

# 1. Project Overview

This project is a complete **E-commerce Backend API** built using **Node.js, Express, and MongoDB Atlas**, with **JWT authentication and Cart functionality**.

**With this API, we can:**

- Register & Login Users securely
- Fetch products from database
- Add products to cart
- Update quantity in cart
- Remove product from cart
- Get user's entire cart

All cart routes are **protected and require JWT authentication**.

**Smart features used:**

- Password encryption (bcrypt)
  - Token-based authentication (JWT)
- 

## 2. Middleware Overview

### a) Authentication Middleware

This middleware protects cart routes. It verifies the token sent in the request header:

- ✓ If the token is valid, it allows the request to proceed
- ✗ If invalid/missing, it returns **401 Unauthorized**

**Why useful?**

- Ensures only logged-in users can add/view cart items.
- Prevents unauthorized access to private data.

### b) Error Handling Middleware

There are two error handlers:

**notFoundHandler**

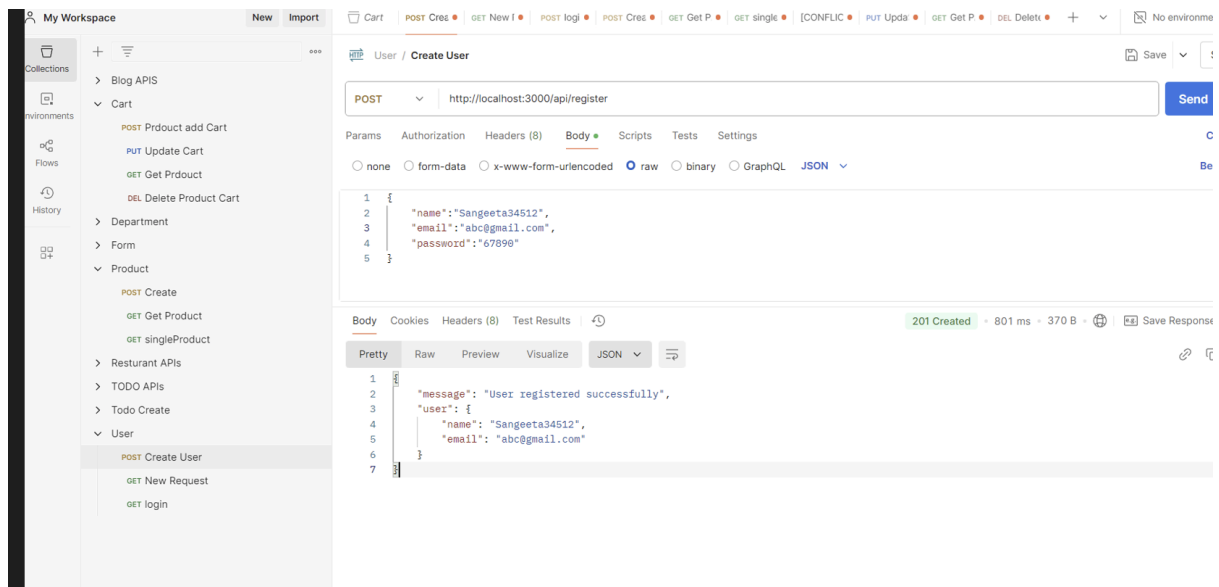
Used when a route does not exist.

"Route /unknown not found"

