Title : 1 Setting Up React Environment and Creating a Basic React Application .(Install Node.js, NPM, Create React App)

Title : 2. JSX and Component Creation Using Props.

App.jsx :

```
import Greeting from './Greeting'

const App = () => {
  return (
    <div>
      <Greeting name="Aaditya" />
      <Greeting name="Pranav" />
      <Greeting name="Parth" />
    </div>
  )
}

export default App
```

Greeting.jsx :

```
const Greeting = (props) => {
  return (
    <div>
        <h3>Hello, {props.name}...!!!</h3>
    </div>
  )
}

export default Greeting
```

Output :

Title : 3. State Management in React Using use State: Building a Counter App

App.jsx :

```
import { useState } from 'react'

const App = () => {
  const [count, setCount] = useState(0)
  return (

    <div className="flex flex-col justify-center items-center m-26 w-
3/5 bg-amber-100 rounded-2xl">

      <h1 className='m-2 text-5xl font-bold'>React Counter</h1>
      <div className='p-5 border-2 rounded w-10 m-2 h-8 flex justify-
center items-center mt-4'>{count}</div>
```

```
        <div className='flex gap-10 m-4'>
          <button className='border-2 rounded px-5'
          onClick={()=> setCount(count+1)}>+</button>
          <button className='border-2 rounded px-5'
          onClick={()=> setCount(count-1)}>-</button>
          <button className='border-2 rounded px-5'
          onClick={()=> setCount(0)}>Reset</button>
        </div>
      </div>
    )
  }

  export default App
```

Output :

Title : 4 Event Handling in React: Managing Button Clicks and Input Changes

App.jsx :

```
  import { useState } from 'react'

  const App = () => {
    const [name, setname] = useState('')
    const [message, setmessage] = useState('')
    const changeName= (e)=>{
      console.log(e.target.value);

      setname(e.target.value)
    }
    const buttonClick = ()=>{
      setmessage(`Hello, ${name}`)
    }
    return (
      <div className='m-10'>
        <input
        type="text"
        placeholder='Enter Your Name...'
        value={name}
        onChange={changeName}
        className='border-2 rounded m-4'/> <br />

        <button onClick={buttonClick}
        className='border-2 rounded m-4 px-2'>Greet Me</button>
        <br />
        <p className='m-4 text-emerald-500 text-xl font-
bold'>{message}</p>
      </div>
    )
  }

  export default App
```

Output :

Title : 5. Rendering Dynamic Lists in React Using Array Mapping and Key Props

App.jsx :

```
import React from 'react'

const App = () => {
  const fruits = ['Apple', 'Banana', 'Cherry'];// array
  return (
    <div className='m-4'>
        <h1>FRUITS LIST</h1>
      <ul>
        {fruits.map((fruit, index) => (
          <li key={index}> {fruit}</li>
        ))}
      </ul>
    </div>
  )

}

export default App
```

Output :

Title : 6 Building Controlled Forms in React: Managing State and Implementing Basic Validation

App.jsx :

```
import { useState } from 'react';

const App = () => {
  const [inputValue, setInputValue] = useState('');
  const [submit, setsubmit] = useState("");
  const [error, setError] = useState("");

  function handleInputChange(event) {
    const value = event.target.value;
    setInputValue(value);
    if (value.trim() !== "") {
      setError("");
    }
  }

  function handleSubmit(event) {
    event.preventDefault();
    if (inputValue.trim() === "") {
      setError("Name is required.");
      setsubmit("");
      return;
    }
    setsubmit(`Hello , ${inputValue} your form is submitted`);
    setError("");
  }

  return (
    <form onSubmit={handleSubmit} style={{ margin: "50px" }}>
      <label>
        Name:
        <input
          type="text"
          value={inputValue}
          onChange={handleInputChange}
        />
      </label>
      <br />
      <button type="submit" className="border rounded bg-fuchsia-300
px-4 my-4">
        Submit
      </button>
      {error && <p style={{ color: 'red' }}>{error}</p>}
      <p>{submit}</p>
    </form>
  );
}
export default App
```

Output :

Title : 7 Styling React Components: Implementing CSS Modules and Inline Styles

App.jsx :

```
import styles from './Button.module.css';

const App = () => {
  return (
    <button
      className={styles.button} //module css
      style={{ backgroundColor: "rgba(154, 43, 252, 0.655)" }} //inline
css
      onClick={() => { alert("Button Clicked") }}>
      Click Me
    </button>
  );
}
export default App
```

Button.module.css :

```
.button {
    color: white;
    padding: 10px 20px;
    margin: 10px;
    font-weight: 500
}
```

Output :

Title : 8 Conditional styling in React using both CSS Modules and inline styles. (Toggle Button with Conditional Styling).

App.jsx :

```
import "./toggle.css";
import { useState } from "react";
const App = () => {
  const [isOn, setIsOn] = useState(false);

  const buttonStyle = {
    backgroundColor: isOn ? '#4CAF50' : '#f44336',
    color: 'white',
    padding: '12px 20px',
    border: 'none',
    borderRadius: '5px',
    fontSize: '16px',
    cursor: 'pointer',
    transition: 'background-color 0.3s ease',
  };

  return (
    <div className="container">
      <span className="label">Toggle is {isOn ? 'ON' : 'OFF'}</span>
      <button style={buttonStyle} onClick={() => setIsOn(!isOn)}>
        {isOn ? 'Turn OFF' : 'Turn ON'}
      </button>
    </div>
  );

}
export default App
```

Output :

Title : 9 Developing a Personal Portfolio Website with React and Bootstrap

App.jsx :

```
import Navbar from './Navbar';
import Home from './Home';
import About from './About';
import Projects from './Projects';
import Footer from './Footer';
function App() {
  return (
    <div>
      <Navbar />
      <Home />
      <About />
      <Projects />
```

```
      <Footer />
    </div>
  );
}
export default App;
```

Navbar.jsx:

```
function Navbar() {
    return (
        <nav className="navbar navbar-expand-lg navbar-dark bg-dark">
            <div className="container">
                <a className="navbar-brand">My Portfolio</a>
                <div className="collapse navbar-collapse">
                    <ul className="navbar-nav ms-auto">
                        <li className="nav-item"><a className="nav-
link" href="#home">Home</a></li>
                        <li className="nav-item"><a className="nav-
link" href="#about">About</a></li>
                        <li className="nav-item"><a className="nav-
link" href="#projects">Projects</a></li>
                    </ul>
                </div>
            </div>
        </nav>
    );
}
export default Navbar;
```

Home.jsx

```
function Home() {
    return (
        <section id="home" className="bg-light text-center py-5">
            <div className="container">
                <h1>Hello, I’m Aaditya </h1>
                <p>Frontend Developer | React Enthusiast</p>
            </div>
        </section>
    );
}
export default Home;
```

About.jsx

```
import React from 'react';
function About() {
    return (
        <section id="about" className="py-5">
            <div className="container">
                <h2>About Me</h2>
                <p>I am a passionate web developer with skills in
React, Bootstrap, and modern web
                    technologies.</p>
            </div>
        </section>
    );
}
export default About;
```

Project.jsx

```
function Projects() {
    return (
        <section id="projects" className="bg-light py-5">
            <div className="container">
                <h2>Projects</h2>
                <ul>
                    <li>Portfolio Website</li>
                    <li>To-do App with React</li>
                    <li>Weather App using API</li>
                </ul>
            </div>
        </section>
    );
}
export default Projects;
```

Footer.jsx

```
function Footer() {
    return (
        <footer className="bg-dark text-white text-center py-3">
            <p>&copy; 2025 My Portfolio. All rights reserved.</p>
        </footer>
    );
}
export default Footer;
```

Output :

Title : 10 Setting Up a Node.js and Express.js Development Environment: A Practical Guide

Step 1: Setup the Backend (Node.js + Express.js)

1.Go to your folder on the top write cmd

2. In cmd write this commands one by one

- `mkdir fullstack-app`
- `cd fullstack-app`
- `mkdir backend`
- `cd backend`
- `npm init -y`
- `code .`
- in VS code your folder is open and create file server.js copy the code in server.js

2. Install Express

```
npm install express cors
```

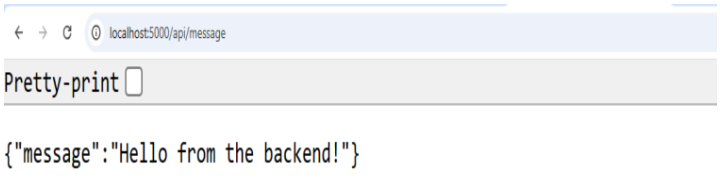
3. Create server.js

add this code in server.js

```
const express = require('express');
const cors = require('cors');
const app = express();
const PORT = 5000;
app.use(cors());
app.use(express.json());
// Dummy API
app.get('/api/message', (req, res) => {
 res.json({ message: "Hello from the backend!" });
});
app.listen(PORT, () => {
 console.log(`Server running on http://localhost:${PORT}`);
});
```

4. Run the Backend Server

Run this command on CMD :
`node server.js`
Visit: http://localhost:5000/api/message
You should see:
{ "message": "Hello from the backend!" }



Practical no.11: Implementing Basic Routing in Express.js: Creating Multiple GET Endpoints.

Step: 1:- Create folder on desktop.Then open folder and open cmd in that folder.

Step: 2:- npm init –y

Step: 3:- npm install express then code .

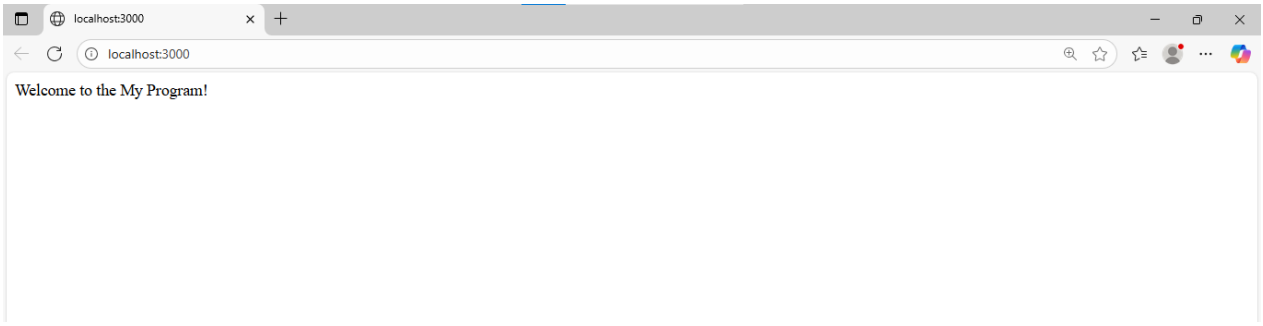
Step: 4:- Create Index.js in vs code and type this code.

