Name: Patel Shivam S.
Enroll no: 21162101019
Sem: 5 Batch: 51 Branch: CBA

Sub: Microservices

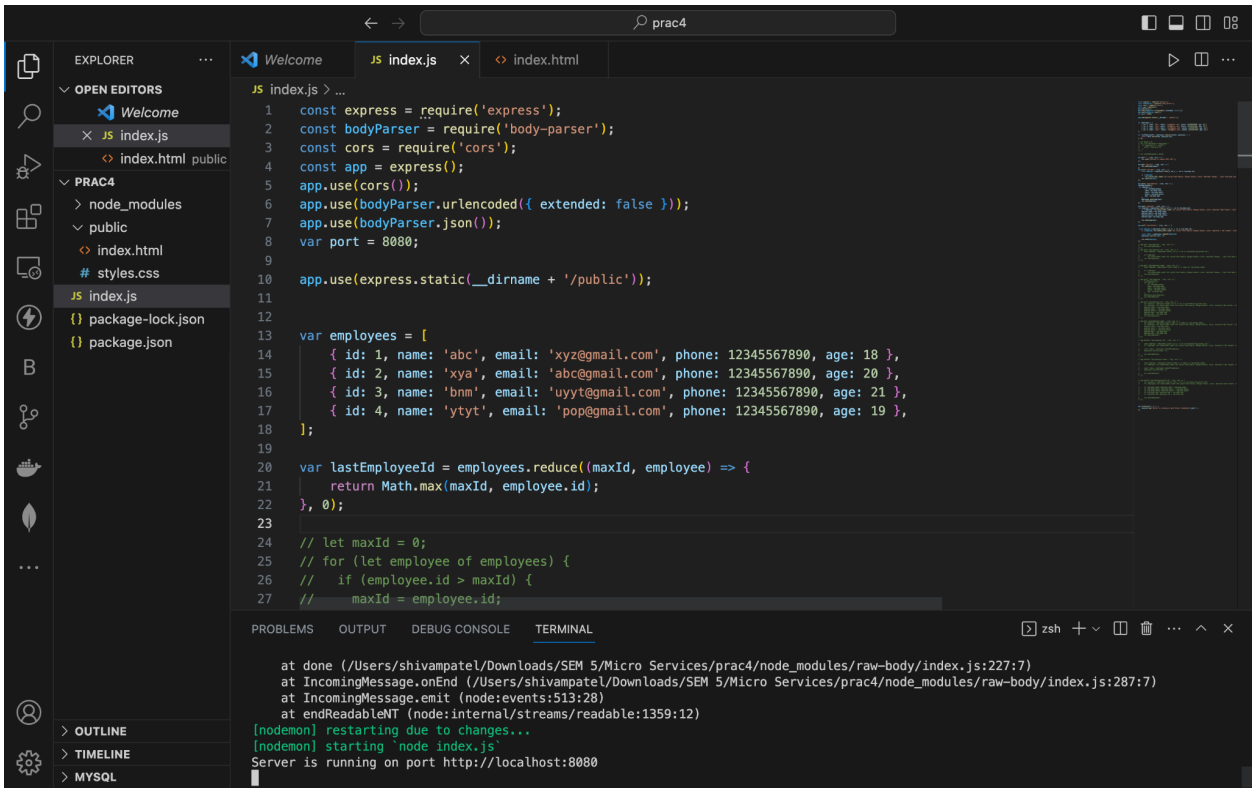
Practical 4

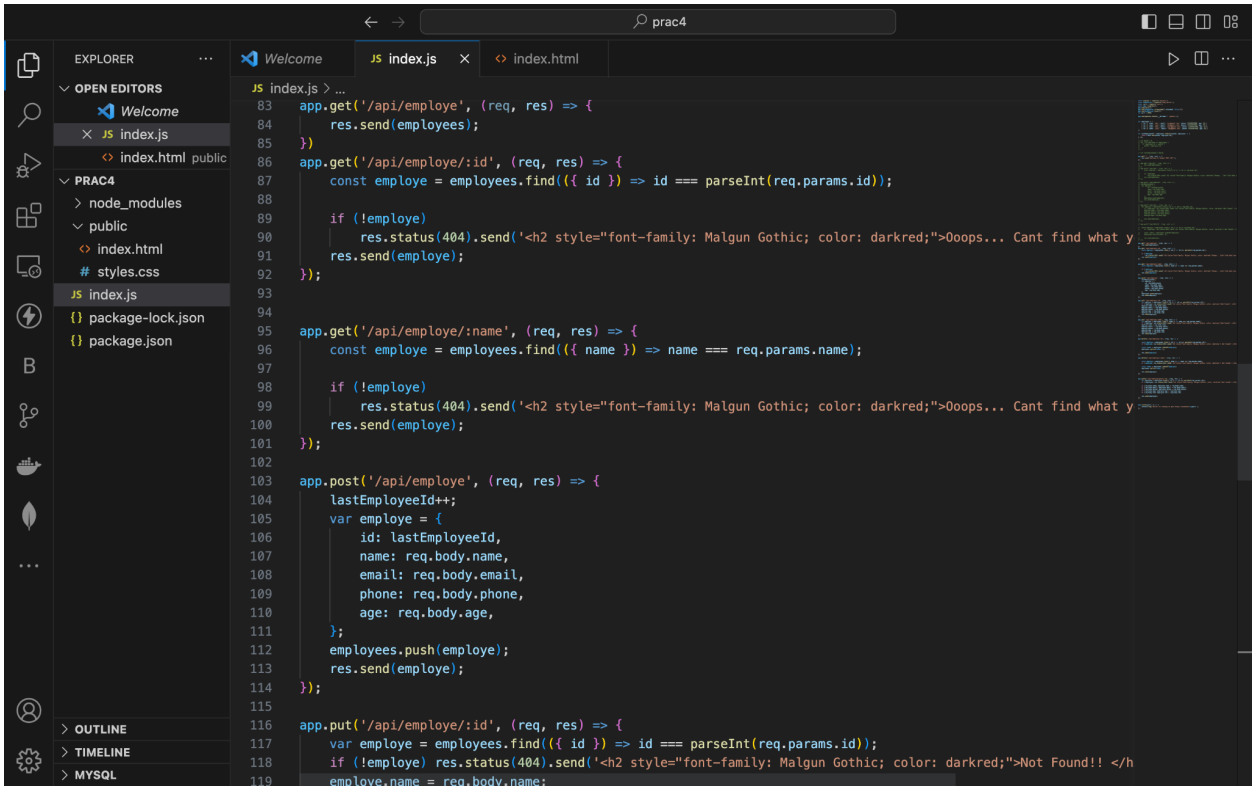
AIM: **Create REST API using NodeJS & Apply REST method to perform CRUD operations on resources at server regarding universities or Industries scenario.**

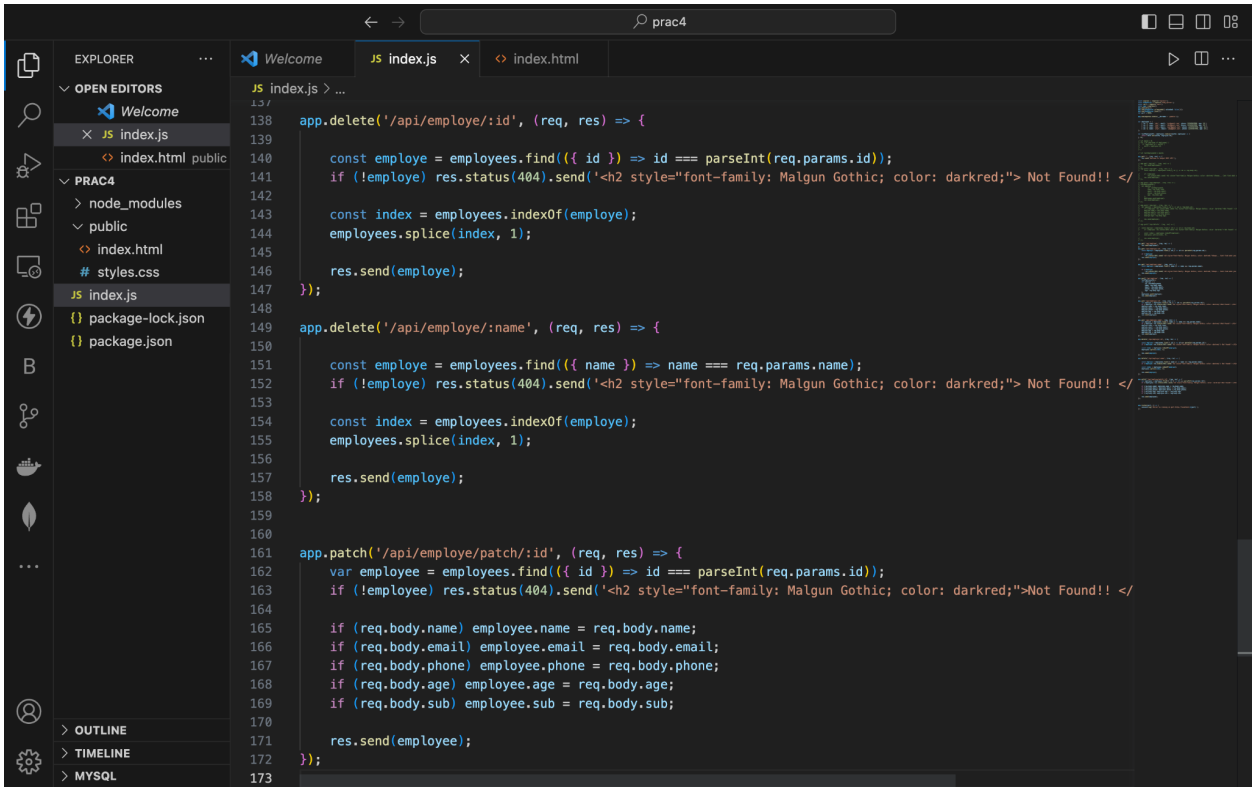
1. Create a Rest API for universities or industry using NodeJS on any IDE
2. Perform CRUD operation on server using Postman.
3. Integrate it with HTML form, where it provides the option to POST the data of new employee, Get information of any employee based on ID, Get information of all employees, Update information of any employee based on their id and delete employee record based on their id