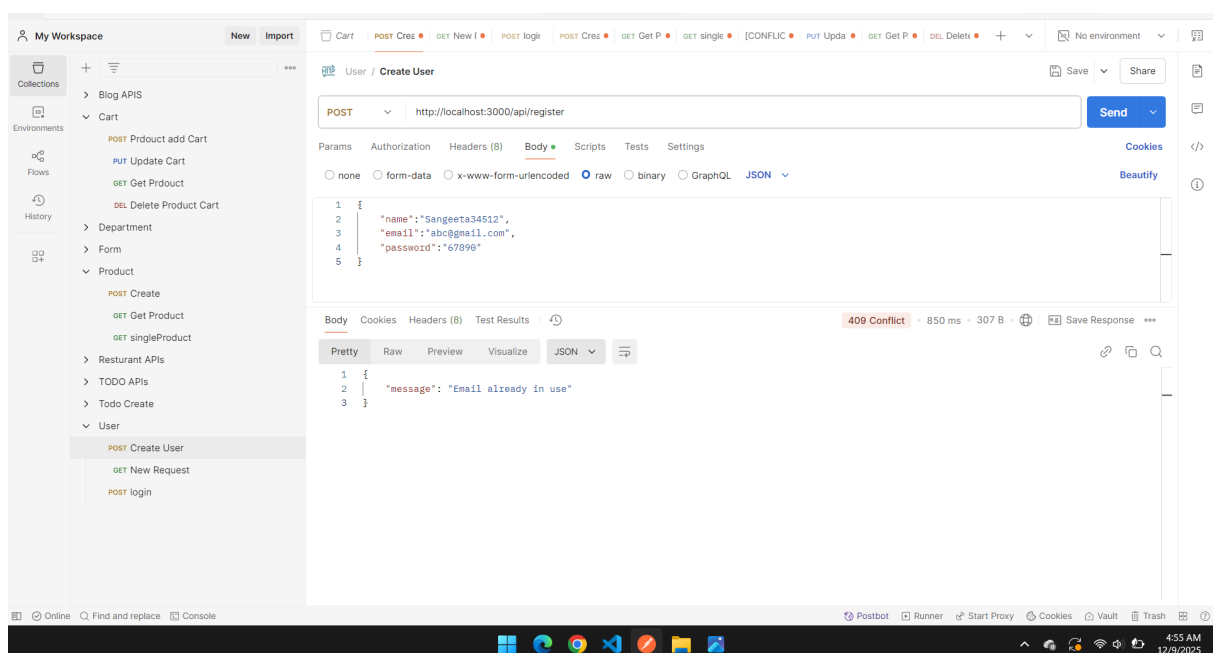
## 3. API Routes Explanation

### User Authentication Routes

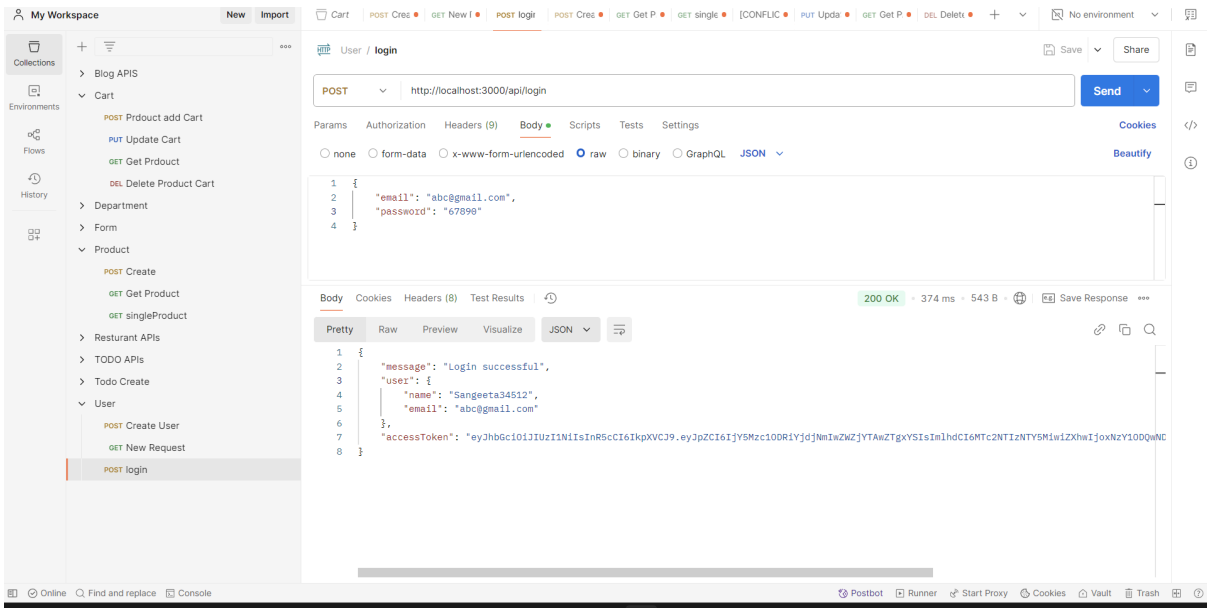
## Post/api/register - Register New User