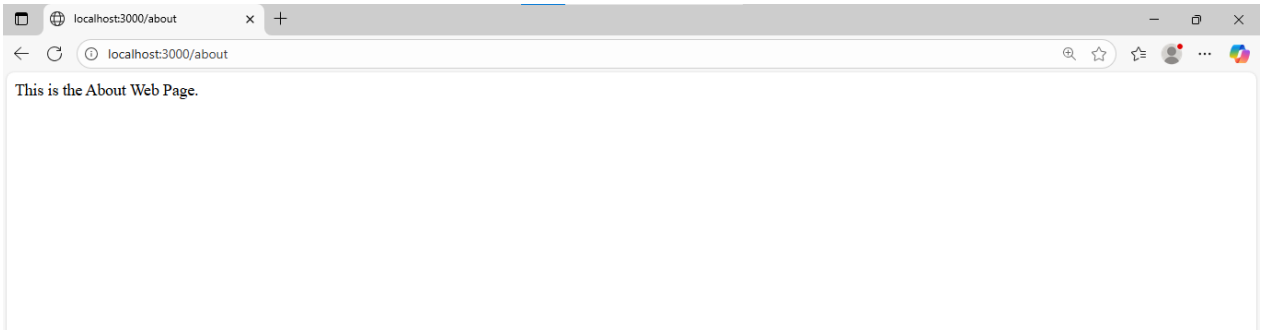
```
const express = require('express');
const app = express();

const port = 3000;

app.get('/', (req, res) => {
res.send('Welcome to the My Program!');

});

app.get('/about', (req, res) => {
res.send('This is the About Web Page.');

});

app.get('/contact', (req, res) => {
res.send('Contact us at aiabi45@gmail.com');

});

app.get('/services', (req, res) => {
res.send('Here are our services: Web Development, App Development, SEO.');

});

app.listen(port, () => {
console.log(`Server running at http://localhost:${port}`);

});
```

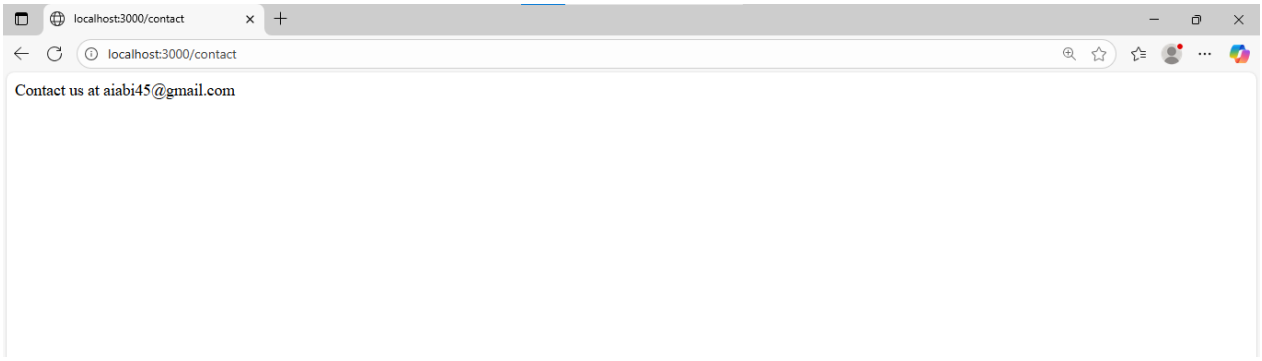
Step 5: Run this in terminal

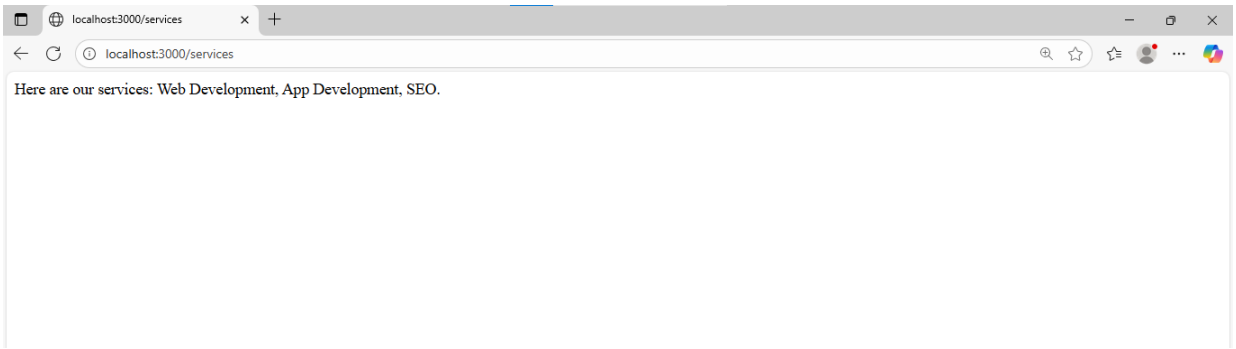
```
node index.js
```

Output:


localhost:3000
localhost:3000
Welcome to the My Program!


localhost:3000/about
localhost:3000/about
This is the About Web Page.


localhost:3000/contact
localhost:3000/contact
Contact us at aiabi45@gmail.com


localhost:3000/services
localhost:3000/services
Here are our services: Web Development, App Development, SEO.

Name: Aditya Dnyaneshwar Pawar Roll no: 178 Class: SYBCA
Practical no.12- Building a RESTful API with Express.js: A Hands-On Guide to HTTP Methods on (Customer details)

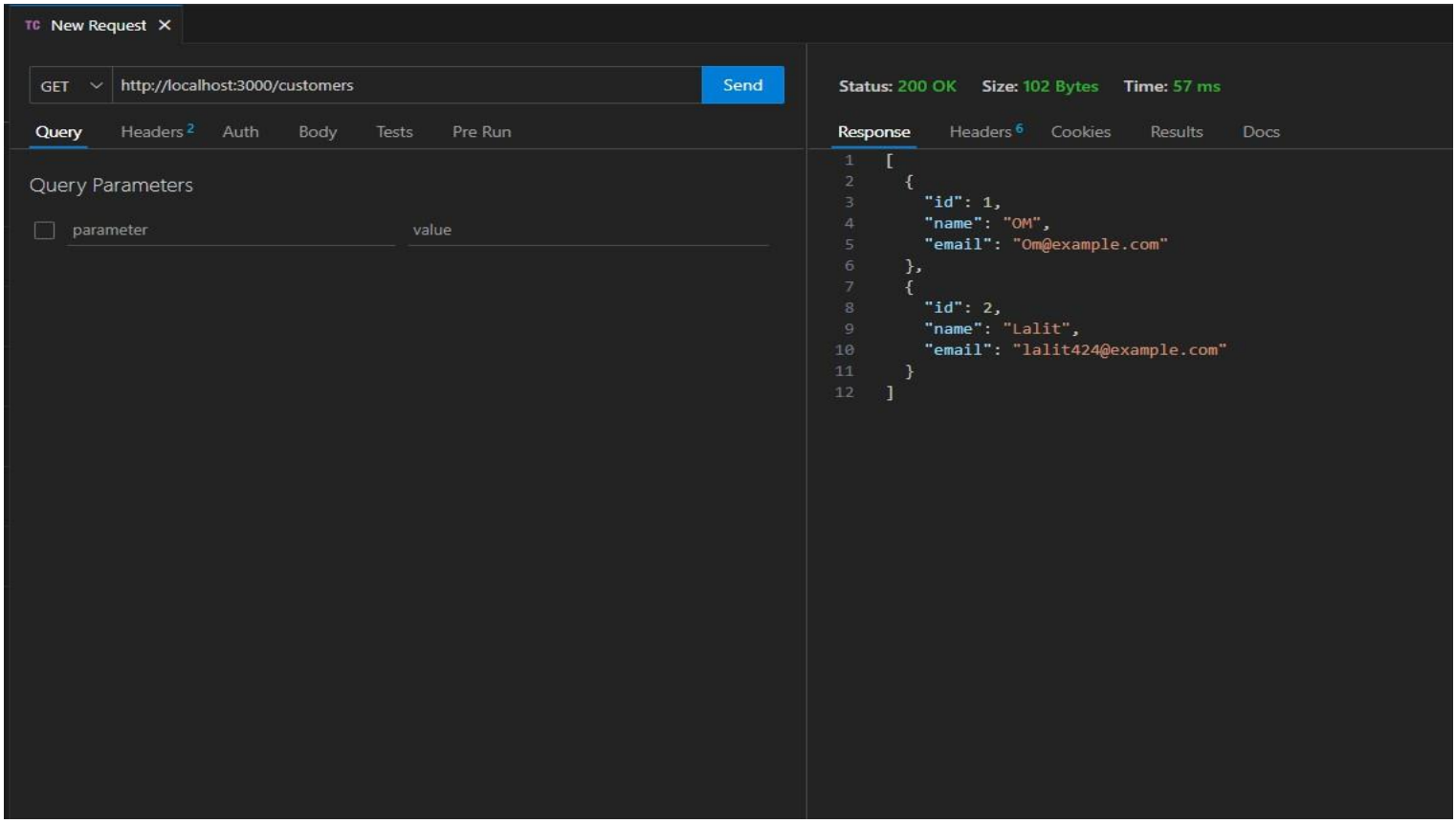
```
const express = require('express');
const app = express();
const port = 3000;
app.use(express.json());

let customers = [
  { id: 1, name: 'OM', email: 'Om@example.com' },
  { id: 2, name: 'Lalit', email: 'lalit424@example.com' }
];

app.get('/customers', (req, res) => {
  res.json(customers);
});

app.get('/customers/:id', (req, res) => {
  const id = parseInt(req.params.id);
  const customer = customers.find(c => c.id === id);
  if (!customer) {
    return res.status(404).send('Customer not found');
  }
  res.json(customer);
});

app.post('/customers', (req, res) => {
  const { name, email } = req.body;
  const newCustomer = {
    id: customers.length + 1,
    name,
    email
  };
  customers.push(newCustomer);
  res.status(201).json(newCustomer);
});

app.put('/customers/:id', (req, res) => {
  const id = parseInt(req.params.id);
  const customer = customers.find(c => c.id === id);
  if (!customer) {
    return res.status(404).send('Customer not found');
  }
```

```
  customer.name = req.body.name || customer.name;
  customer.email = req.body.email || customer.email;

  res.json(customer);
});

app.delete('/customers/:id', (req, res) => {
  const id = parseInt(req.params.id);
  const index = customers.findIndex(c => c.id === id);
  if (index === -1) {
    return res.status(404).send('Customer not found');
  }
  const deletedCustomer = customers.splice(index, 1);
  res.json(deletedCustomer);
});

app.listen(port, () => {
  console.log(`Customer API is running at http://localhost:${port}`);
});
```