GITHUB LINK:
https://github.com/Shivam3783/microservice_practicals/tree/main/prac4

CODE: 1)

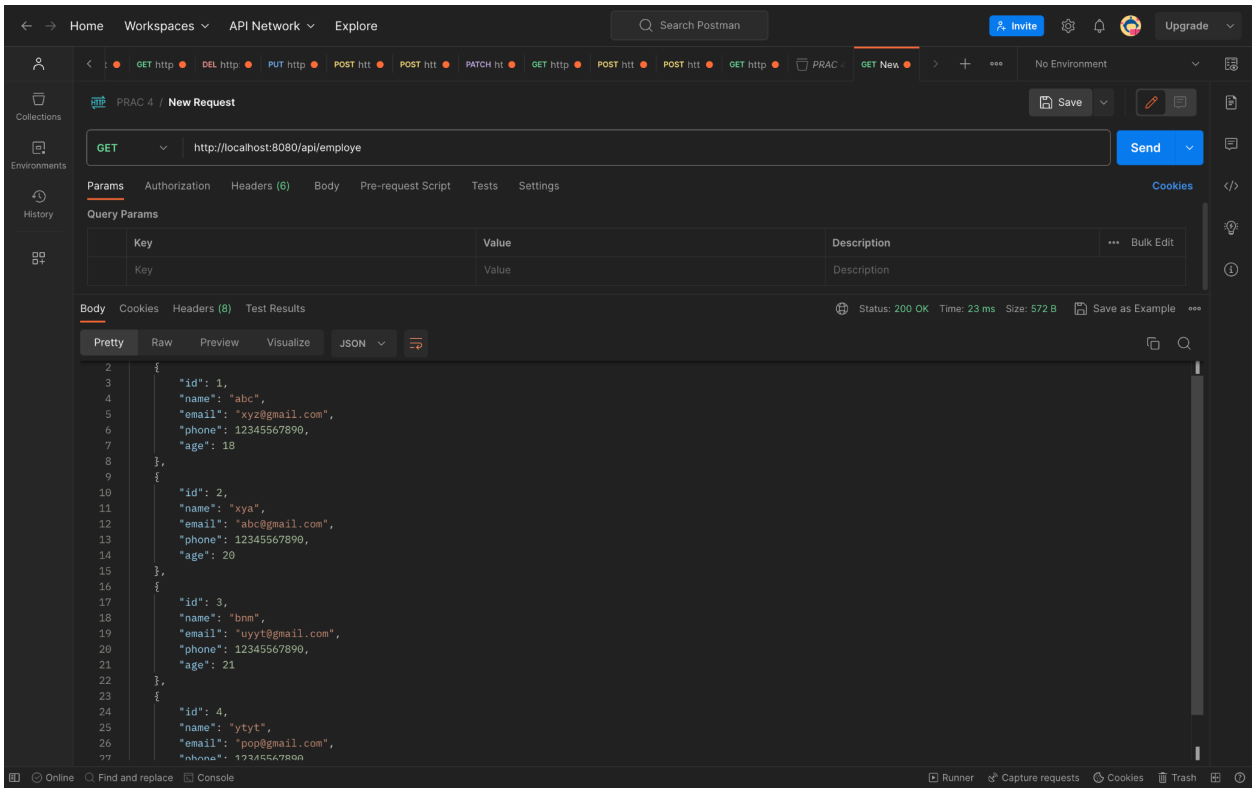

prac4
EXPLORER
OPEN EDITORS
Welcome
index.js
index.html public
PRAC4
node_modules
public
index.html
styles.css
index.js
package-lock.json
package.json
OUTLINE
TIMELINE
MYSQL
Welcome
index.js
index.html
index.js > ...
1 const express = require('express');
2 const bodyParser = require('body-parser');
3 const cors = require('cors');
4 const app = express();
5 app.use(cors());
6 app.use(bodyParser.urlencoded({ extended: false }));
7 app.use(bodyParser.json());
8 var port = 8080;
9
10 app.use(express.static(__dirname + '/public'));
11
12
13 var employees = [
14 { id: 1, name: 'abc', email: 'xyz@gmail.com', phone: 12345567890, age: 18 },
15 { id: 2, name: 'xya', email: 'abc@gmail.com', phone: 12345567890, age: 20 },
16 { id: 3, name: 'bnm', email: 'uyyt@gmail.com', phone: 12345567890, age: 21 },
17 { id: 4, name: 'ytyt', email: 'pop@gmail.com', phone: 12345567890, age: 19 },
18];
19
20 var lastEmployeeId = employees.reduce((maxId, employee) => {
21 return Math.max(maxId, employee.id);
22 }, 0);
23
24 // let maxId = 0;
25 // for (let employee of employees) {
26 // if (employee.id > maxId) {
27 // maxId = employee.id;
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
zsh
at done (/Users/shivampatel/Downloads/SEM 5/Micro Services/prac4/node_modules/raw-body/index.js:227:7)
at IncomingMessage.onEnd (/Users/shivampatel/Downloads/SEM 5/Micro Services/prac4/node_modules/raw-body/index.js:287:7)
at IncomingMessage.emit (node:events:513:28)
at endReadableNT (node:internal/streams/readable:1359:12)
[nodemon] restarting due to changes...
[nodemon] starting `node index.js`
Server is running on port http://localhost:8080



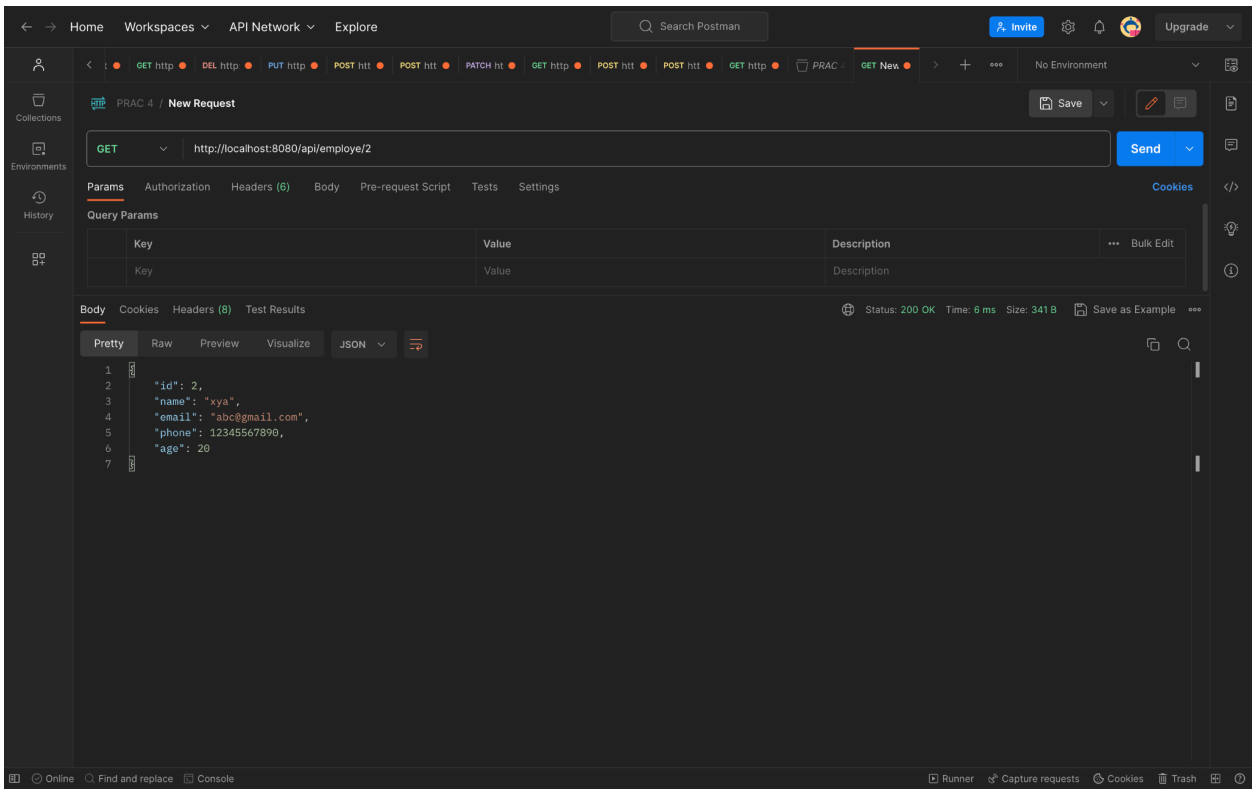


2) OUTPUT in POSTMAN:

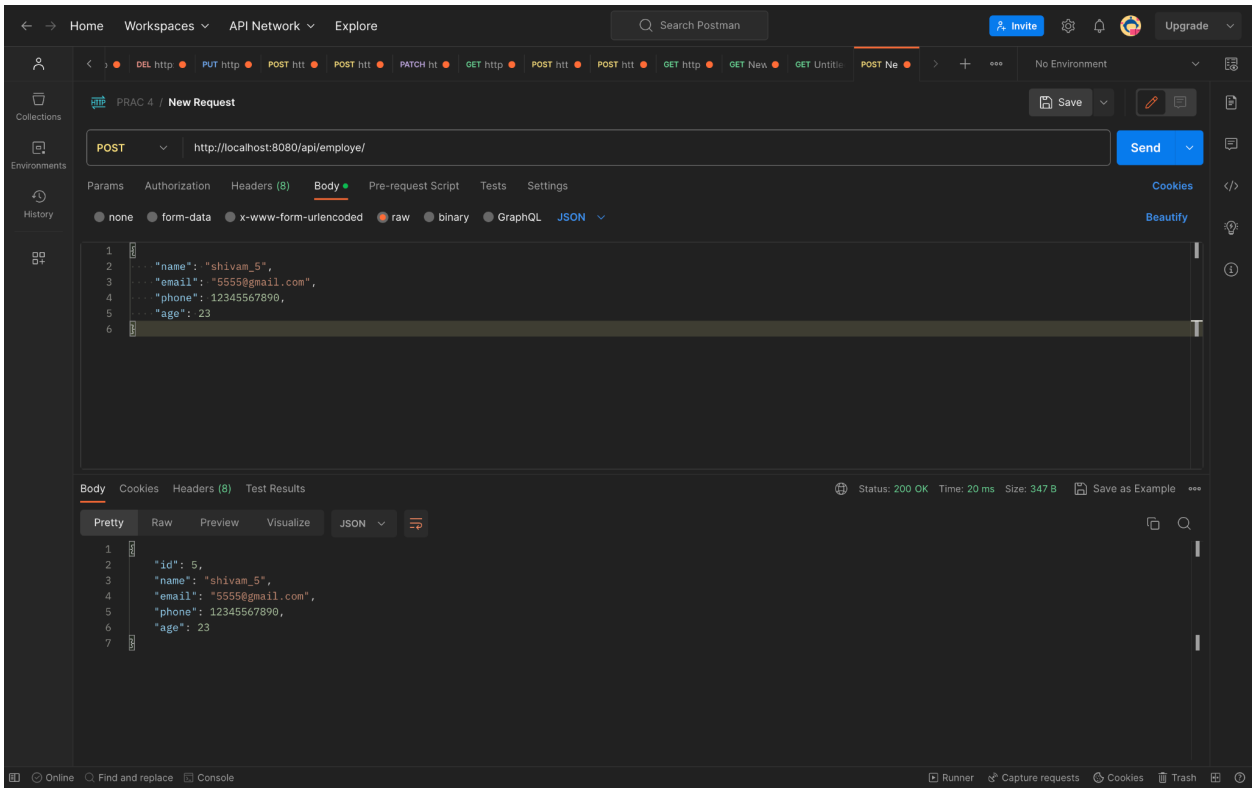
→ Get All data (GET REQUEST)