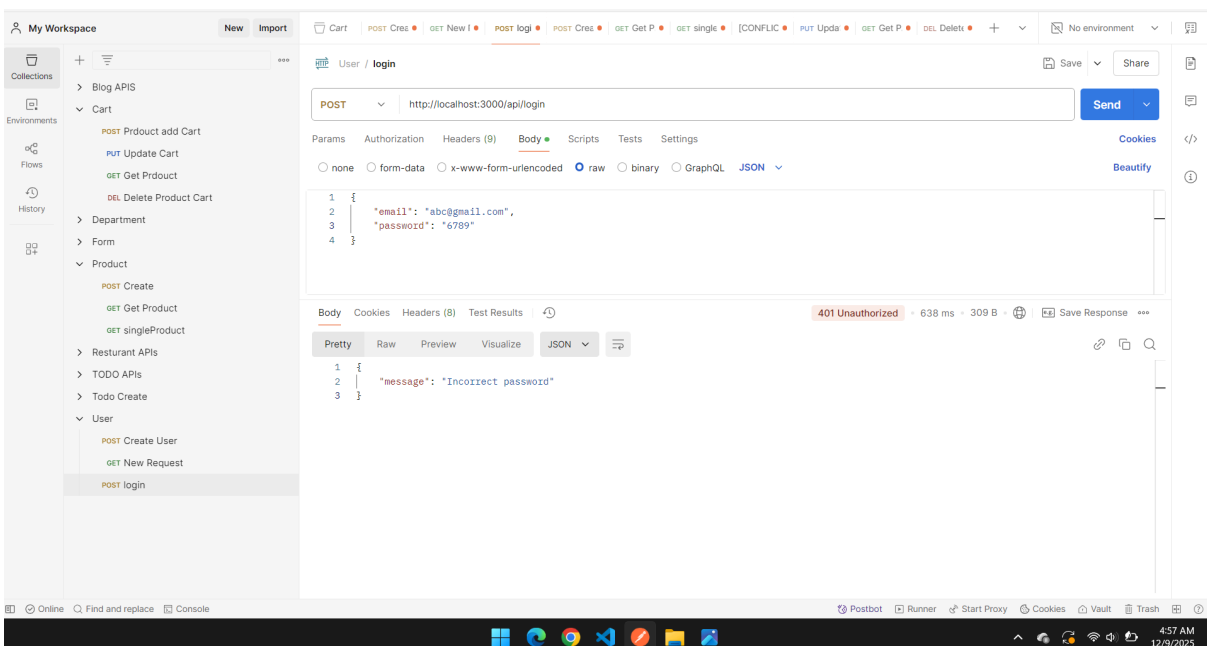
## Validate Proper Email



## Post/api/login -user login

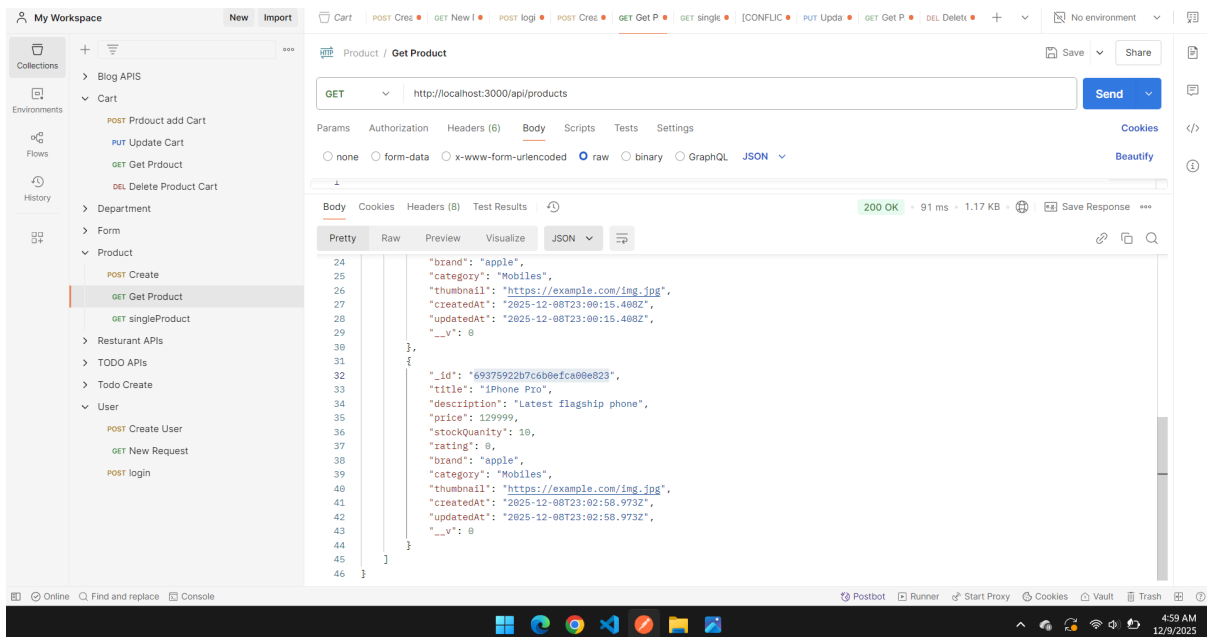


## If wrong password



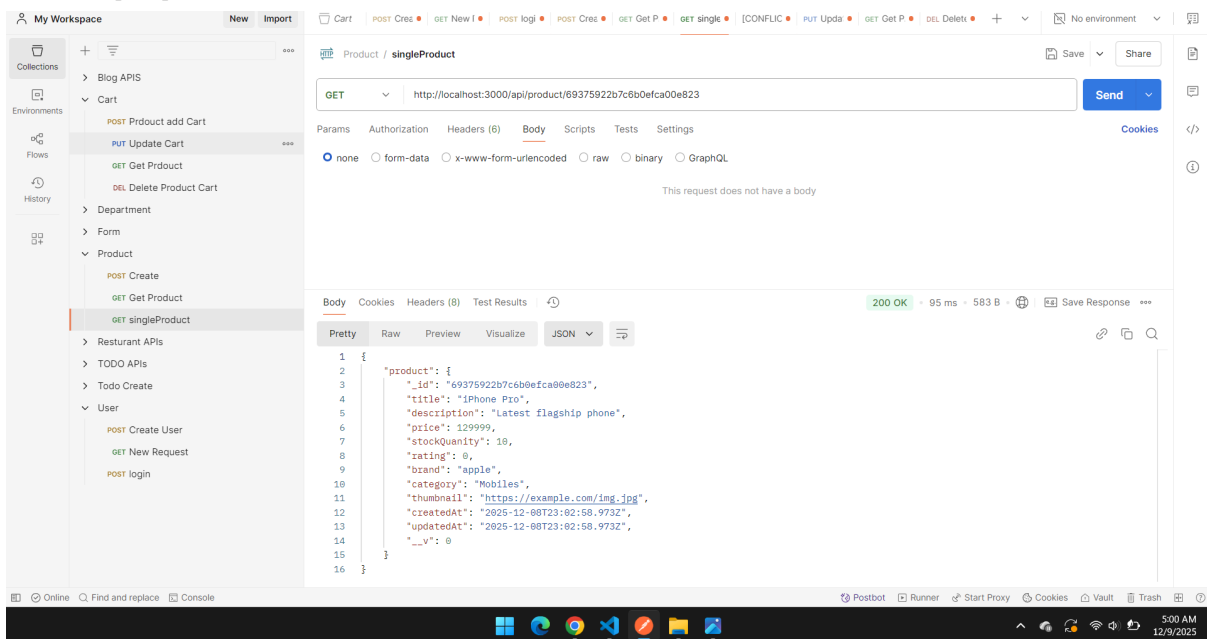
## Product Routes

## Get /api/products



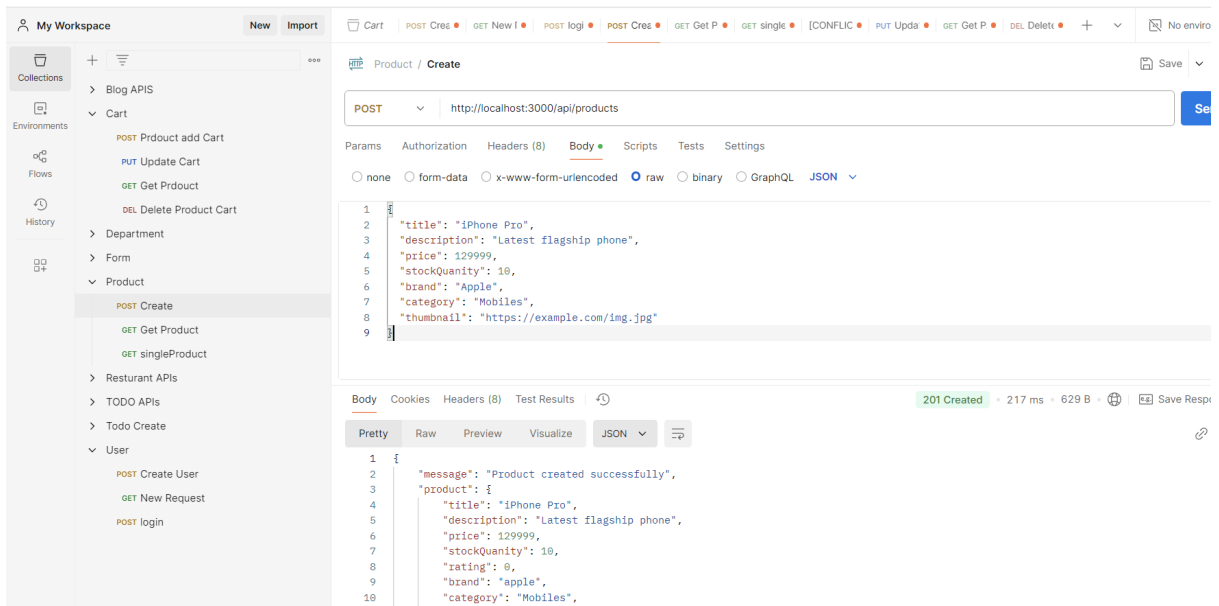
# Fetch Single Product By id

## Get /api/product/:id



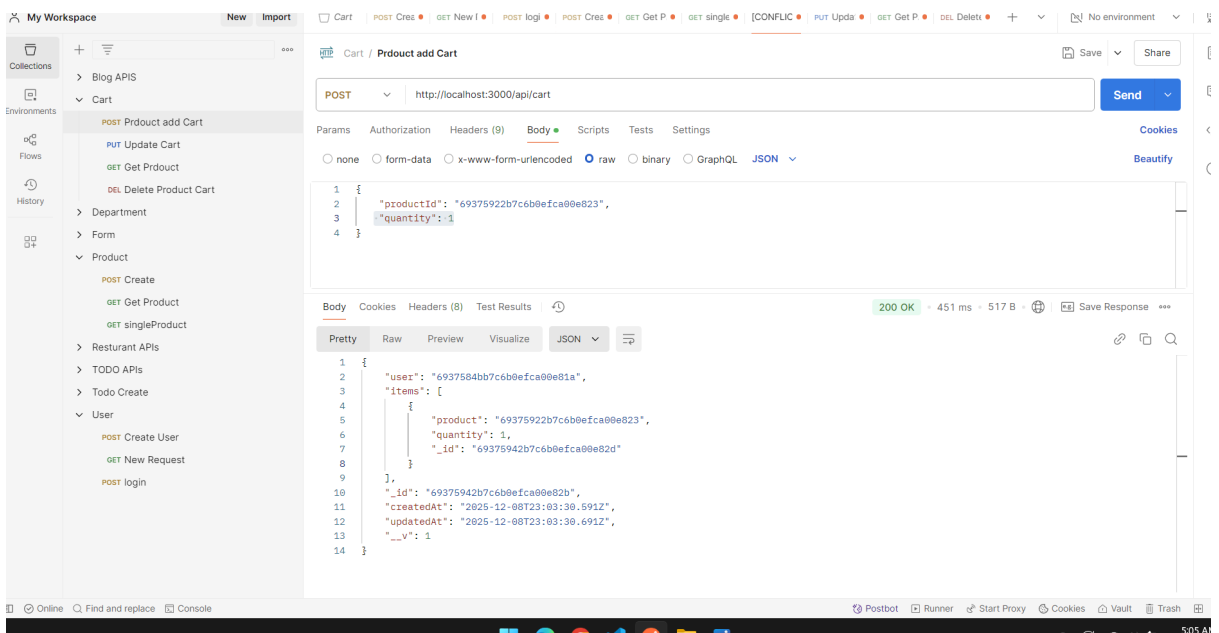
# Create Products

## Post /api/products



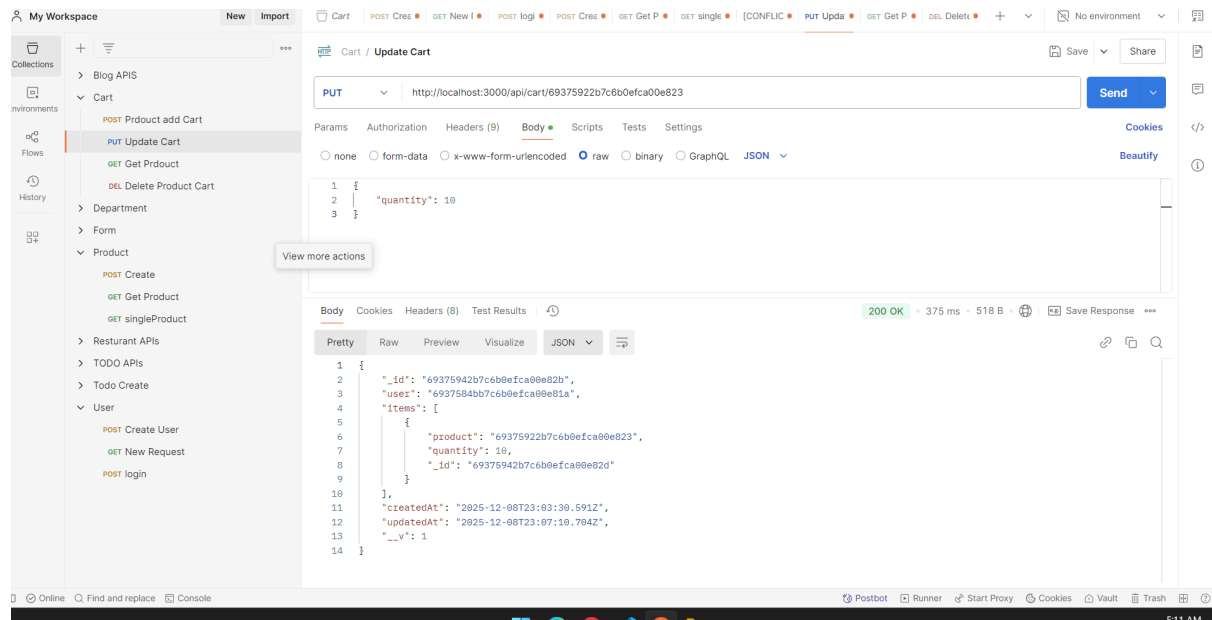