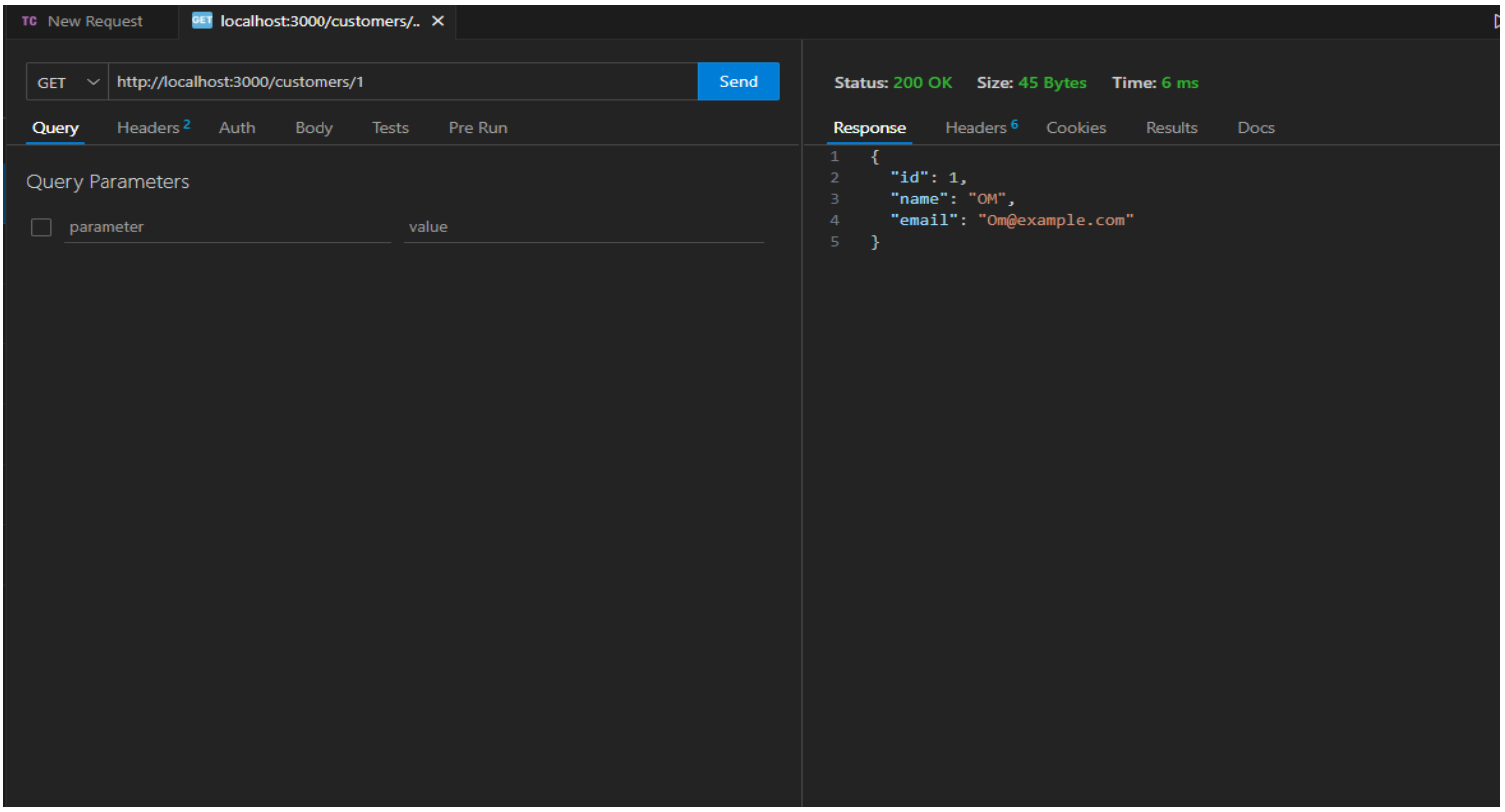
1. GET all customers

URL: http://localhost:3000/customers

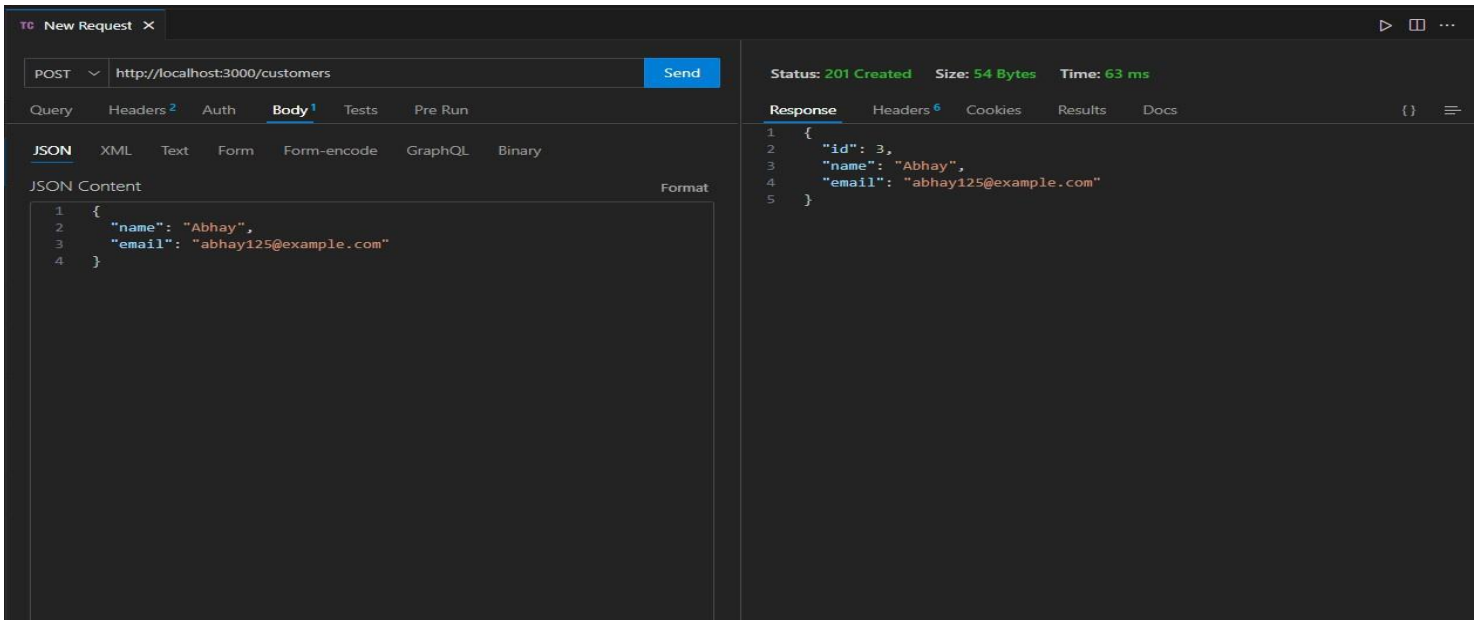
Method: GET



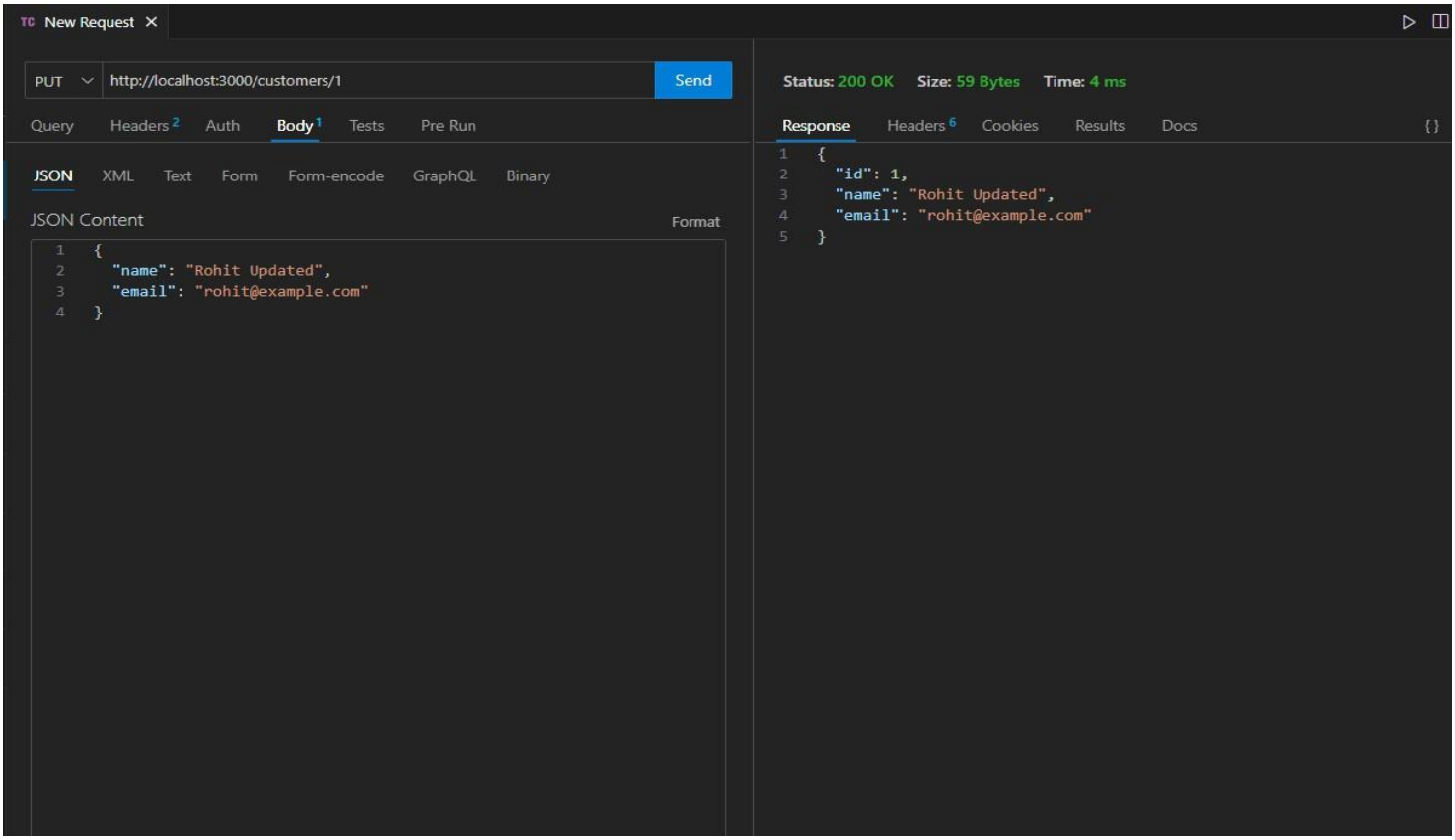
2. GET a customer by ID
URL: http://localhost:3000/customers/1
Method: GET



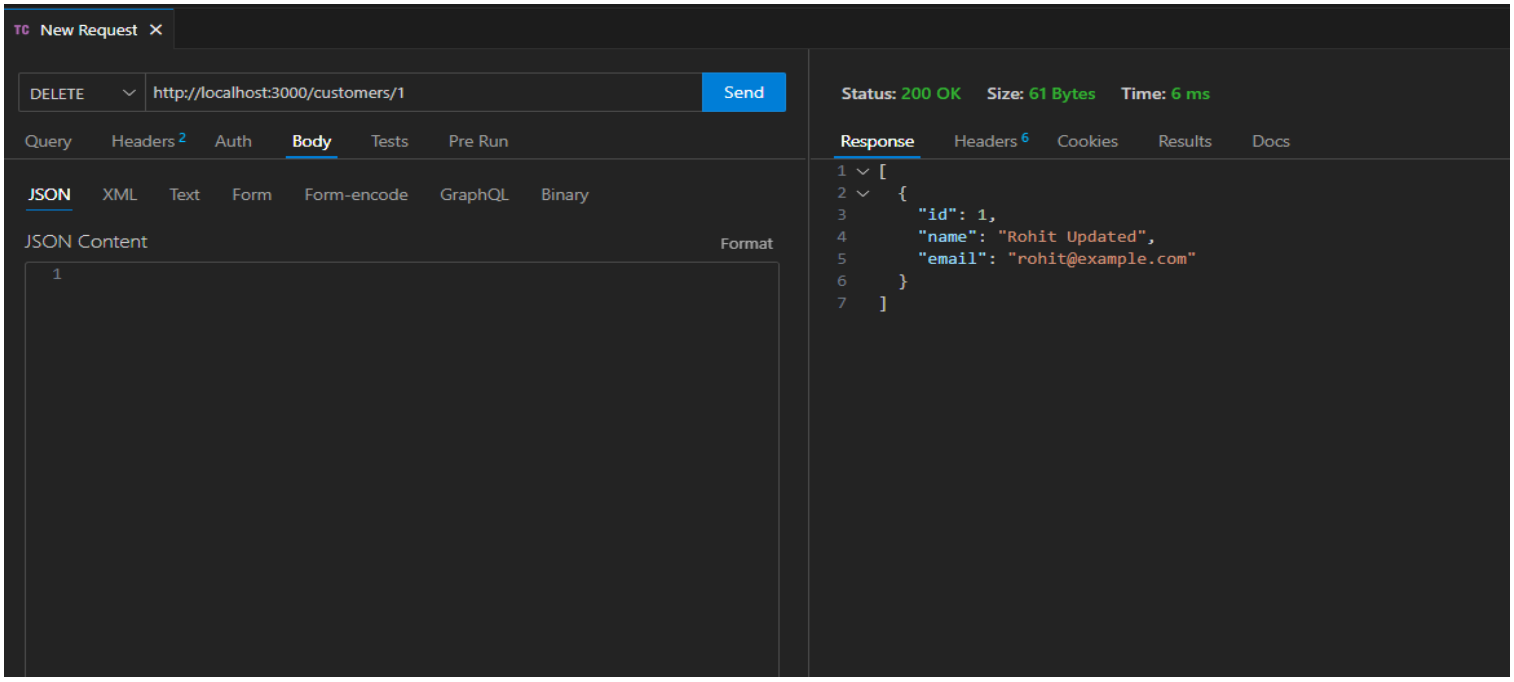
3. POST a new customer
URL: http://localhost:3000/customers
Method: POST



4. PUT (update) a customer
URL: http://localhost:3000/customers/2
Method: PUT



5. DELETE a customer
URL: http://localhost:3000/customers/1
Method: DELETE



Name: Aditya Dnyaneshwar Pawar Roll no: 178 Class: SYBCA

Practical 13 :- Building RESTful APIs: Managing JSON POST Requests in Express.js (Employee Post Method).