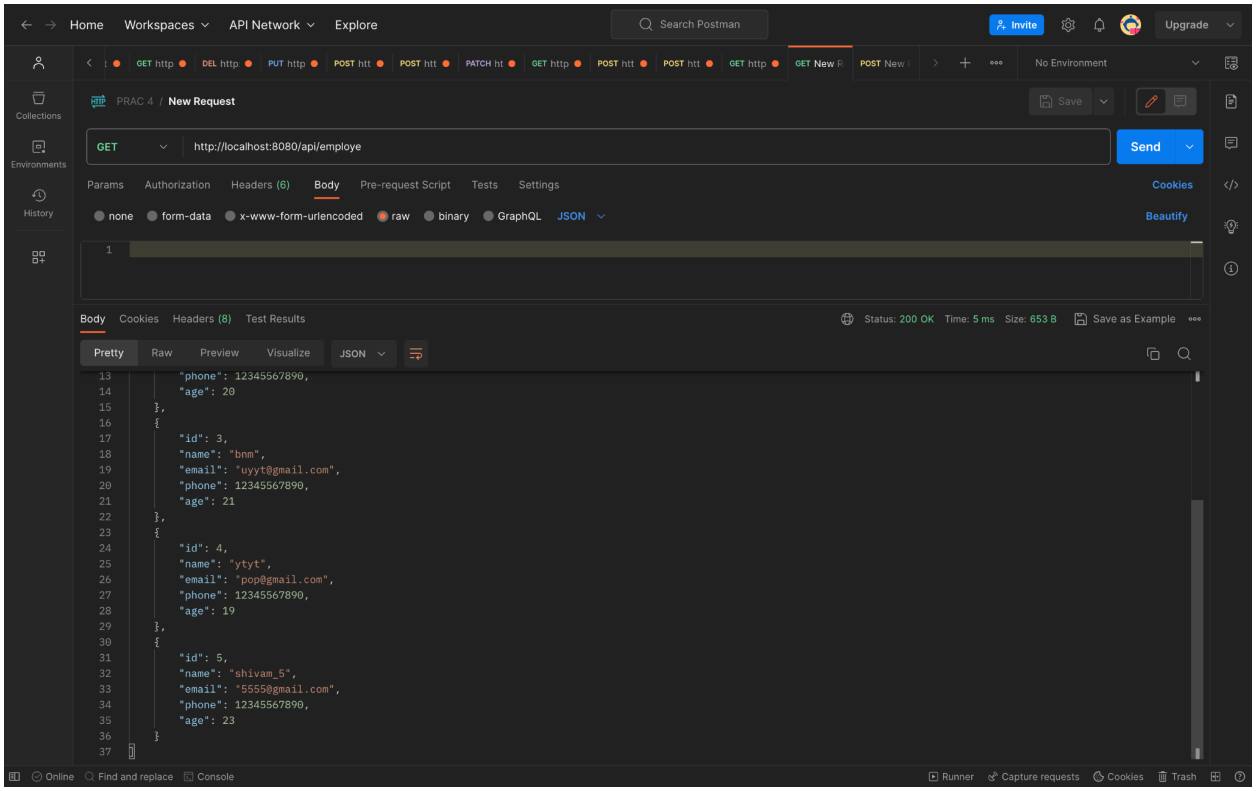


→ Get data by ID (GET REQUEST)

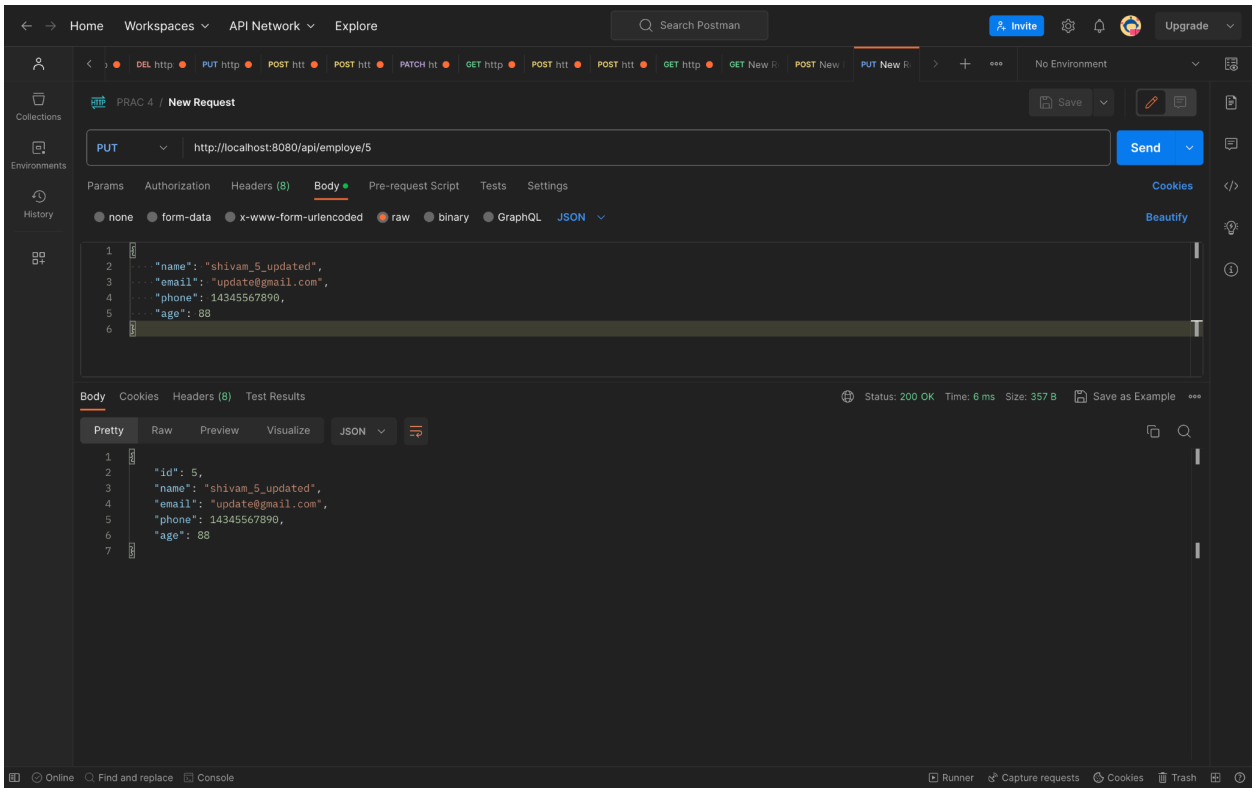


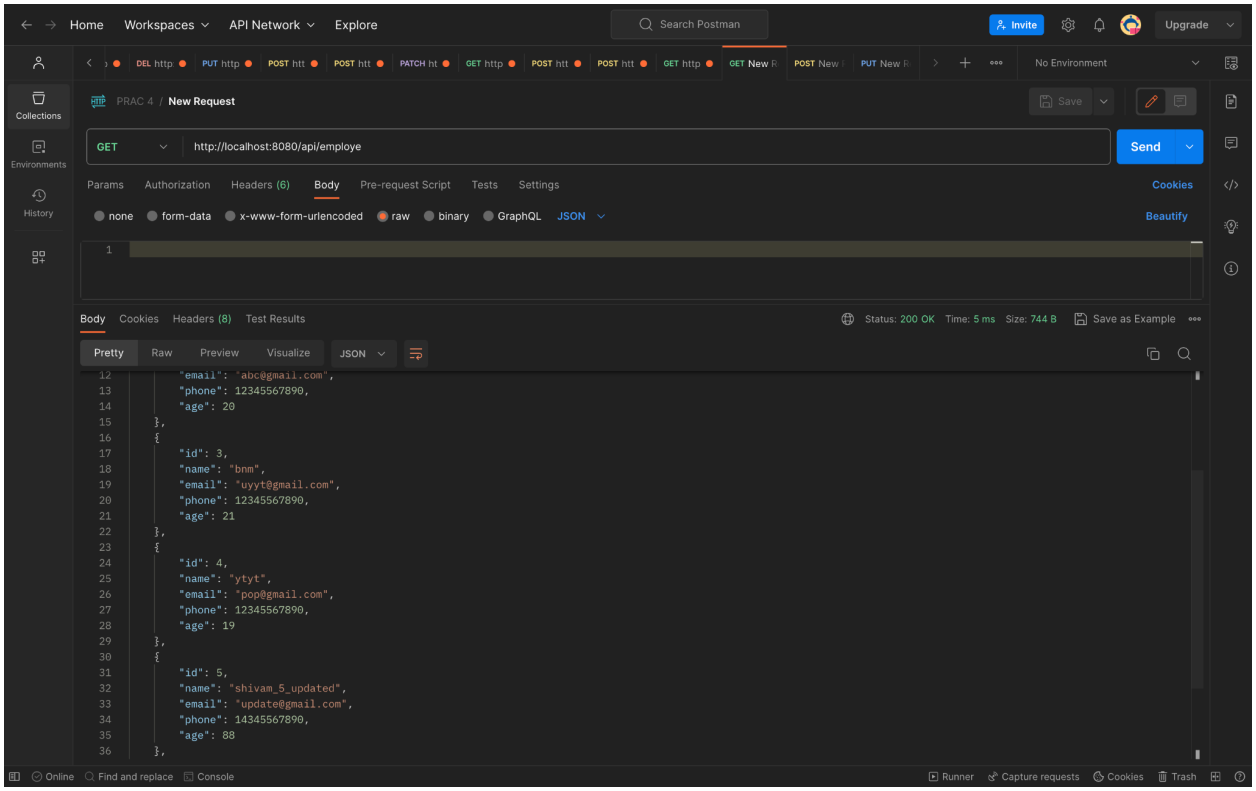
→ Add data (POST REQUEST)