## Cart Routes

### Post/api/cart -(product Add to cart)



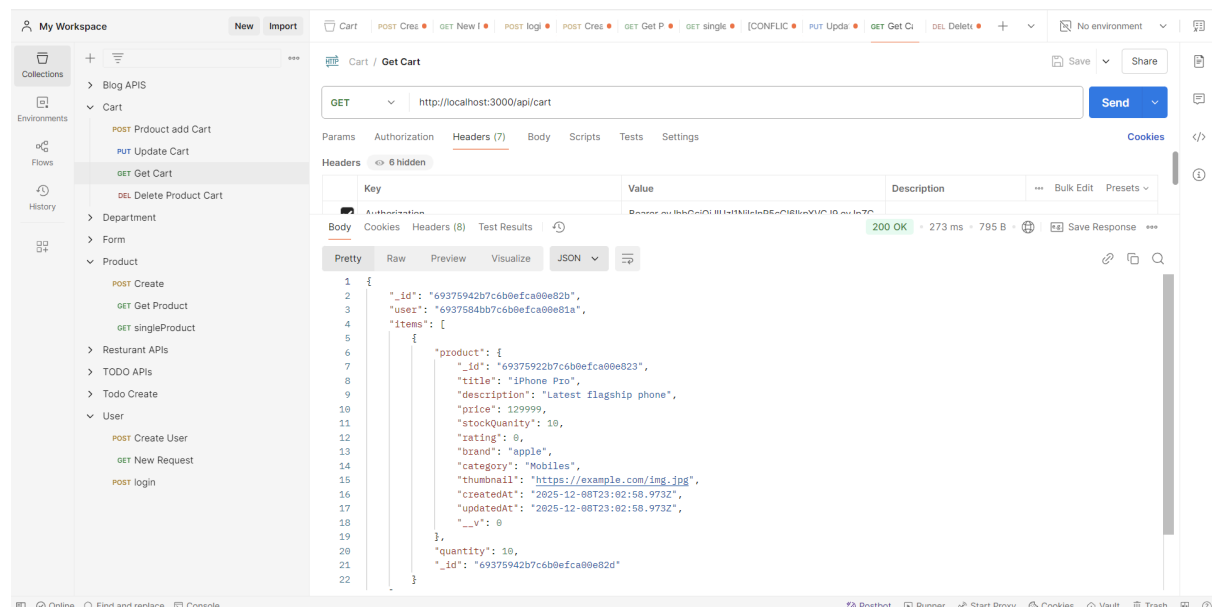
# Update Product Quantity Cart

## Put/api/cart /productid



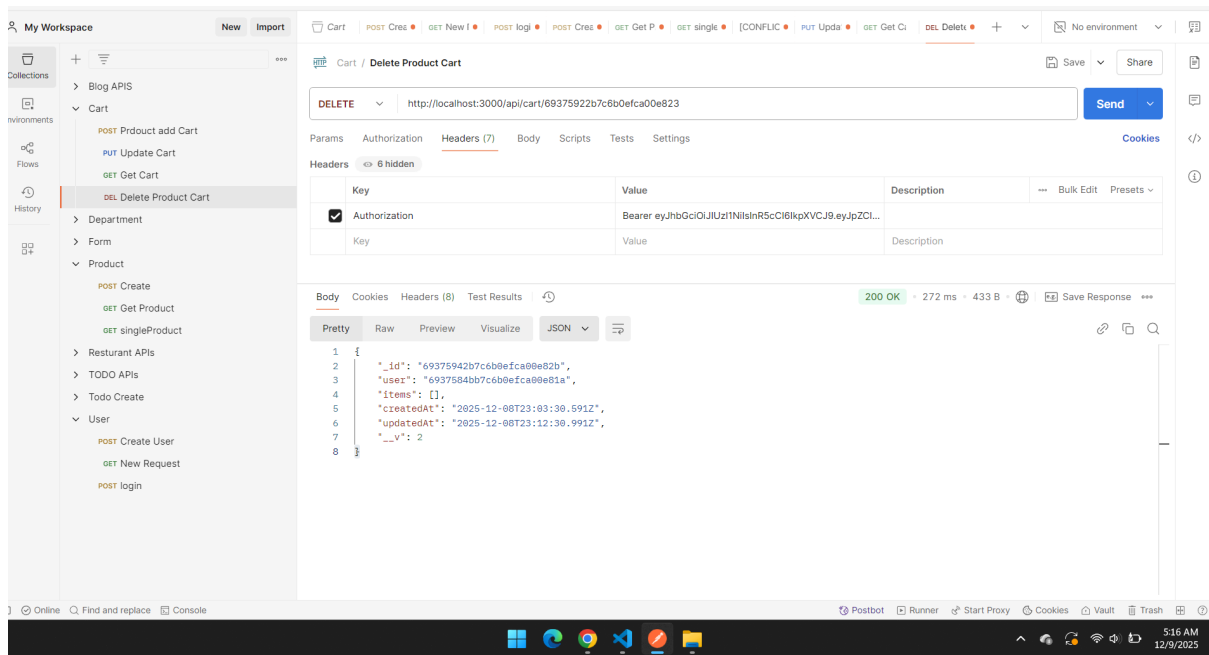
# Get Product Quantity Cart

## get/api/cart



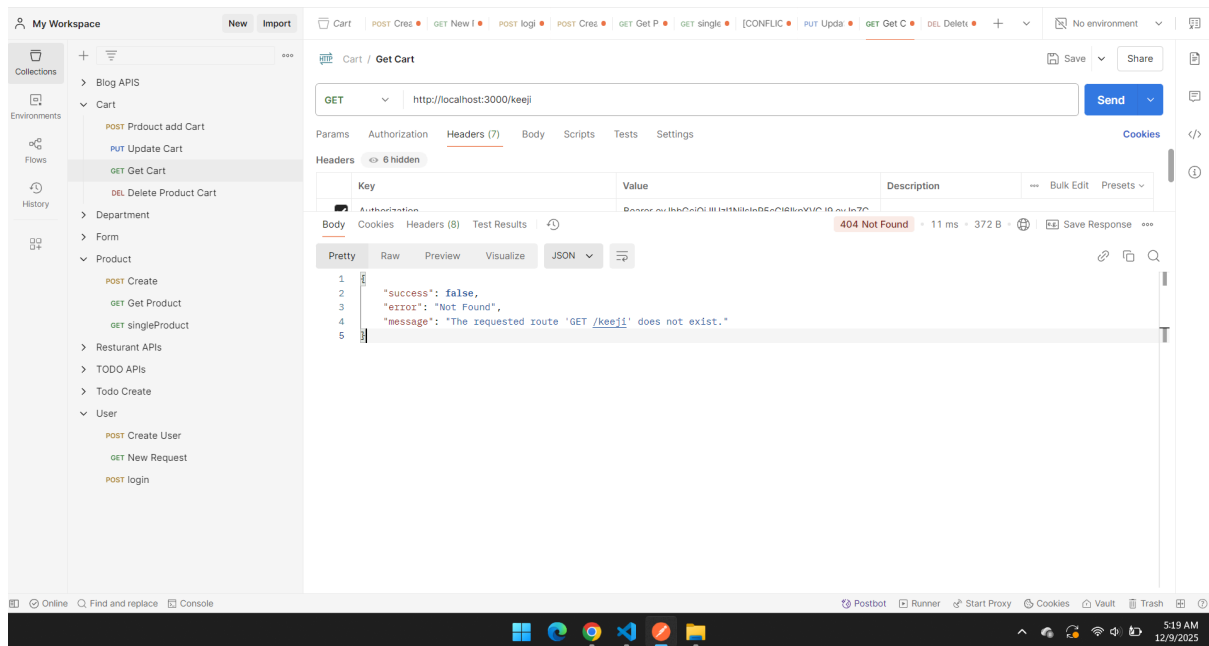
# Delete Product Cart

## Delete/api/cart



## 4. Error Handling

### If path not found -404



### .proper status code

**400 (Bad Request)**

**401 (Unauthorized)**

**404 (Not Found)**

# 500 (Internal Server Error)

## //user data

Cluster

