Product CRUD API with Node.js & Mongoose

Project Overview

This project is a simple RESTful API built with Node.js, Express, and MongoDB (Mongoose) that allows you to perform CRUD operations on a Product database.

- **Create a new product**
- **Read all products or a single product**
- **Update a product**
- **Delete a product**

Technologies Used

- Node.js
- Express.js
- MongoDB
- Mongoose
- Postman (for API testing)

Folder Structure

CRUD_Operations/

├── index.js

├── models/

| └── Product.js

Initialization

1. Install dependencies:

npm install express mongoose

2. Make sure MongoDB is installed and running locally, or use a MongoDB Atlas URI.

3. Start the server (Server will run at: http://localhost:3000)

node index.js

Code

1. Product.js

```
const mongoose = require('mongoose');
const productSchema = new mongoose.Schema({
   name: { type: String, required: true },
   price: { type: Number, required: true },
   category: { type: String, required: true }
});
module.exports = mongoose.model('Product', productSchema);
```

2. index.js

```
const express = require('express');
const mongoose = require('mongoose');
const app = express();
app.use(express.json());
mongoose.connect('mongodb://127.0.0.1:27017/productDB');
const Product = mongoose.model('Product', new mongoose.Schema({
  name: String,
  price: Number,
  category: String
}));
app.get('/products', async (req, res) => res.json(await Product.find()));
app.get('/products/:id', async (req, res) => {
  const p = await Product.findById(req.params.id);
  res.json(p || { message: 'Not found' });
});
app.post('/products', async (req, res) => res.status(201).json(await new
Product(req.body).save()));
app.put('/products/:id', async (req, res) => {
  const p = await Product.findByIdAndUpdate(req.params.id, req.body, { new: true });
```

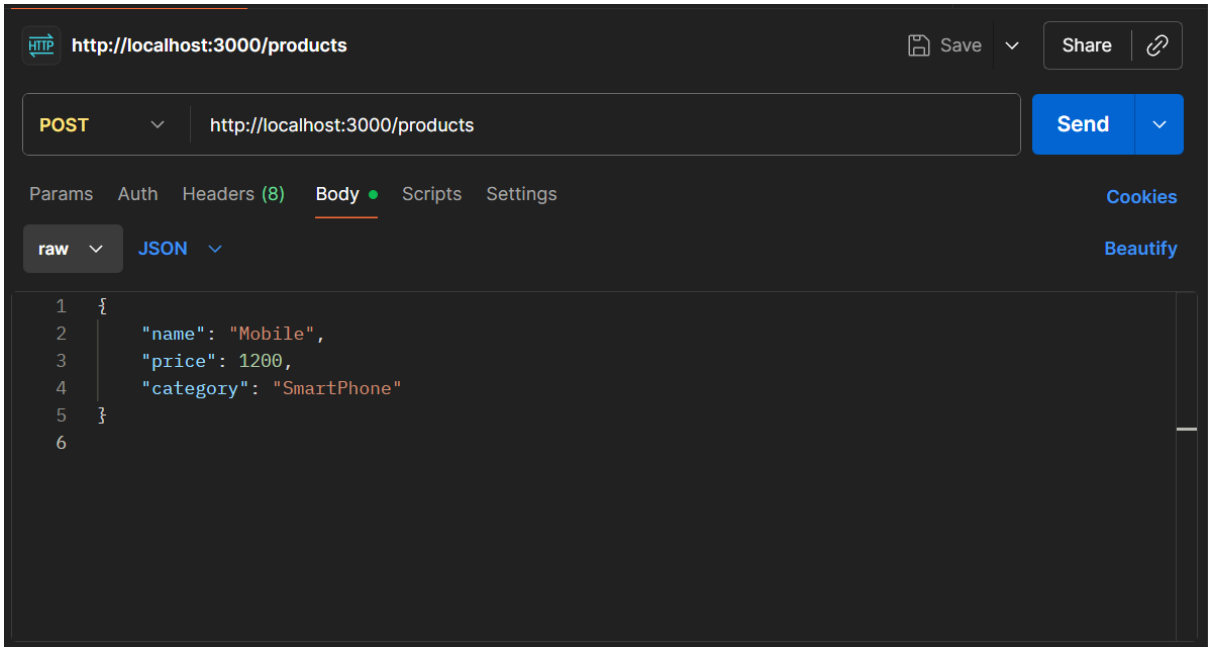
```
  res.json(p || { message: 'Not found' });
});
app.delete('/products/:id', async (req, res) => {
  const p = await Product.findByIdAndDelete(req.params.id);
  res.json(p ? { message: 'Deleted', product: p } : { message: 'Not found' });
});
app.listen(3000, () => console.log('Server running on http://localhost:3000'));
```