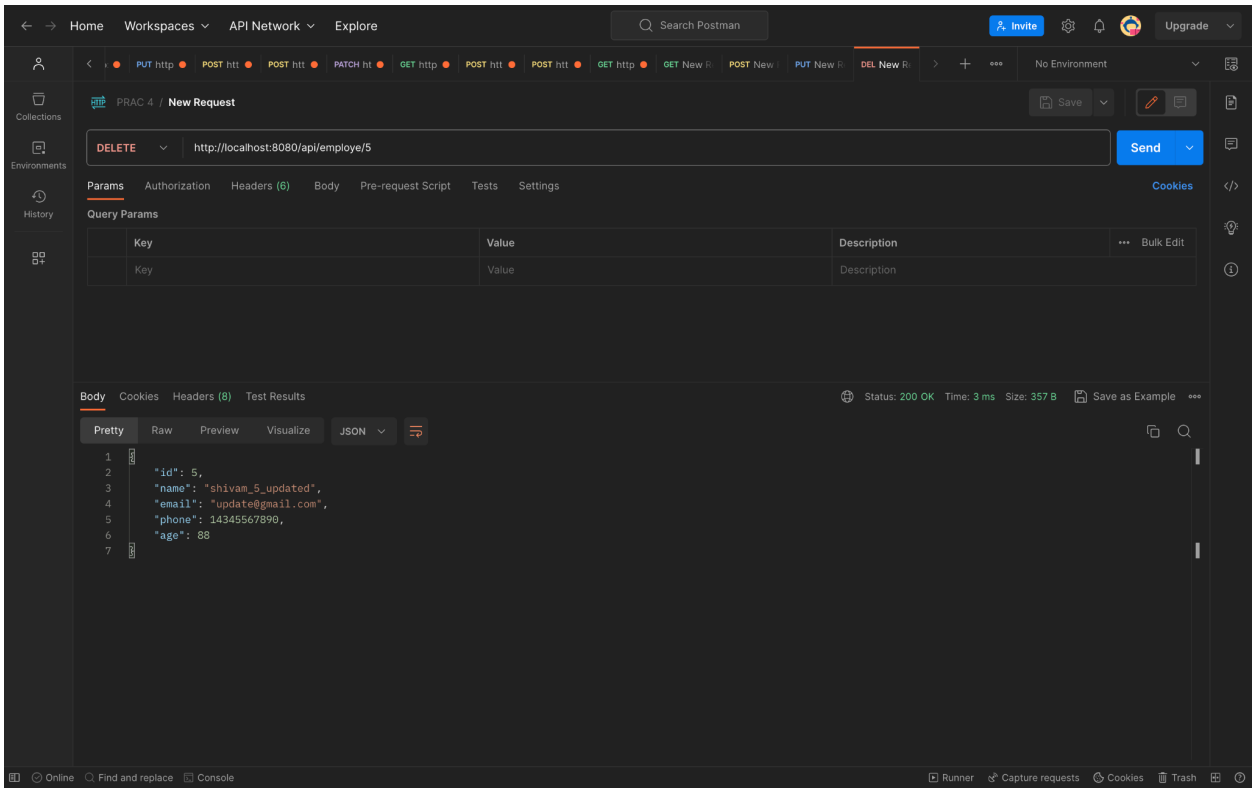


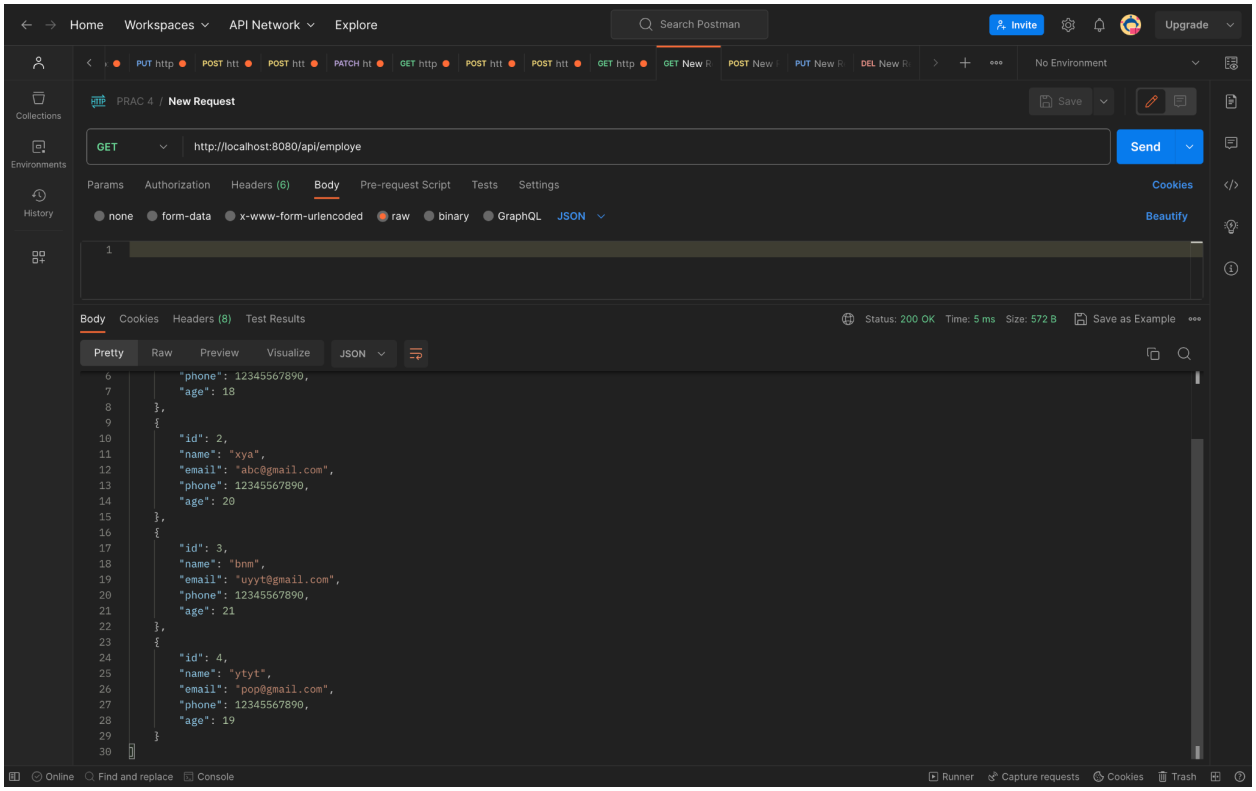
→ Update data (PUT REQUEST)



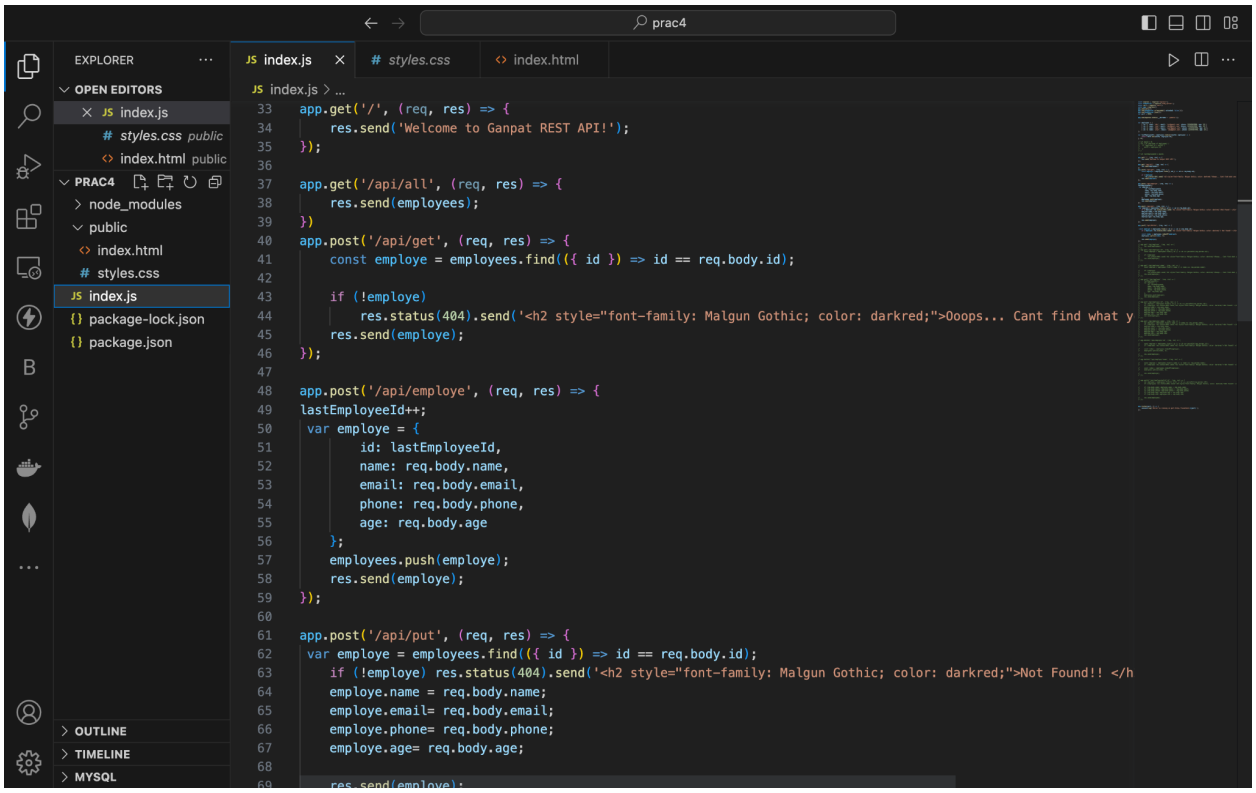


→ Delete data (DELETE REQUEST)