Overview

Data Explorer

Real Time

Cluster Metrics

Query Insights

Performance Advisor

Online Archive

Command Line Tools

Infrastructure as Code

SHORTCUTS

Search & Vector Search

ORGANIZATION

Sangeeta's Org - 202...

PROJECT

shoppy\_09

CLUSTER

Cluster0

DATABASES: 1

COLLECTIONS: 3

+ Create Database

Search Namespaces

test

cars

products

users

test.users

STORAGE SIZE: 36KB

LOGICAL DATA SIZE: 367B

TOTAL DOCUMENTS: 2

INDEXES TOTAL SIZE: 36KB

Find

Indexes

Schema Anti-Patterns

Aggregation

Search Indexes

Generate queries from natural language in Compass

INSERT DOCUMENT

Filter

Type a query: { field: 'value' }

Reset

Apply

Options

QUERY RESULTS: 1-2 OF 2

\_id: ObjectId('6936d9f90913e983176fa92e')

name: "Sangeeta34512"

email: "abc1@gmail.com"

password: "52b5129d7932d92.155uZTshKldKOOKYOL8sVOZq1QGKHpcZ/S3dqkfj."

createdAt: 2025-12-08T14:00:25.073+00:00

updatedAt: 2025-12-08T14:00:25.073+00:00

\_\_v: 0

\_id: ObjectId('6937584bb7c6b0efca00e81a')

name: "Sangeeta34512"

