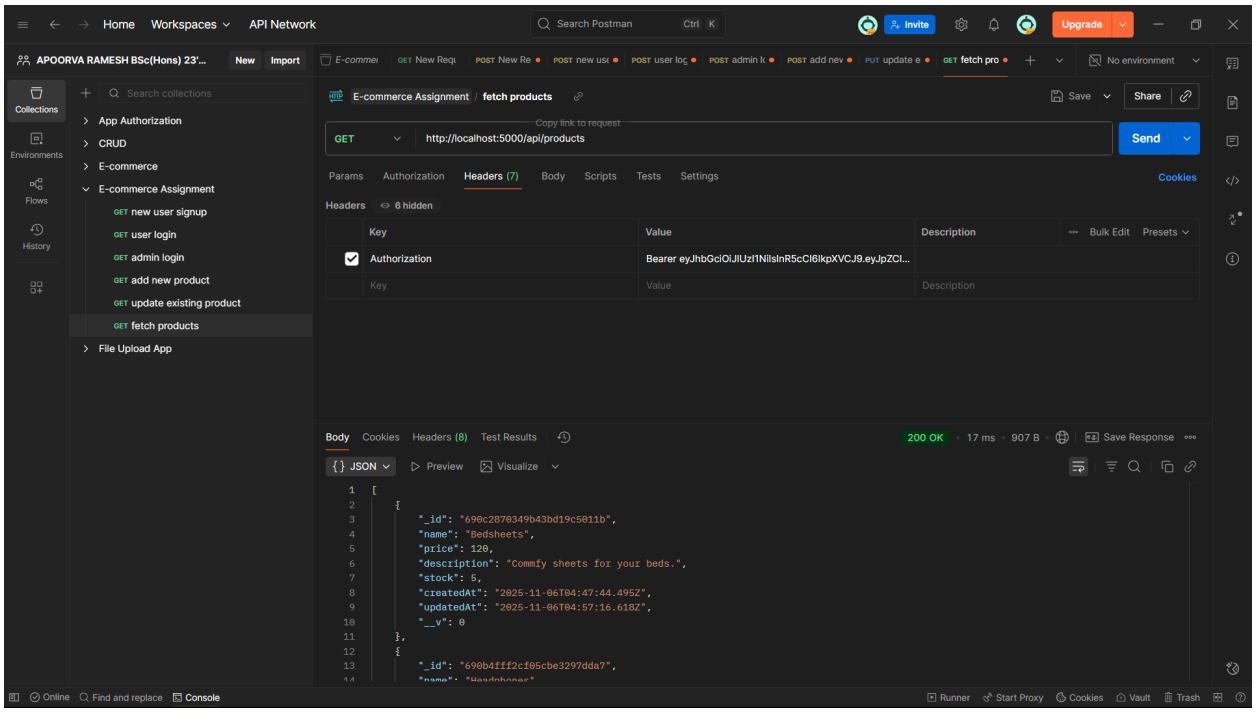
Create a new product



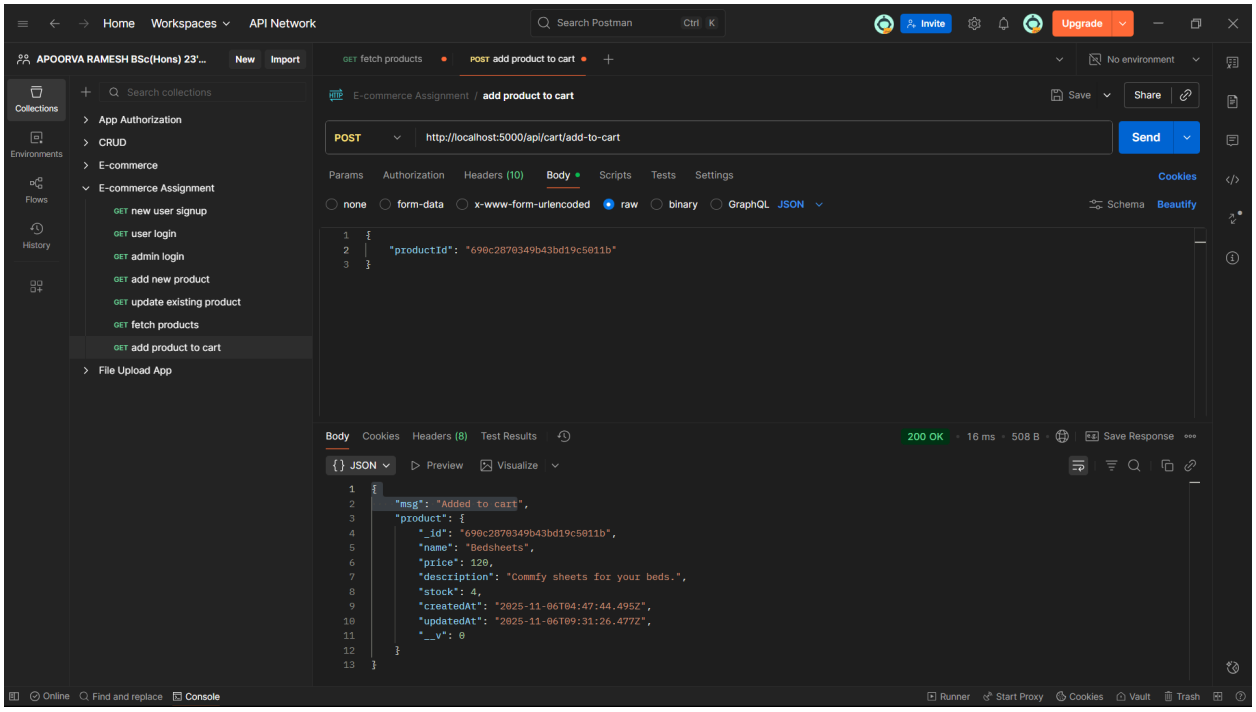
Update an existing product



Fetch products



4. Add to cart (User)



Github Repo: E-Commerce Website