API Endpoints

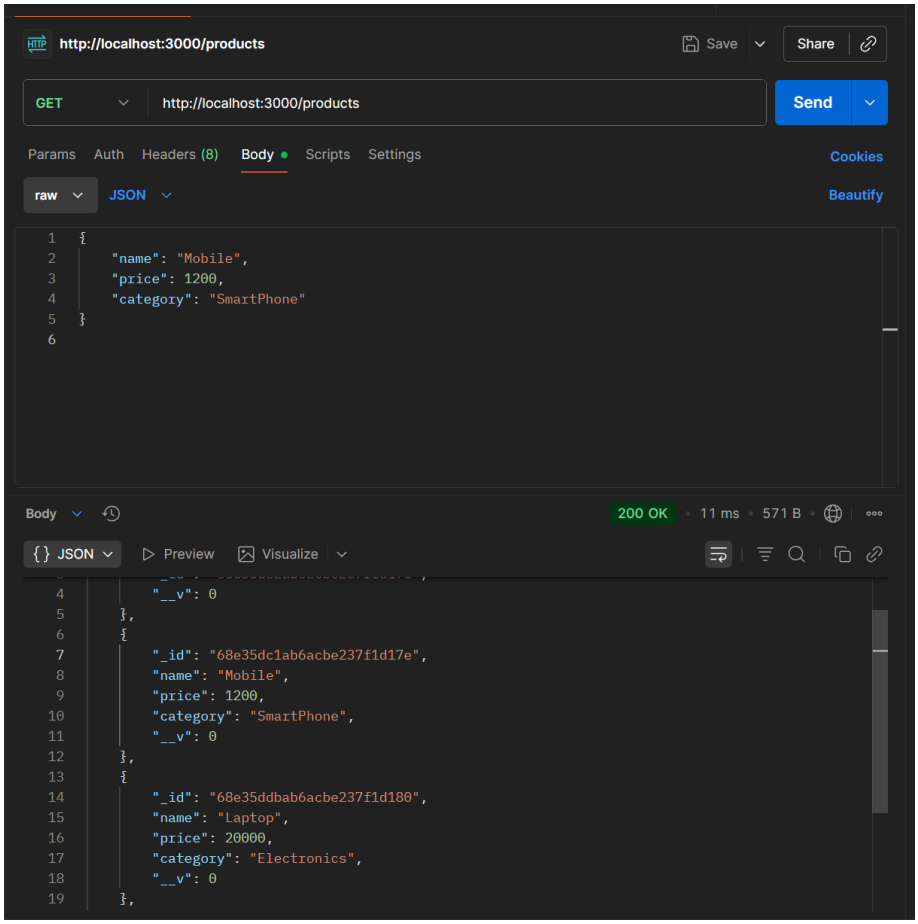
Method	Endpoint	Description
GET	/products	Get all products
GET	/products/:id	Get a single product by ID
POST	/products	Add a new product
PUT	/products/:id	Update a product by ID
DELETE	/products/:id	Delete a product by ID

Screen Shots

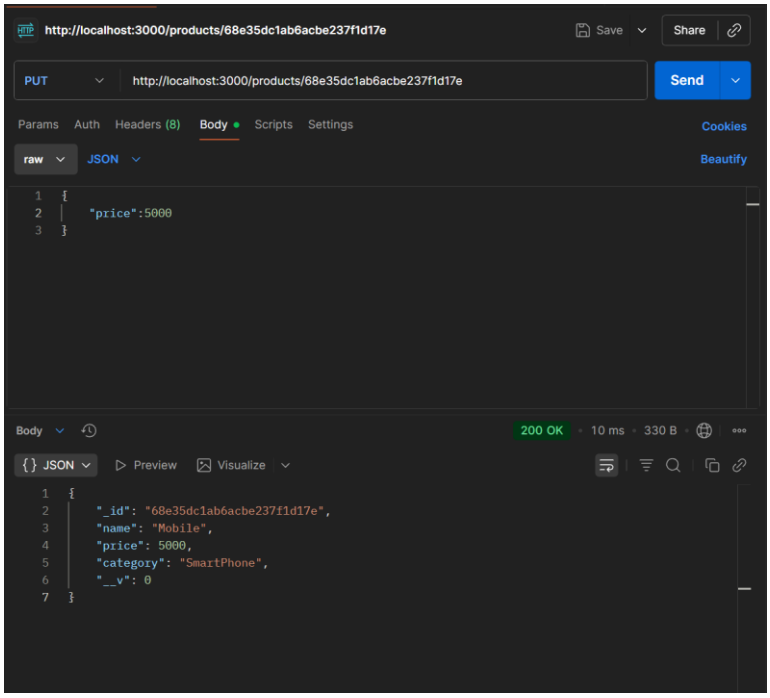
1. Add a new product (POST)



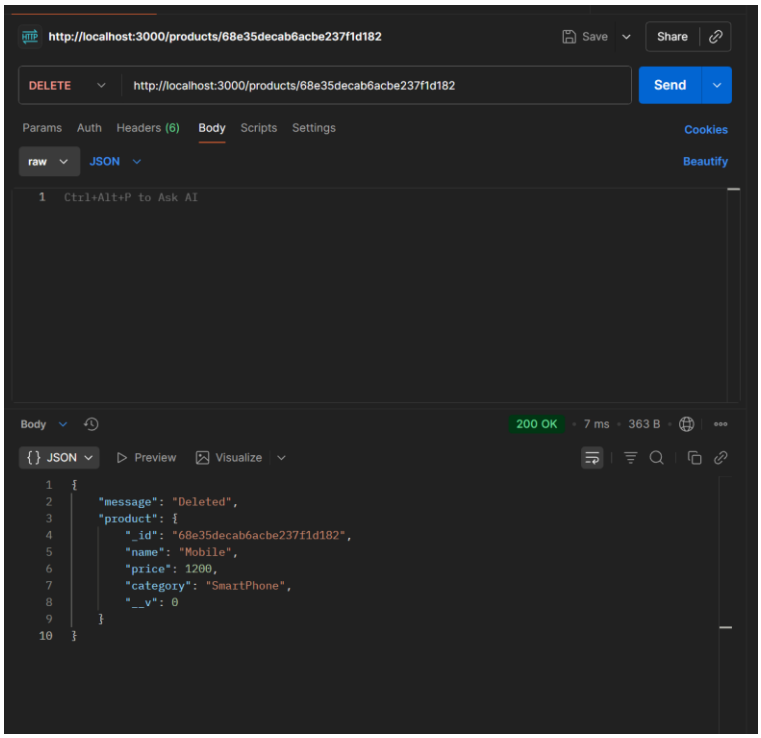
2. Get all products



3. PUT (UPDATE ENTRIES)



5. DELETE DATA



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