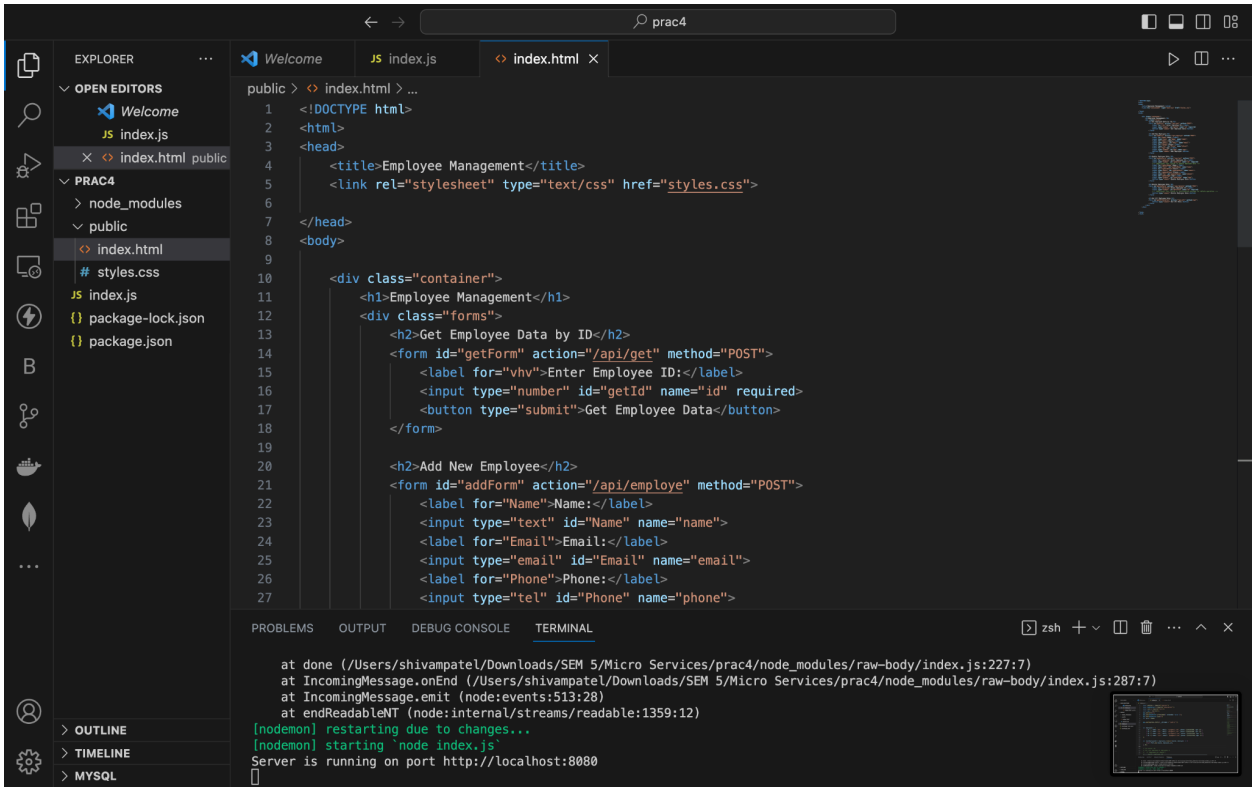




3) CODE: HTML Part



```
app.get('/', (req, res) => {
    res.send('Welcome to Ganpat REST API!');
});

app.get('/api/all', (req, res) => {
    res.send(employees);
})
app.post('/api/get', (req, res) => {
    const employe = employees.find(({ id }) => id == req.body.id);

    if (!employe)
        res.status(404).send('<h2 style="font-family: Malgun Gothic; color: darkred;">Ooops... Cant find what y
    res.send(employe);
});

app.post('/api/employe', (req, res) => {
lastEmployeeId++;
 var employe = {
        id: lastEmployeeId,
        name: req.body.name,
        email: req.body.email,
        phone: req.body.phone,
        age: req.body.age
    };
    employees.push(employe);
    res.send(employe);
});

app.post('/api/put', (req, res) => {
 var employe = employees.find(({ id }) => id == req.body.id);
    if (!employe) res.status(404).send('<h2 style="font-family: Malgun Gothic; color: darkred;">Not Found!! </h
    employe.name = req.body.name;
    employe.email= req.body.email;
    employe.phone= req.body.phone;
    employe.age= req.body.age;
```