---

1. Create a new folder for your project and open it in terminal.

2. Run: npm init –y

npm install express

Code:-

```
const express = require('express');
const app = express();
const port = 3000;
app.use(express.json());
let employees = [
  { id: 1, name: 'Alice', role: 'Developer' },
  { id: 2, name: 'Bob', role: 'Designer' }
];
app.get('/employees', (req, res) => {
  res.json(employees);
});
app.post('/employees', (req, res) => {
  const newEmployee = req.body;
  if (!newEmployee.name || !newEmployee.role) {
    return res.status(400).json({ error: 'Name and role are required' });
  }
  newEmployee.id = employees.length + 1;
  employees.push(newEmployee);
```

```
  res.status(201).json(newEmployee);
});
app.listen(port, () => {
  console.log(`Server running at http://localhost:${port}`);
});
```

Output:-

Run your server

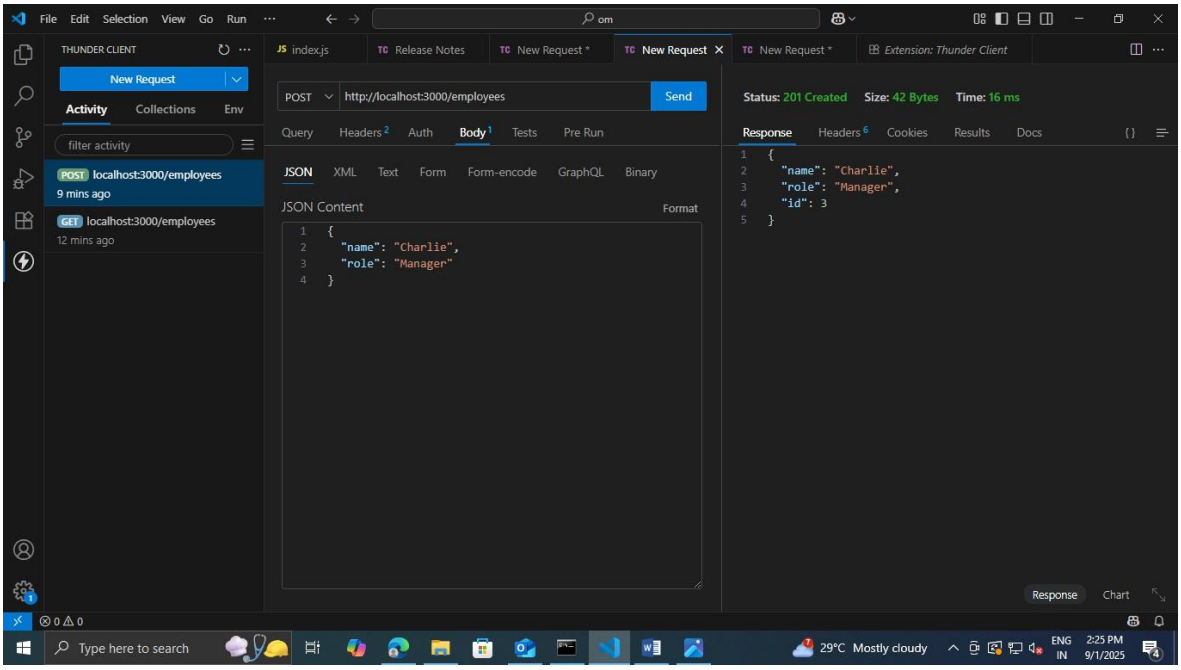
Run in terminal: node index.js

You should see: Server running at http://localhost:3000

Open your browser or Postman and visit:

http://localhost:3000/employees

GET:



POST:-

Use Postman or curl to send a POST request to: http://localhost:3000/employees

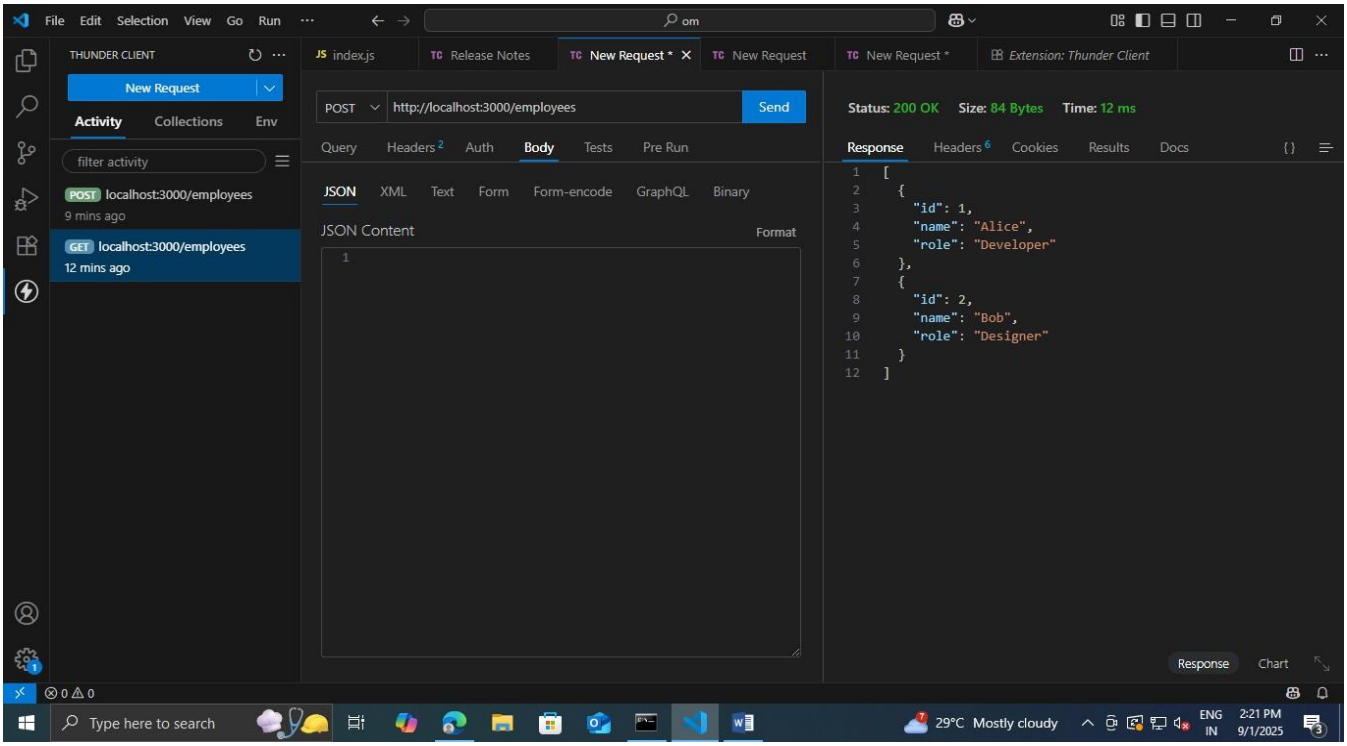
With this JSON body:

{

"name": "Charlie",

"role": "Manager"