email: "abc@gmail.com"

password: "52b5129d8Gzmzq89JQgKavh00ReI0J2A0qr0jdvp0vCoTwe6k8o0RdKP.a"

createdAt: 2025-12-08T14:00:25.073+00:00

updatedAt: 2025-12-08T14:00:25.073+00:00

\_\_v: 0

## //product

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CLUSTER

Cluster0

DATABASES: 1

COLLECTIONS: 3

+ Create Database

Search Namespaces

test

cars

products

users

test.products

STORAGE SIZE: 36KB

LOGICAL DATA SIZE: 763B

TOTAL DOCUMENTS: 3

INDEXES TOTAL SIZE: 72KB

Find

Indexes

Schema Anti-Patterns

Aggregation

Search Indexes

Generate queries from natural language in Compass

INSERT DOCUMENT

Filter

Type a query: { field: 'value' }

Reset

Apply

Options

QUERY RESULTS: 1-3 OF 3

\_id: ObjectId('6936dd76959f06ec6625bc7b')

title: "iPhone 16 Pro"

description: "Latest flagship phone"

price: 129999

stockQuantity: 10

rating: 0

brand: "apple"

category: "Mobiles"

thumbnail: "https://example.com/img.jpg"

createdAt: 2025-12-08T14:15:18.609+00:00

updatedAt: 2025-12-08T14:15:18.609+00:00

\_\_v: 0