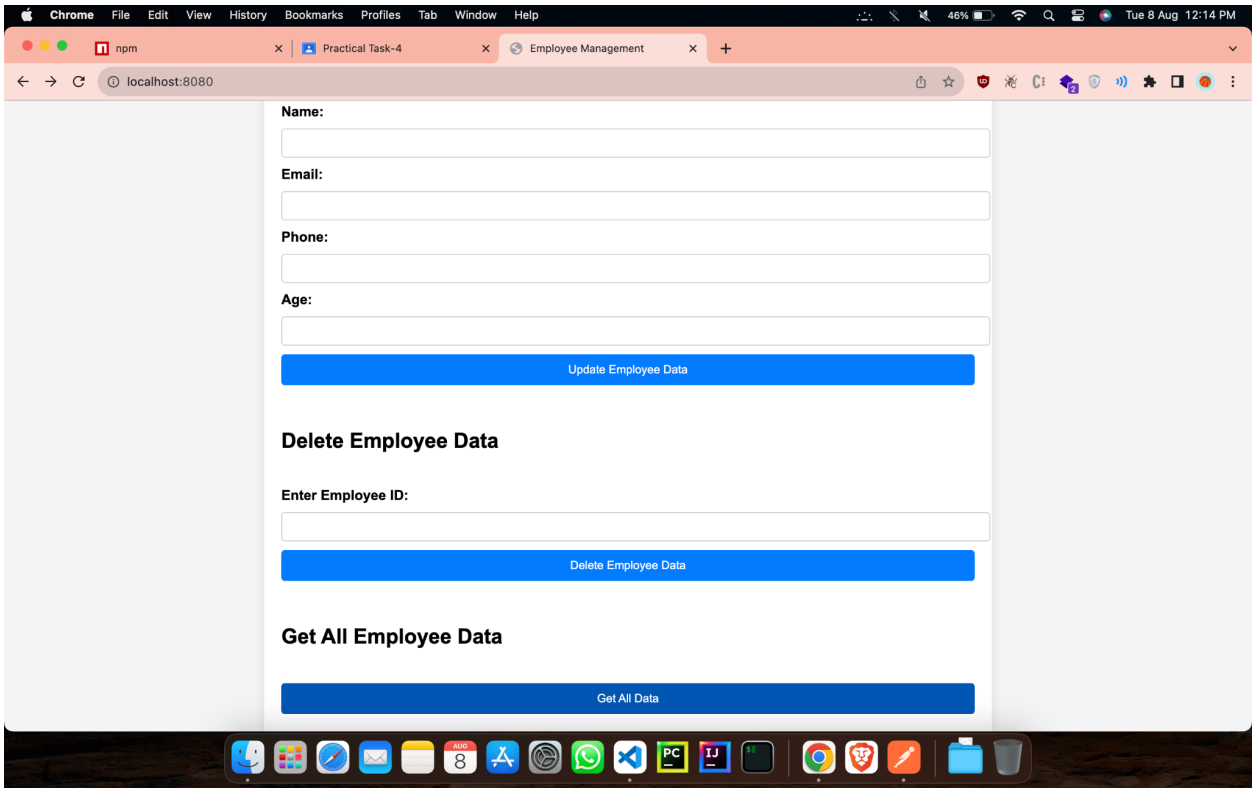


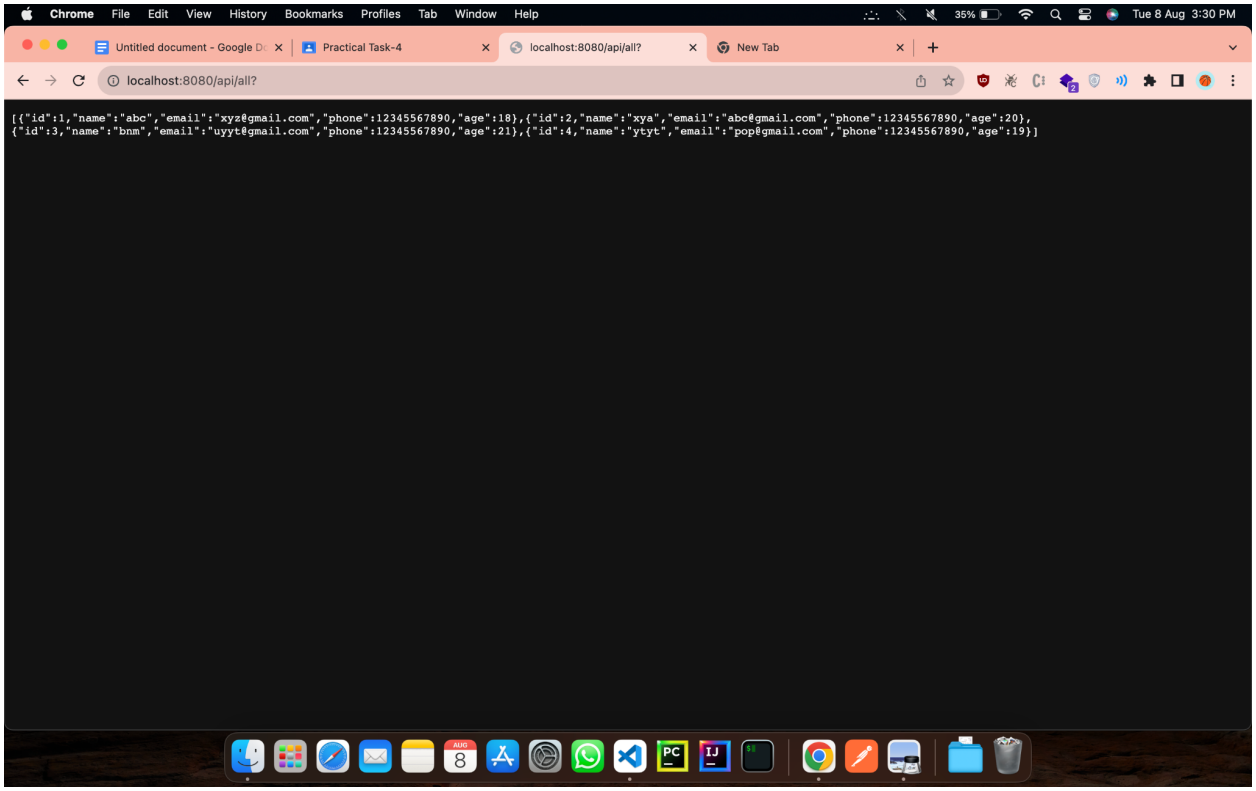
```
<!DOCTYPE html>
<html>
<head>
    <title>Employee Management</title>
    <link rel="stylesheet" type="text/css" href="styles.css">

</head>
<body>

    <div class="container">
        <h1>Employee Management</h1>
        <div class="forms">
            <h2>Get Employee Data by ID</h2>
            <form id="getForm" action="/api/get" method="POST">
                <label for="vhv">Enter Employee ID:</label>
                <input type="number" id="getId" name="id" required>
                <button type="submit">Get Employee Data</button>
            </form>

            <h2>Add New Employee</h2>
            <form id="addForm" action="/api/employe" method="POST">
                <label for="Name">Name:</label>
                <input type="text" id="Name" name="name">
                <label for="Email">Email:</label>
                <input type="email" id="Email" name="email">
                <label for="Phone">Phone:</label>
                <input type="tel" id="Phone" name="phone">
```

```
    at done (/Users/shivampatel/Downloads/SEM 5/Micro Services/prac4/node_modules/raw-body/index.js:227:7)
    at IncomingMessage.onEnd (/Users/shivampatel/Downloads/SEM 5/Micro Services/prac4/node_modules/raw-body/index.js:287:7)
    at IncomingMessage.emit (node:events:513:28)
    at endReadableNT (node:internal/streams/readable:1359:12)
[nodemon] restarting due to changes...
[nodemon] starting `node index.js`
Server is running on port http://localhost:8080
```

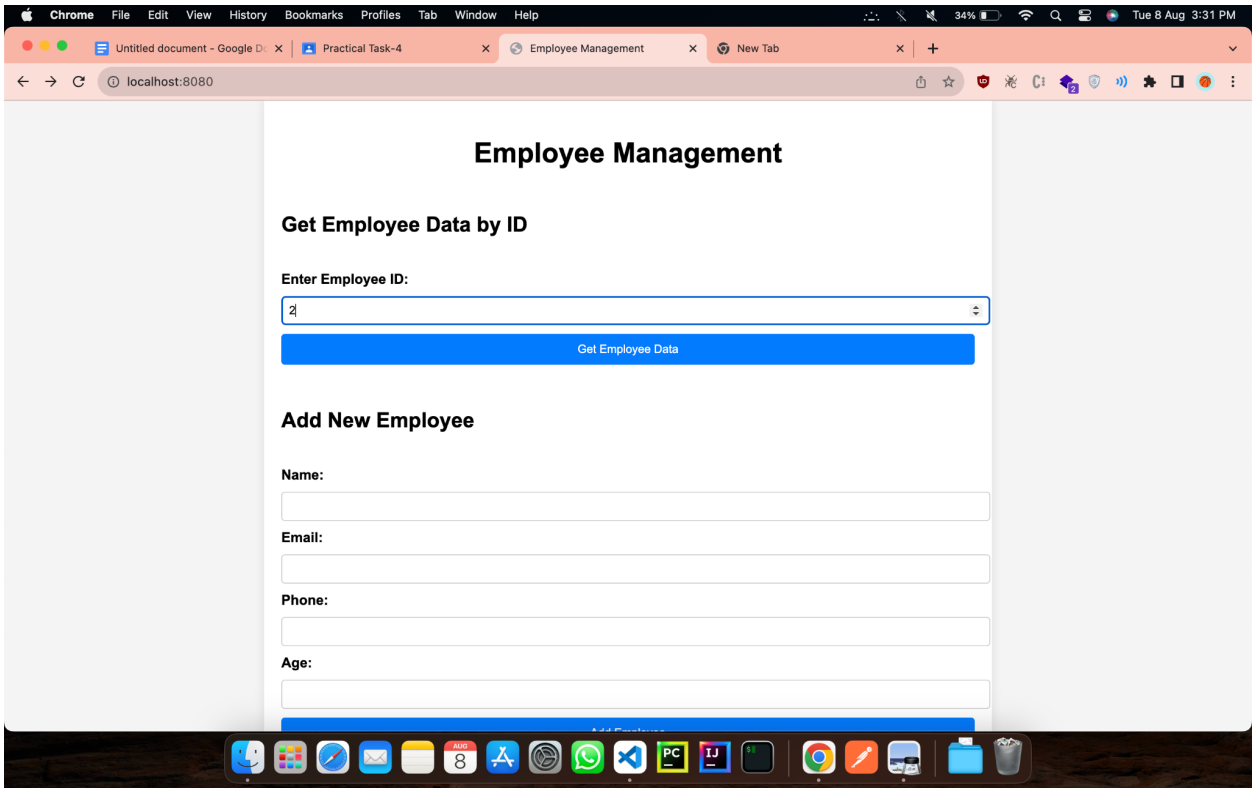
OUTPUT:

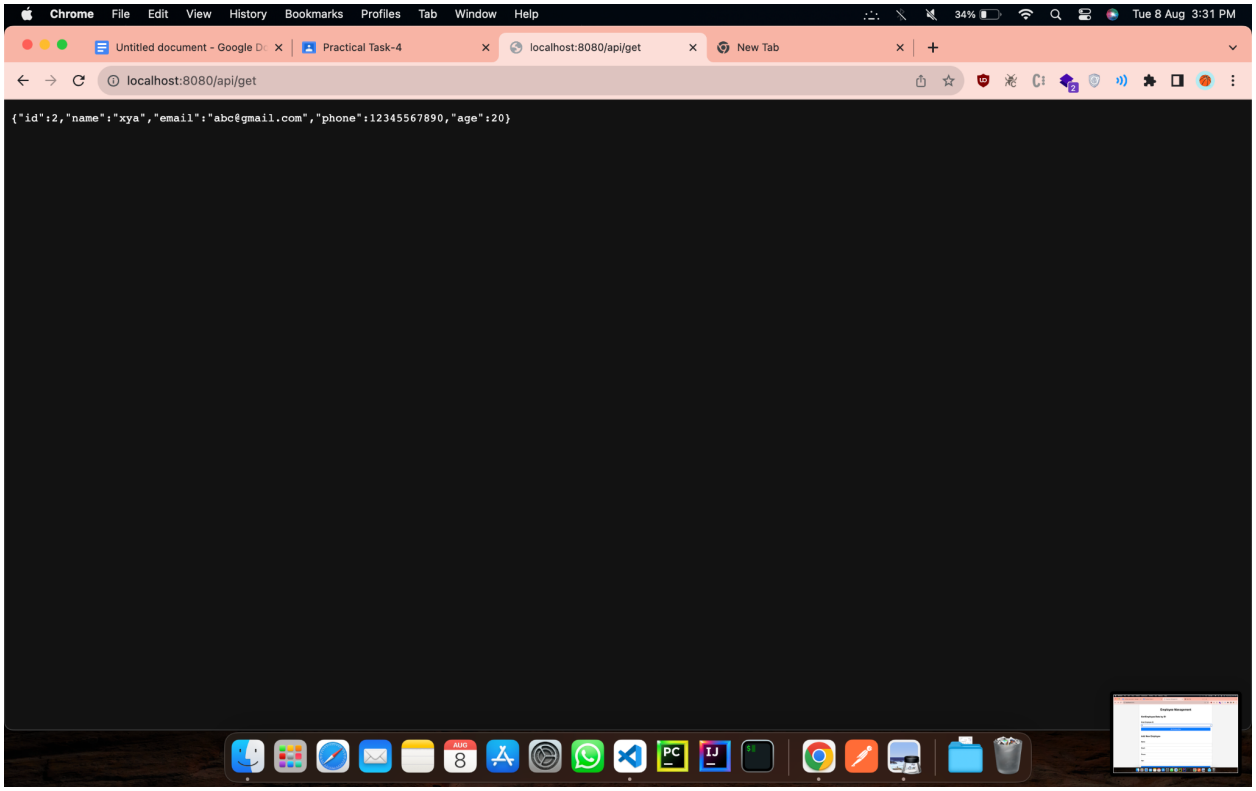
→ Get all data


Chrome File Edit View History Bookmarks Profiles Tab Window Help
Tue 8 Aug 12:14 PM
npm
Practical Task-4
Employee Management
localhost:8080
Name:
Email:
Phone:
Age:
Update Employee Data
Delete Employee Data
Enter Employee ID:
Delete Employee Data
Get All Employee Data
Get All Data