}

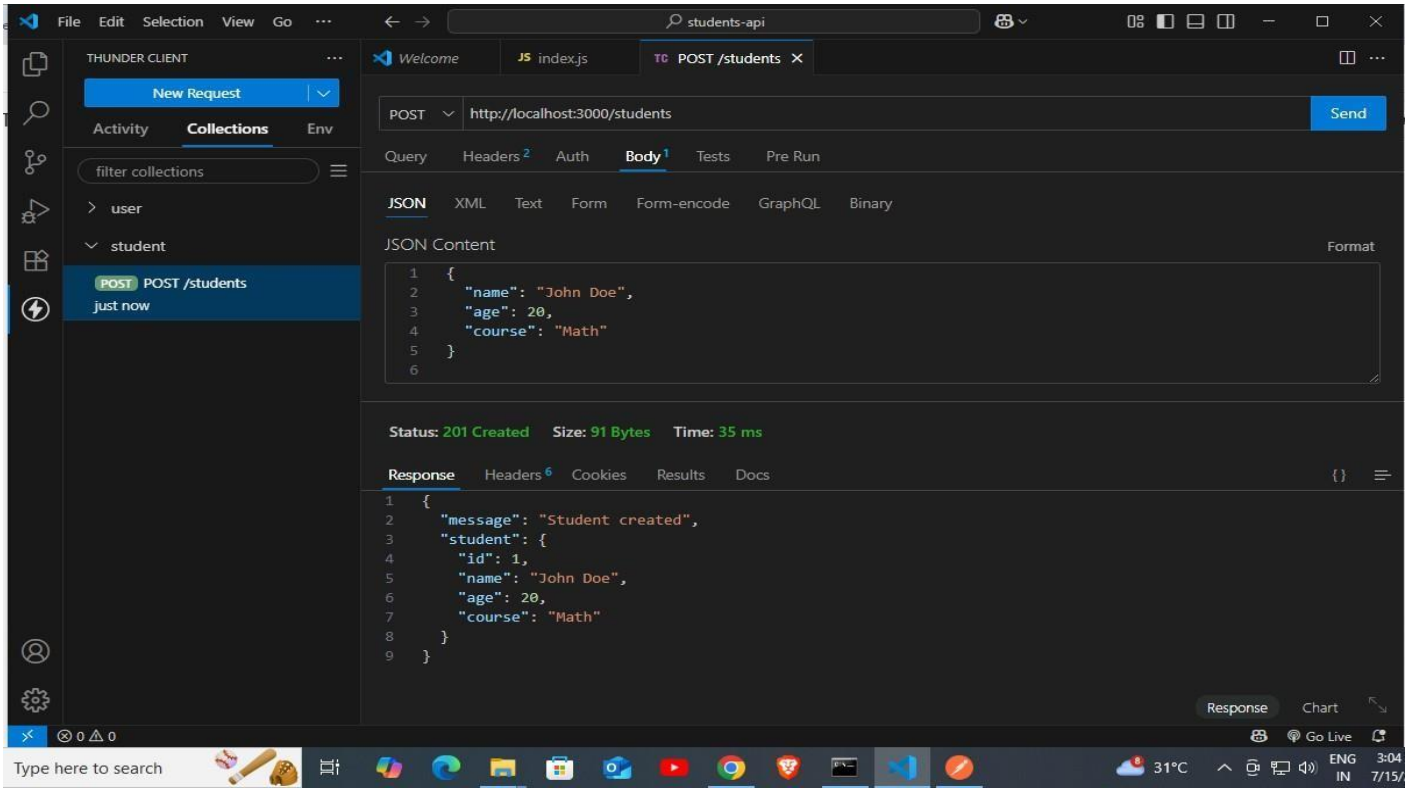


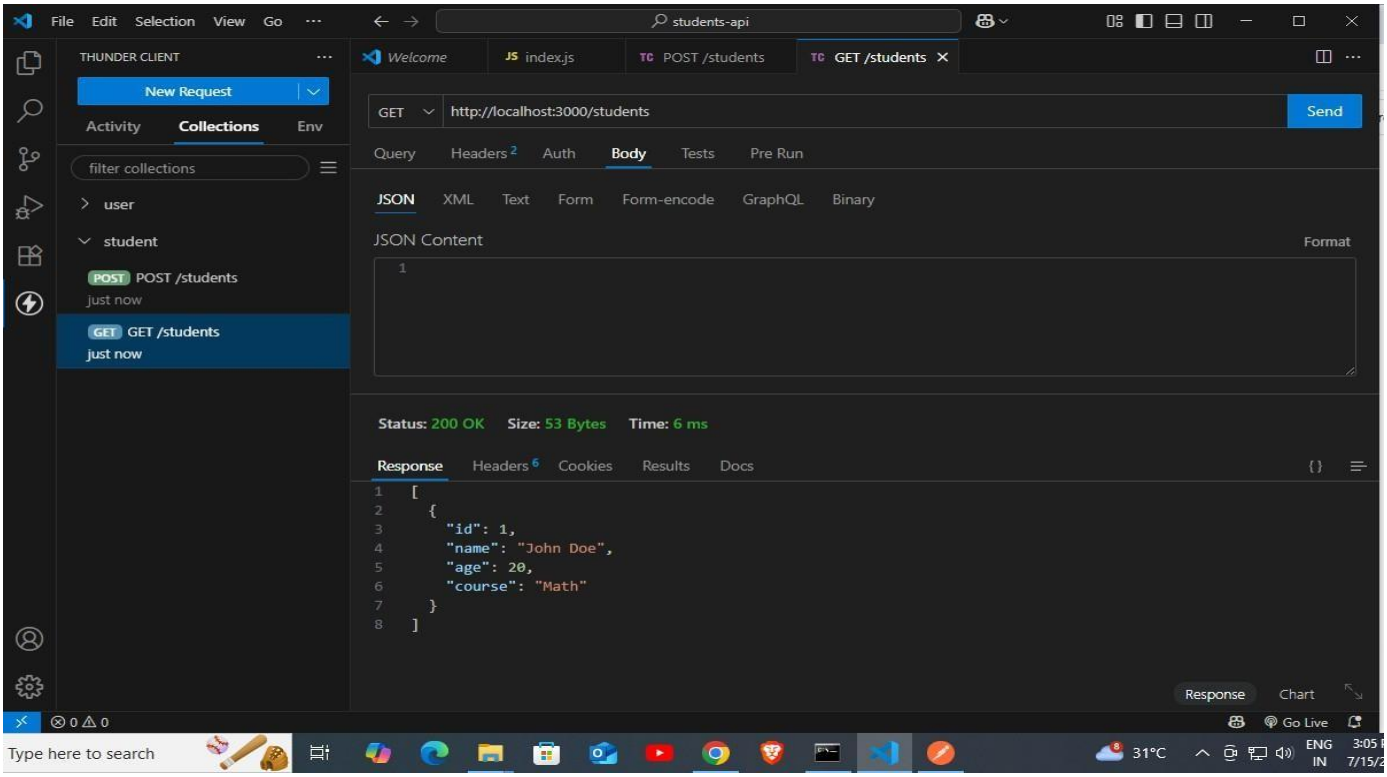
Practical no.14: Implementing CRUD Operations (Students)Using RE/STful API and HTTP Methods.

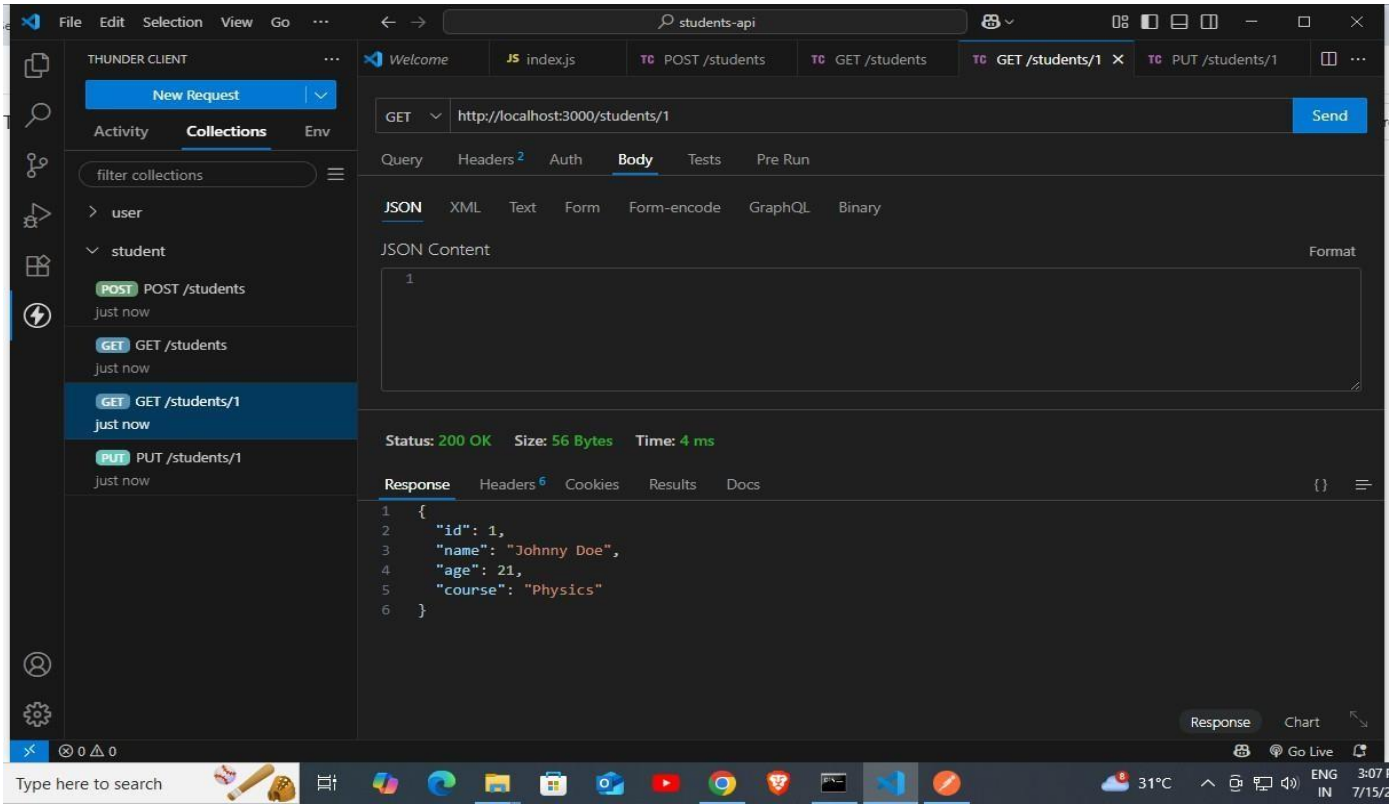
```
const express = require('express');
const app = express();
const port = 3000;
app.use(express.json());

let students = [];
let nextId = 1;
// CREATE - Add new student
app.post('/students', (req, res) => {
  const student = { id: nextId++, ...req.body };
  students.push(student);
  res.status(201).json({ message: 'Student created', student });
});

app.get('/students', (req, res) => {
  res.json(students);
});
app.get('/students/:id', (req, res) => {
  const student = students.find(s => s.id == req.params.id);
  if (!student) {
    return res.status(404).json({ message: 'Student not found' });
  }
  res.json(student);
});
```

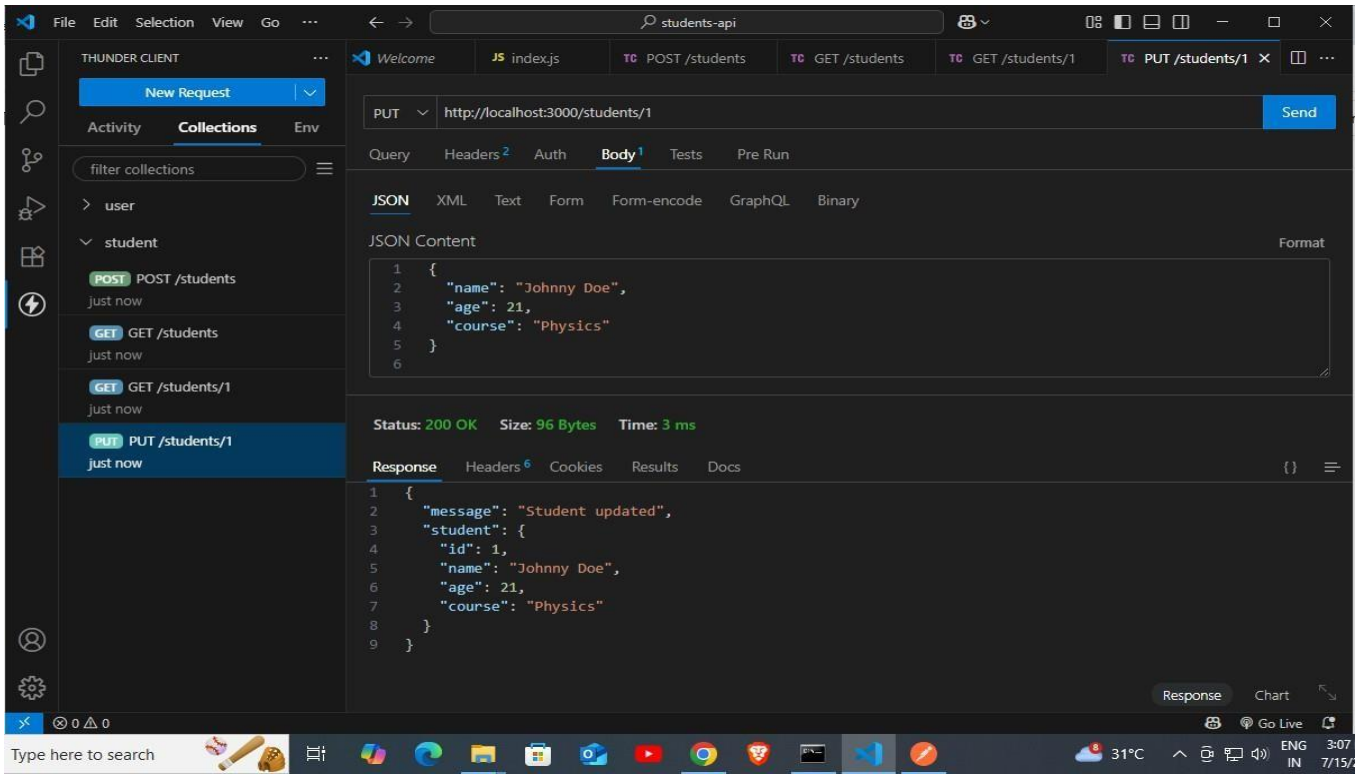
```
app.put('/students/:id', (req, res) => {
  const index = students.findIndex(s => s.id == req.params.id);
  if (index === -1) {
    return res.status(404).json({ message: 'Student not found' });
  }
  students[index] = { id: students[index].id, ...req.body };
  res.json({ message: 'Student updated', student: students[index] });
});

app.delete('/students/:id', (req, res) => {
  const index = students.findIndex(s => s.id == req.params.id);
  if (index === -1) {
    return res.status(404).json({ message: 'Student not found' });
  }
  const removedStudent = students.splice(index, 1);
  res.json({ message: 'Student deleted', student: removedStudent[0] });
});

app.listen(port, () => {
  console.log(`Server running at http://localhost:${port}`);
});
```

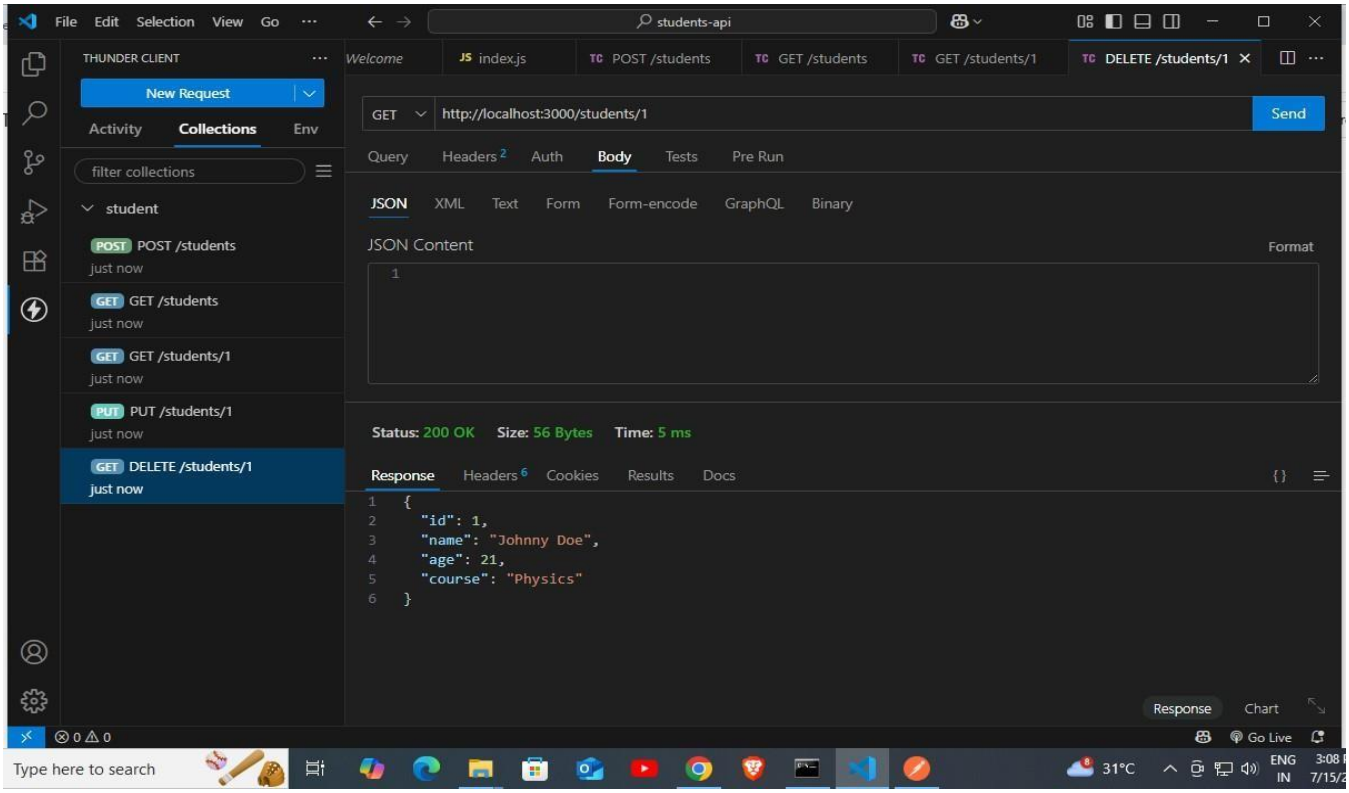
Output:


File Edit Selection View Go
students-api
THUNDER CLIENT
New Request
Activity Collections Env
filter collections
user
student
POST POST /students
just now
Welcome
index.js
POST /students
POST
http://localhost:3000/students
Send
Query Headers 2 Auth Body 1 Tests Pre Run
JSON XML Text Form Form-encode GraphQL Binary
JSON Content
Format
{
"name": "John Doe",
"age": 20,
"course": "Math"
}
Status: 201 Created Size: 91 Bytes Time: 35 ms
Response Headers 6 Cookies Results Docs
{
"message": "Student created",
"student": {
"id": 1,
"name": "John Doe",
"age": 20,
"course": "Math"
}
}
Response Chart
Go Live
Type here to search
31°C
ENG IN
3:04 7/15/


File Edit Selection View Go
students-api
THUNDER CLIENT
New Request
Activity Collections Env
filter collections
user
student
POST POST /students
just now
GET GET /students
just now
Welcome
index.js
POST /students
GET /students
GET
http://localhost:3000/students
Send
Query Headers 2 Auth Body Tests Pre Run
JSON XML Text Form Form-encode GraphQL Binary
JSON Content
Format
Status: 200 OK Size: 53 Bytes Time: 6 ms
Response Headers 6 Cookies Results Docs
[
{
"id": 1,
"name": "John Doe",
"age": 20,
"course": "Math"
}
]
Response Chart
Go Live
Type here to search
31°C
ENG IN
3:05 7/15/


File Edit Selection View Go
students-api
THUNDER CLIENT
New Request
Activity Collections Env
filter collections
user
student
POST POST /students
just now
GET GET /students
just now
GET GET /students/1
just now
PUT PUT /students/1
just now
Welcome
index.js
POST /students
GET /students
GET /students/1
PUT /students/1
GET http://localhost:3000/students/1
Send
Query Headers 2 Auth Body Tests Pre Run
JSON XML Text Form Form-encode GraphQL Binary
JSON Content
Format
Status: 200 OK Size: 56 Bytes Time: 4 ms
Response Headers 6 Cookies Results Docs
{
"id": 1,
"name": "Johnny Doe",
"age": 21,
"course": "Physics"
}
Response Chart
Go Live
Type here to search
31°C
ENG
IN


File Edit Selection View Go
students-api
THUNDER CLIENT
New Request
Activity Collections Env
filter collections
user
student
POST POST /students
just now
GET GET /students
just now
GET GET /students/1
just now
PUT PUT /students/1
just now
Welcome
index.js
POST /students
GET /students
GET /students/1
PUT /students/1
PUT http://localhost:3000/students/1
Send
Query Headers 2 Auth Body 1 Tests Pre Run
JSON XML Text Form Form-encode GraphQL Binary
JSON Content
Format
{
"name": "Johnny Doe",
"age": 21,
"course": "Physics"
}
Status: 200 OK Size: 96 Bytes Time: 3 ms
Response Headers 6 Cookies Results Docs
{
"message": "Student updated",
"student": {
"id": 1,
"name": "Johnny Doe",
"age": 21,
"course": "Physics"
}
}
Response Chart
Go Live
Type here to search
31°C
ENG
IN
3:07
7/15/2


File Edit Selection View Go
students-api
THUNDER CLIENT
New Request
Activity Collections Env
filter collections
student
POST POST /students
just now
GET GET /students
just now
GET GET /students/1
just now
PUT PUT /students/1
just now
GET DELETE /students/1
just now
Welcome
index.js
POST /students
GET /students
GET /students/1
DELETE /students/1
GET
http://localhost:3000/students/1
Send
Query
Headers 2
Auth
Body
Tests
Pre Run
JSON
XML
Text
Form
Form-encode
GraphQL
Binary
JSON Content
Format
1
Status: 200 OK
Size: 56 Bytes
Time: 5 ms
Response
Headers 6
Cookies
Results
Docs
{ }
1 {
2 "id": 1,
3 "name": "Johnny Doe",
4 "age": 21,
5 "course": "Physics"
6 }
Response
Chart
0 0
Go Live
Type here to search
31°C
ENG
IN

PRACTICAL 15: SETTING UP MONGO DB ENVIRONMENT: TEACHERS API WITH MONGODB BY USING MONGODB COMPASS.

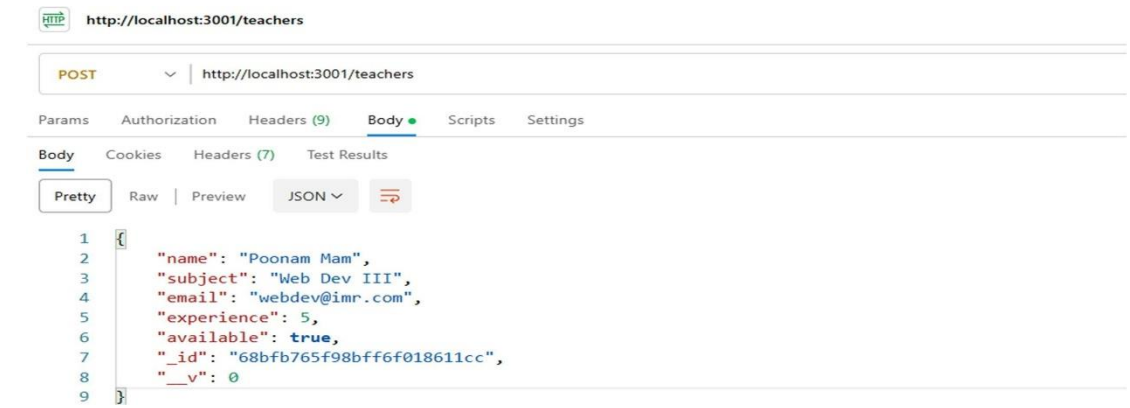
Server.js:

```
const express =
require('express');  const
mongoose =
require('mongoose');
const app = express();
app.use(express.json()); // middleware to parse JSON

// Connect to MongoDB
mongoose.connect("mongodb://127.0.0.1:27017/
MongoDB", { useNewUrlParser: true,
useUnifiedTopology: true,
})
.then(() => console.log("Connected to MongoDB"))
.catch(err => console.error(" MongoDB connection error:", err));

// Create Teacher Schema
const teacherSchema = new
mongoose.Schema({ name: String,
subject:
String,
email:
String,
experien
ce:
Number,
available
:
Boolean
});

// Create Teacher Model
const Teacher = mongoose.model('Teacher', teacherSchema);
// Get all teachers
app.get('/teachers', async (req,
res) => { const teachers =
await Teacher.find();
res.json(teachers);
});

// Add new teacher
app.post('/teachers', async
(req, res) => { const teacher =
new Teacher(req.body); await
teacher.save();
```

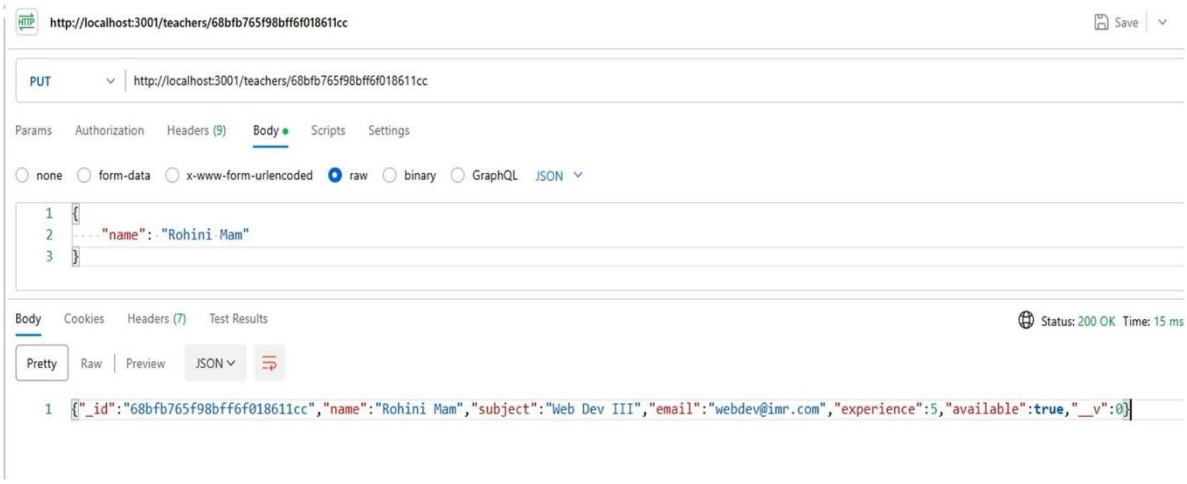
```
        res.status(201).json(teacher);
});

        // Get teacher by ID
        app.get('/teachers/:id', async (req, res) => {
        const teacher = await Teacher.findById(req.params.id);
        if (!teacher) return res.status(404).send('Teacher
    not found'); res.json(teacher);
});

        // Update teacher by ID
        app.put('/teachers/:id', async
        (req, res) => {
        const teacher = await Teacher.findByIdAndUpdate(req.params.id,
        req.body, { new: true }); if (!teacher) return res.status(404).send('Teacher
        not found');
        res.json(teacher);
});

        // Delete teacher by ID
        app.delete('/teachers/:id', async
        (req, res) => {
        const result = await
        Teacher.findByIdAndDelete(req.params.id); if
        (!result) return res.status(404).send('Teacher not
        found'); res.send('Teacher deleted');
});

        // Start
        the
        server
        const
        PORT =
        3001;
        app.listen(PORT, () => {
        console.log(`Server is running at http://localhost:${PORT}`);
});
```

Output:

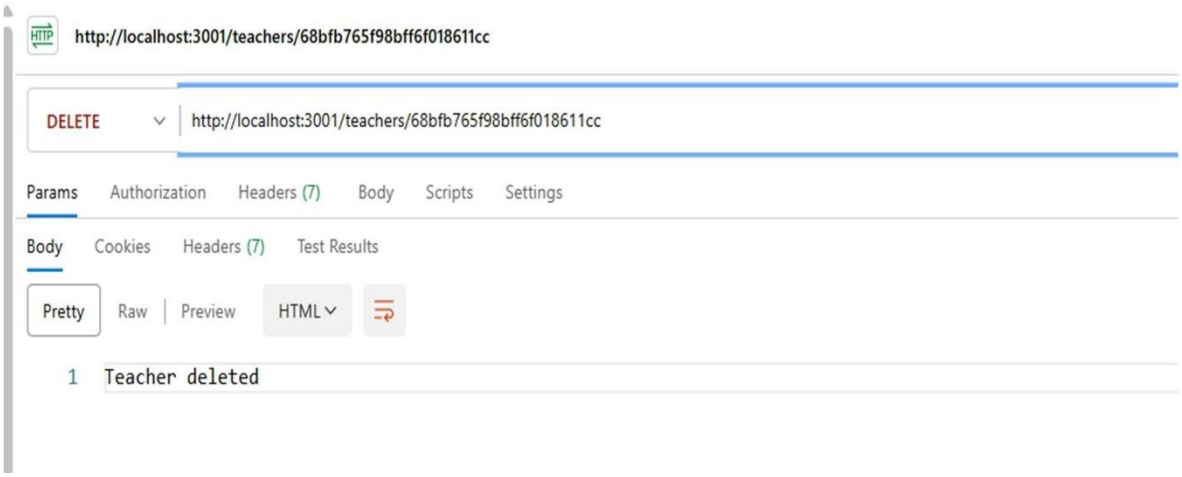
POST


http://localhost:3001/teachers
POST
http://localhost:3001/teachers
Params
Authorization
Headers (9)
Body
Scripts
Settings
Body
Cookies
Headers (7)
Test Results
Pretty
Raw
Preview
JSON
{
"name": "Poonam Mam",
"subject": "Web Dev III",
"email": "webdev@imr.com",
"experience": 5,
"available": true,
"_id": "68bfb765f98bff6f018611cc",
"__v": 0
}

PUT


http://localhost:3001/teachers/68bfb765f98bff6f018611cc
Save
PUT
http://localhost:3001/teachers/68bfb765f98bff6f018611cc
Params
Authorization
Headers (9)
Body
Scripts
Settings
none
form-data
x-www-form-urlencoded
raw
binary
GraphQL
JSON
{
"name": "Rohini Mam"
}
Body
Cookies
Headers (7)
Test Results
Status: 200 OK
Time: 15 ms
Pretty
Raw
Preview
JSON
{"_id":"68bfb765f98bff6f018611cc","name":"Rohini Mam","subject":"Web Dev III","email":"webdev@imr.com","experience":5,"available":true,"__v":0}

DELETE


http://localhost:3001/teachers/68bfb765f98bff6f018611cc
DELETE
http://localhost:3001/teachers/68bfb765f98bff6f018611cc
Params
Authorization
Headers (7)
Body
Scripts
Settings
Body
Cookies
Headers (7)
Test Results
Pretty
Raw
Preview
HTML
Teacher deleted

Practical no.16: Setting up Mongo DB Environment: Teachers API with MongoDB by using MongoDB

Step 1: Backend Setup

open folder and write this commnds in cmd

```
mkdir inventory-mini-api
cd inventory-mini-api
npm init -y
npm install express mongoose cors
```

Create server.js

```
const express = require('express');
const mongoose = require('mongoose');
const cors = require('cors');
const app = express();
app.use(cors());
app.use(express.json());
mongoose.connect('mongodb://127.0.0.1:27017/inventoryDB', {
 useNewUrlParser: true,
 useUnifiedTopology: true
});
mongoose.connection.once("open", () => {
 console.log("✅ Connected to MongoDB");
});
mongoose.connection.on("error", (err) => {
console.error("❌ MongoDB connection error:", err);
});
```

```
const Item = mongoose.model('Item', new mongoose.Schema({
 name: String,
 quantity: Number
}));
app.get('/items', async (req, res) => {
 try {
 const items = await Item.find();
 res.json(items);
 } catch (err) {
 console.error("Error fetching items:", err);
 res.status(500).json({ error: "Failed to fetch items" });
 }
});
app.post('/items', async (req, res) => {
 try {
 const { name, quantity } = req.body;
 if (!name || !quantity) {
 return res.status(400).json({ error: "Name and Quantity required" });
 }
 const item = new Item({ name, quantity });
 await item.save();
 res.json(item);
 } catch (err) {
 console.error("Error saving item:", err);
 res.status(500).json({ error: "Failed to save item" });
 }
});
app.delete('/items/:id', async (req, res) => {
```

```
try {
await Item.findByIdAndDelete(req.params.id);
res.json({ message: "Item deleted" });
} catch (err) {
console.error("Error deleting item:", err);
res.status(500).json({ error: "Failed to delete item" });
}
});
app.listen(5000, () => console.log('🚀 Backend running on http://localhost:5000'));
```

☎ Frontend: React

Step 2: Frontend Setup

Open new terminal in VS Code and run this commands

Create React App

npx create-react-app inventory-mini-client

cd inventory-mini-client

npm install axios

/App.js will be created :

```
// src/App.js
import React, { useEffect, useState } from 'react';
import axios from 'axios';
const API = "http://localhost:5000/items";
function App() {
const [items, setItems] = useState([]);
const [name, setName] = useState('');
const [quantity, setQuantity] = useState(1);
const loadItems = async () => setItems((await axios.get(API)).data);
const addItem = async () => {
await axios.post(API, { name, quantity });
```

```
 setName('');
 setQuantity(1);
 loadItems();
 };
 const deleteItem = async (id) => {
 await axios.delete(`${API}/${id}`);
 loadItems();
 };
 useEffect(() => { loadItems(); }, []);
 return (
 <div style={{ padding: 20 }}>
 <h2>🛍️ Inventory</h2>
 <input value={name} onChange={e => setName(e.target.value)} placeholder="Item Name" />
 <input type="number" value={quantity} onChange={e => setQuantity(Number(e.target.value))}
/>
 <button onClick={addItem}>Add</button>
 <ul>
 {items.map(item => (
 <li key={item._id}>
 {item.name} - Qty: {item.quantity}
 <button onClick={() => deleteItem(item._id)}>❌</button>
 </li>
 ))}
 </ul>
 </div>
 );
}
export default App;
```

 Run the App

Backend:

cd inventory-mini-api

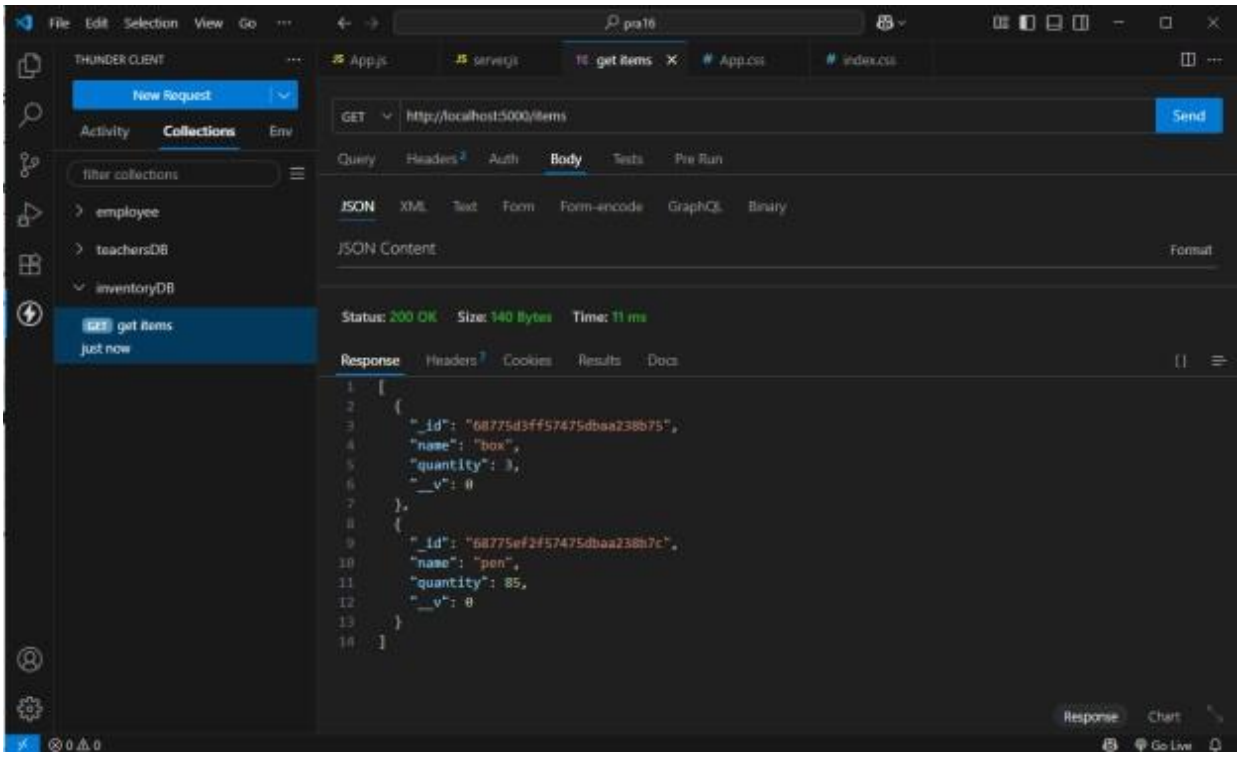
node server.js

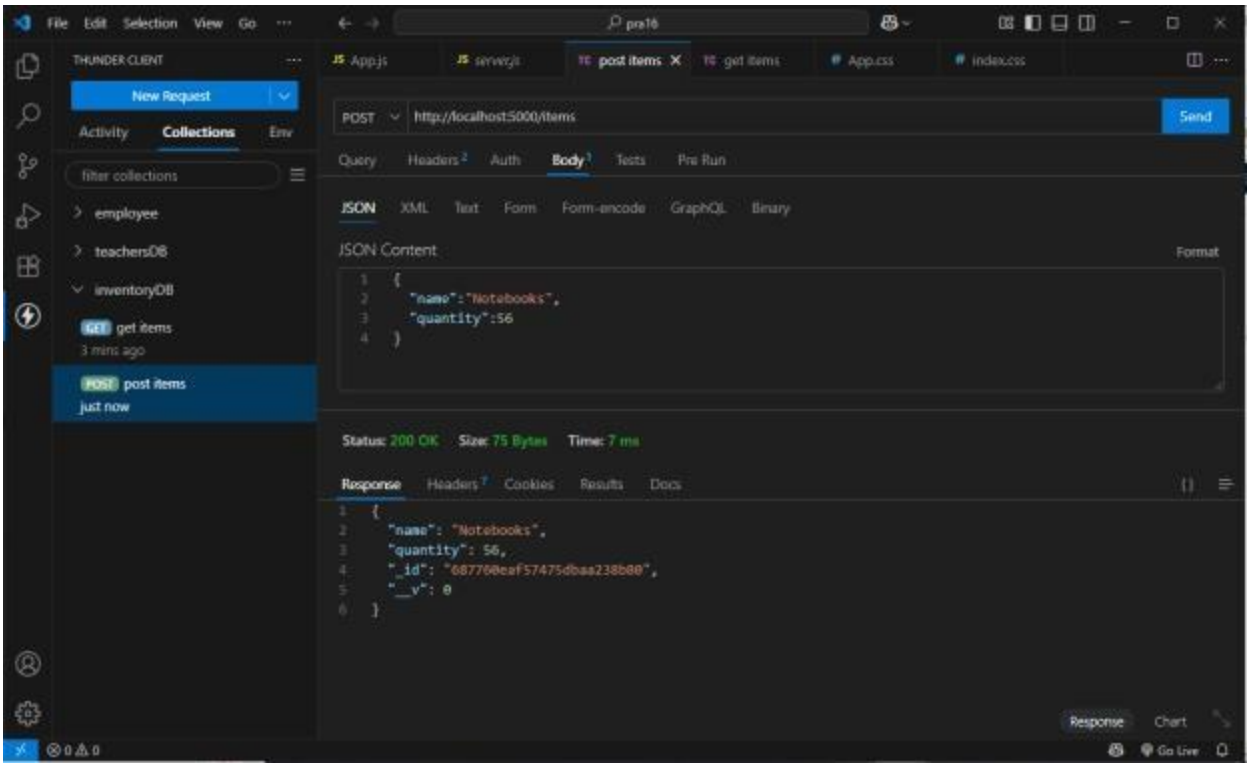
Frontend:

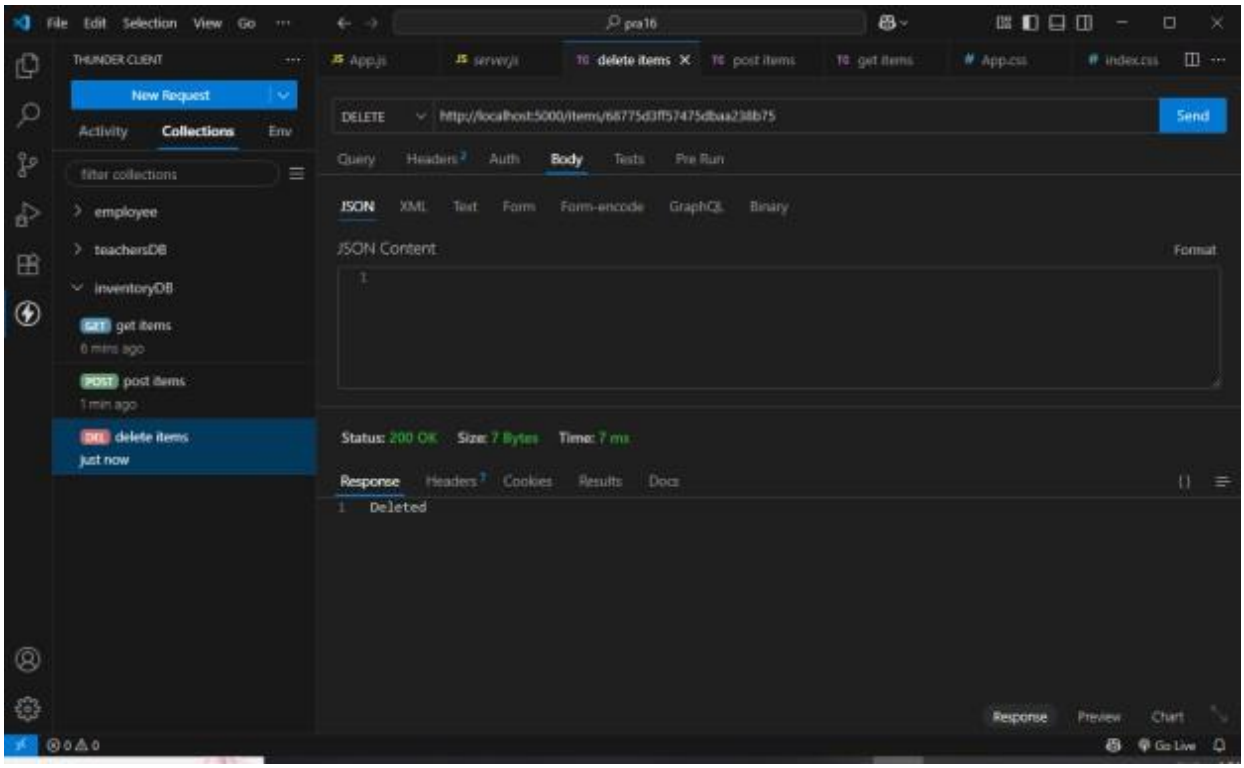
cd inventory-mini-client

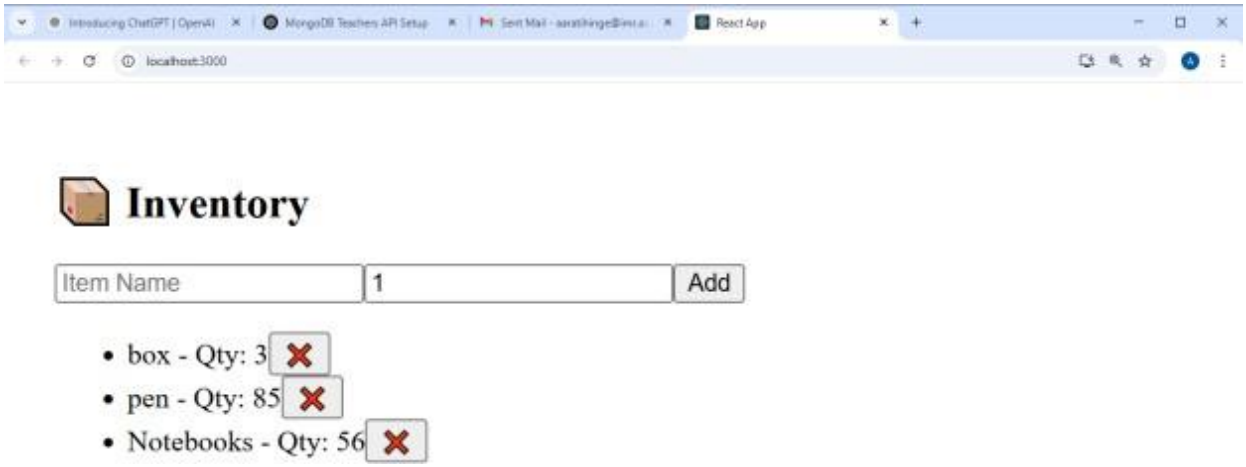
npm start

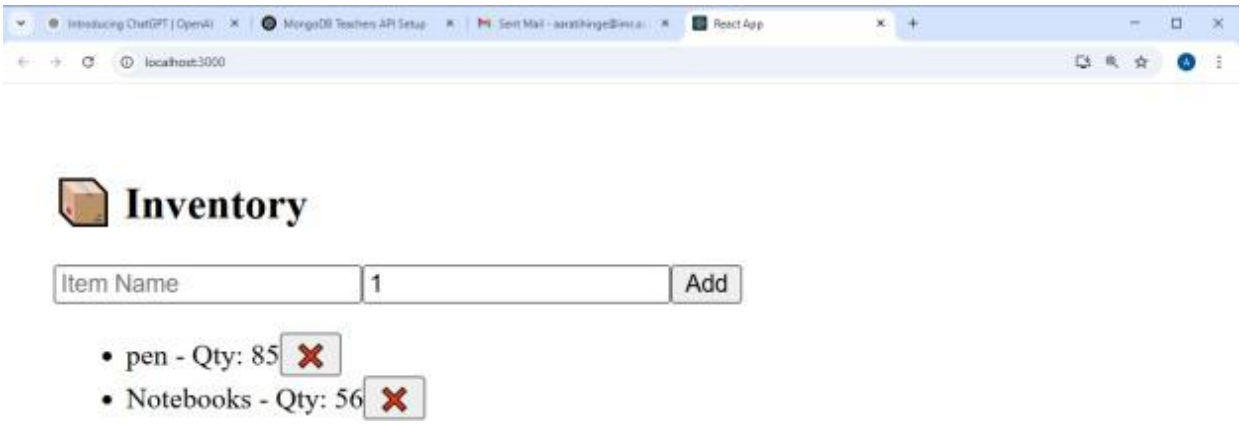
Output:

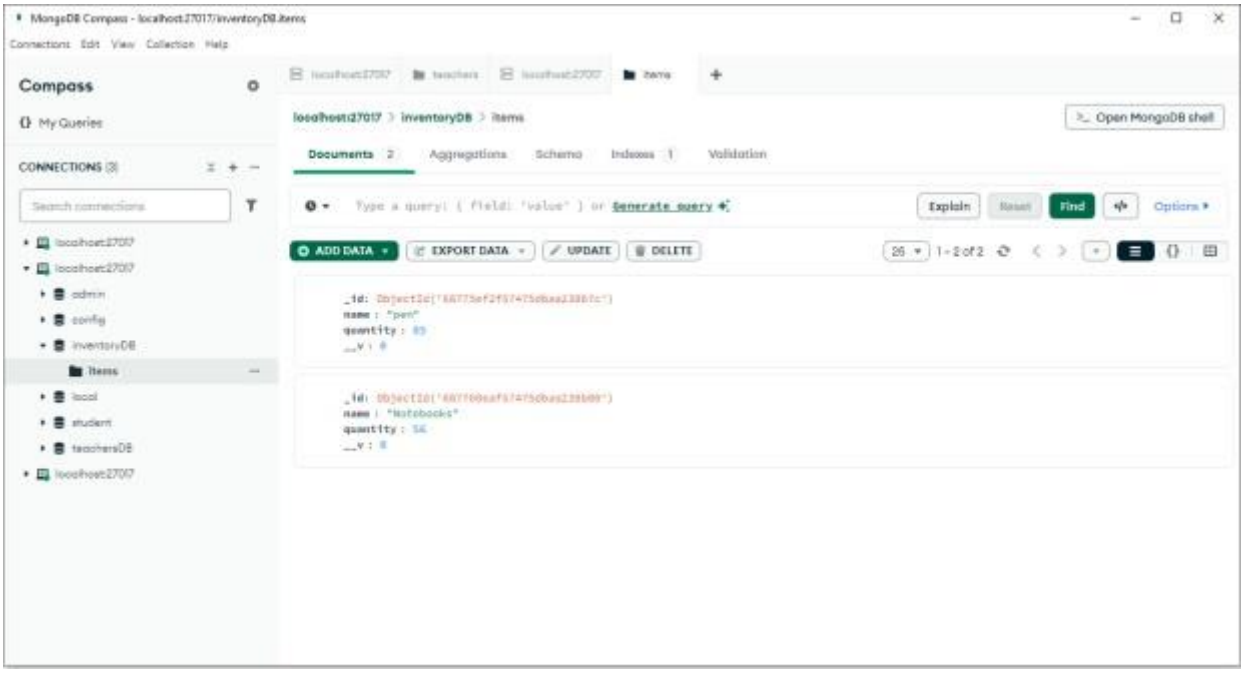



File Edit Selection View Go
pra16
THUNDER CLIENT
New Request
Activity Collections Env
filter collections
employee
teachersDB
inventoryDB
get items
3 mins ago
post items
just now
App.js
server.js
post items
get items
App.css
index.css
POST
http://localhost:5000/items
Send
Query Headers 2 Auth Body 1 Tests Pre Run
JSON XML Text Form Form-encode GraphQL Binary
JSON Content
Format
{
"name":"Notebooks",
"quantity":56
}
Status: 200 OK Size: 75 Bytes Time: 7 ms
Response Headers 7 Cookies Results Docs
{
"name": "Notebooks",
"quantity": 56,
"_id": "68776eaf57475dbaa238b80",
"__v": 0
}
Response Chart
Go Live


File Edit Selection View Go
pra16
THUNDER CLIENT
New Request
Activity Collections Env
filter collections
employee
teachersDB
inventoryDB
get items
6 mins ago
post items
1 min ago
delete items
just now
App.js
server.js
delete items
post items
get items
App.css
index.css
DELETE
http://localhost:5000/items/68775d3ff57475dbaa238b75
Send
Query Headers 2 Auth Body Tests Pre Run
JSON XML Text Form Form-encode GraphQL Binary
JSON Content
Format
Status: 200 OK Size: 7 Bytes Time: 7 ms
Response Headers 7 Cookies Results Docs
Deleted
Response Preview Chart
Go Live


Introducing ChatGPT | OpenAI
MongoDB Teachers API Setup
Sent Mail - sarathinge@mru.a
React App
localhost:3000
Inventory
Item Name
1
Add
box - Qty: 3
pen - Qty: 85
Notebooks - Qty: 56


Introducing ChatGPT | OpenAI
MongoDB Teachers API Setup
Sent Mail - sarathinge@mru.a
React App
localhost:3000
Inventory
Item Name
1
Add
pen - Qty: 85
Notebooks - Qty: 56


MongoDB Compass - localhost:27017/inventoryDB.items
Connections Edit View Collection Help
Compass
My Queries
CONNECTIONS (3)
Search connections
localhost:27017
admin
config
inventoryDB
items
local
student
teachersDB
localhost:27017
teachers
items
localhost:27017 > inventoryDB > items
Open MongoDB shell
Documents 2
Aggregations
Schema
Indexes 1
Validation
Type a query: { field: 'value' } or Generate query
Explain
Reset
Find
Options
ADD DATA
EXPORT DATA
UPDATE
DELETE
1 - 2 of 2
_id: ObjectId('687f5ef2f5f475dbaa2386fc')
name : "pen"
quantity : 83
__v : 0
_id: ObjectId('687f60eaf5f475dbaa2386fd')
name : "Notebooks"
quantity : 56
__v : 0