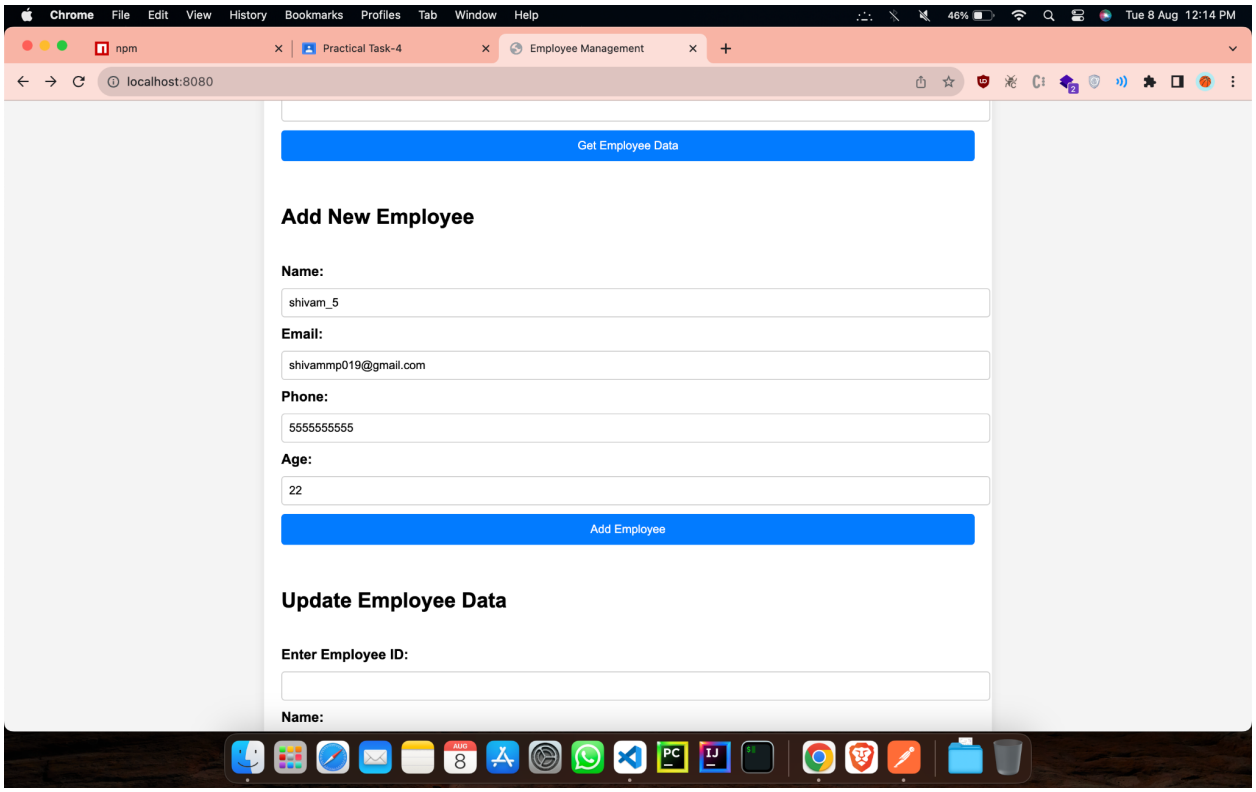

Chrome File Edit View History Bookmarks Profiles Tab Window Help
Tue 8 Aug 3:30 PM
Untitled document - Google D
Practical Task-4
localhost:8080/api/all?
New Tab
localhost:8080/api/all?
[{"id":1,"name":"abc","email":"xyz@gmail.com","phone":12345567890,"age":18},{"id":2,"name":"xya","email":"abc@gmail.com","phone":12345567890,"age":20},
{"id":3,"name":"bnm","email":"uyyt@gmail.com","phone":12345567890,"age":21},{"id":4,"name":"ytyt","email":"pop@gmail.com","phone":12345567890,"age":19}]

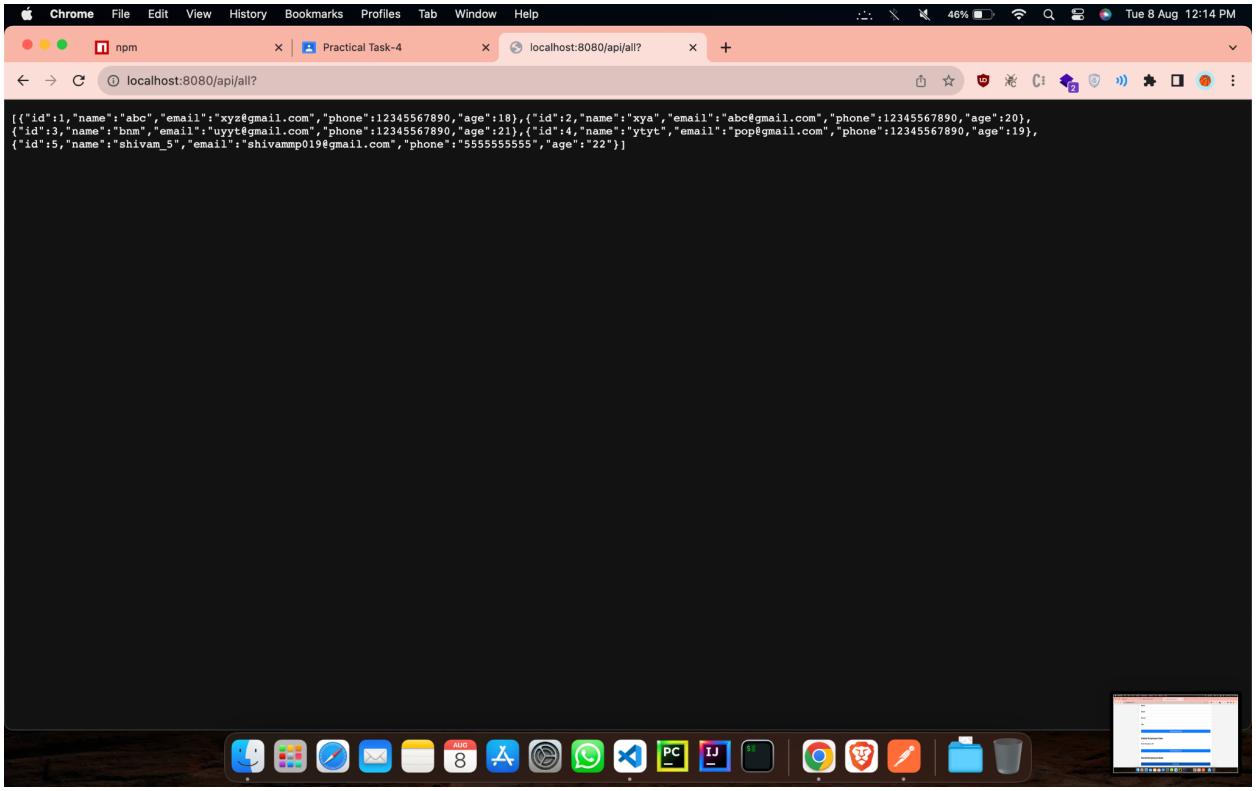
→ Get data by ID



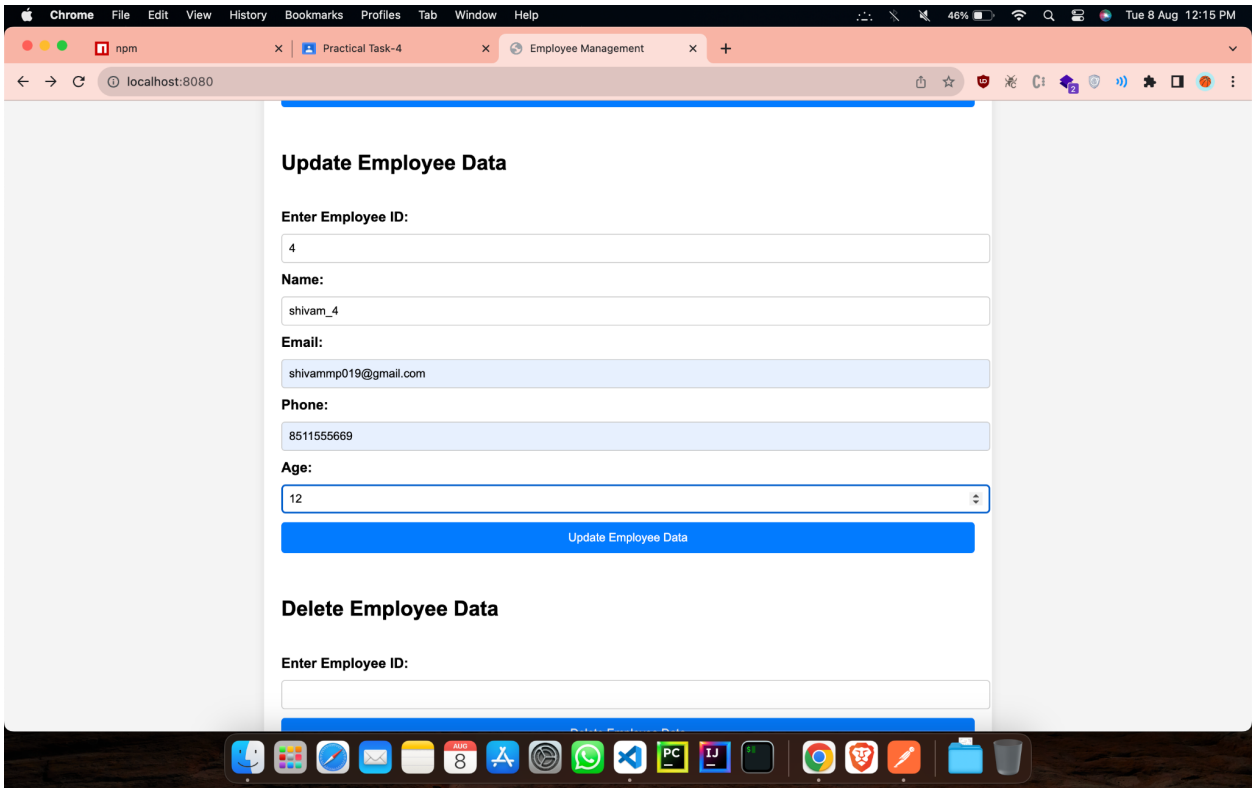


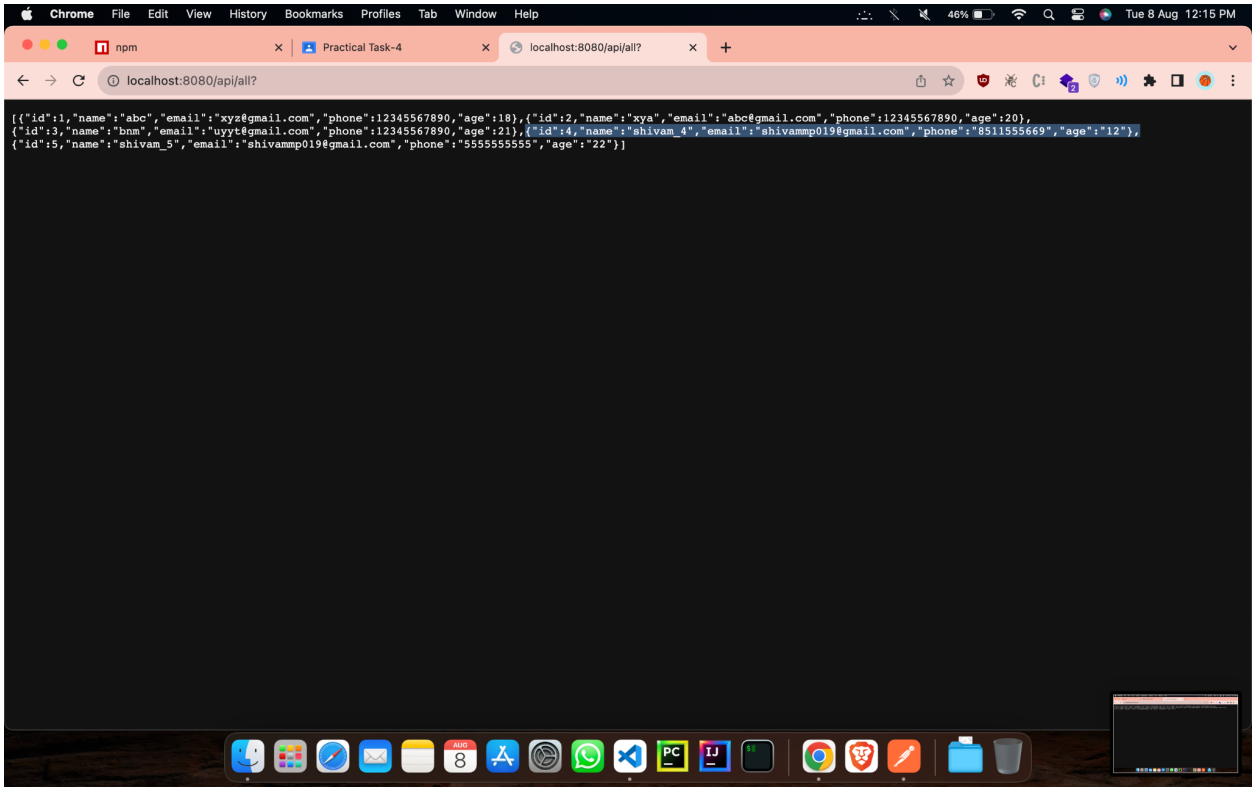
→ Add data


Chrome File Edit View History Bookmarks Profiles Tab Window Help
Tue 8 Aug 12:14 PM
npm
Practical Task-4
Employee Management
localhost:8080
Get Employee Data
Add New Employee
Name:
shivam_5
Email:
shivammp019@gmail.com
Phone:
5555555555
Age:
22
Add Employee
Update Employee Data
Enter Employee ID:
Name:

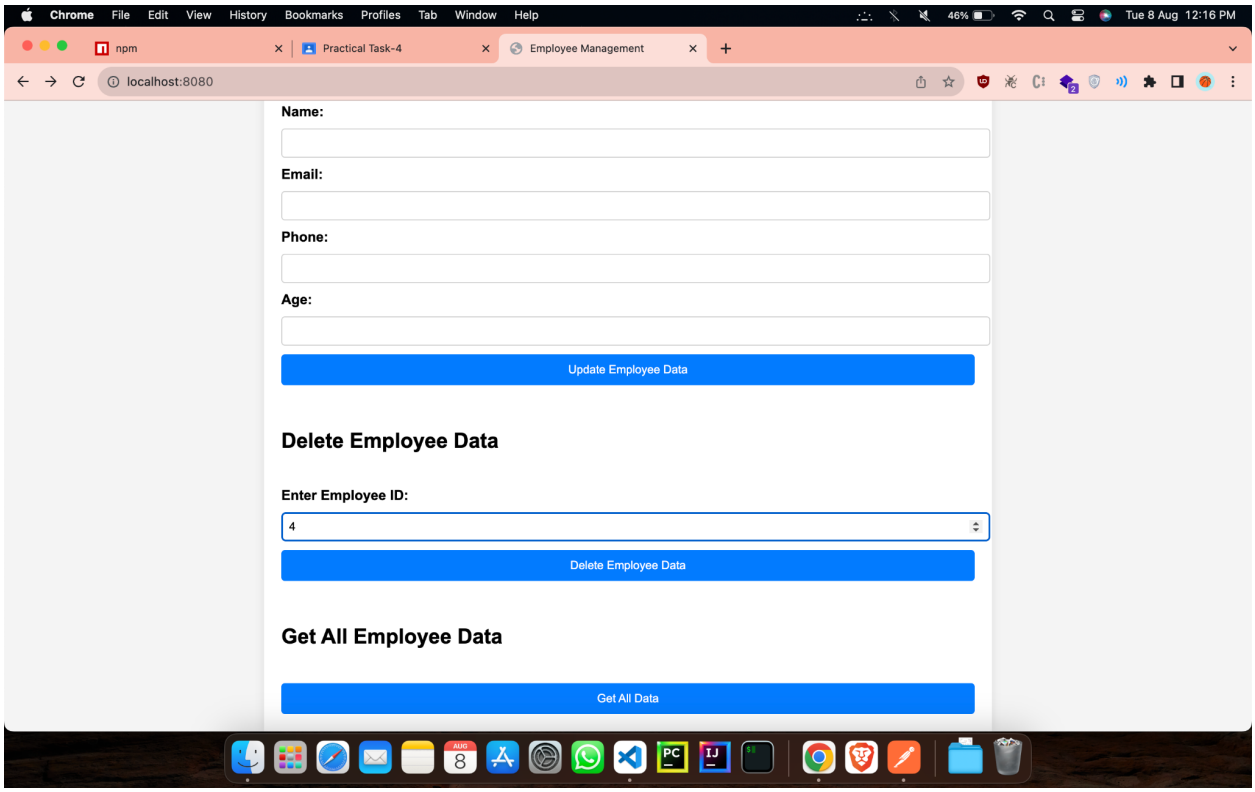

Chrome File Edit View History Bookmarks Profiles Tab Window Help
Tue 8 Aug 12:14 PM
npm
Practical Task-4
localhost:8080/api/all?
localhost:8080/api/all?
[{"id":1,"name":"abc","email":"xyz@gmail.com","phone":12345567890,"age":18},{"id":2,"name":"xya","email":"abc@gmail.com","phone":12345567890,"age":20},
{"id":3,"name":"bnm","email":"uyyt@gmail.com","phone":12345567890,"age":21},{"id":4,"name":"ytyt","email":"pop@gmail.com","phone":12345567890,"age":19},
{"id":5,"name":"shivam_5","email":"shivammp019@gmail.com","phone":"5555555555","age":"22"}]

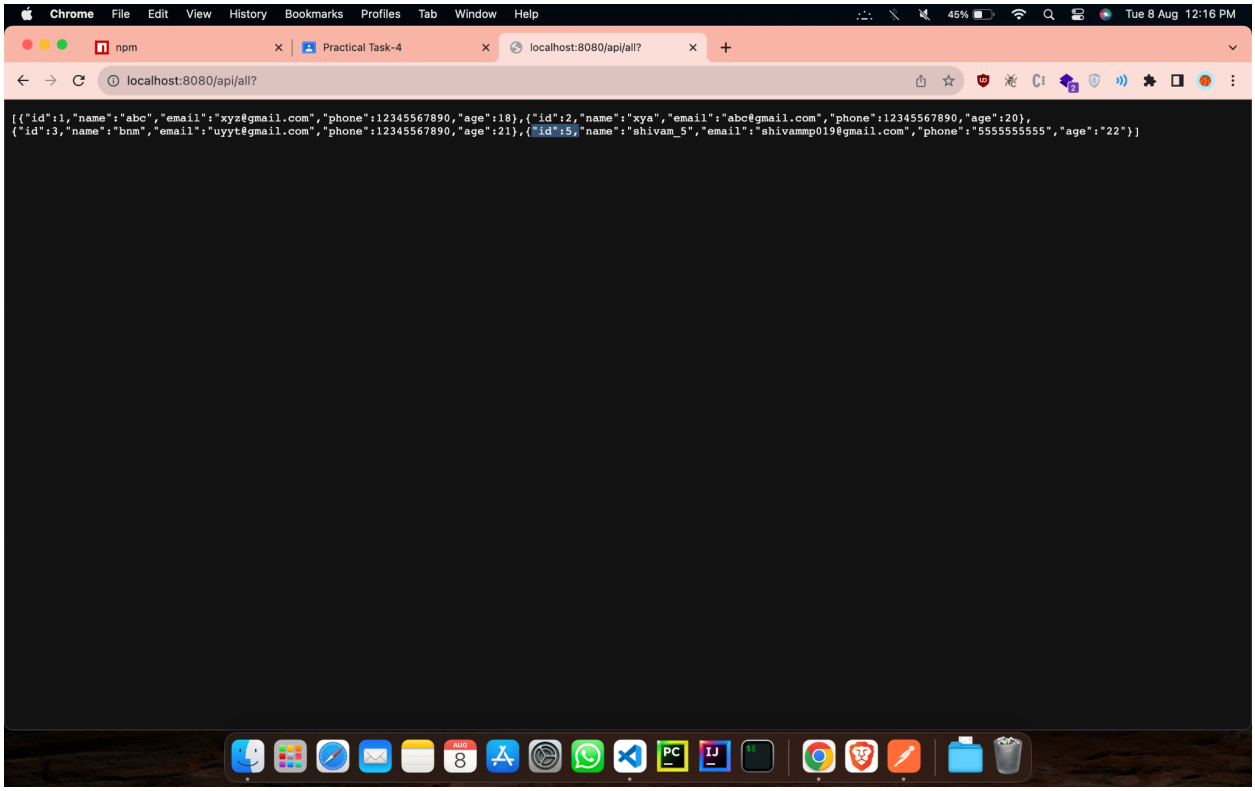
→ Update data


Chrome File Edit View History Bookmarks Profiles Tab Window Help
Tue 8 Aug 12:15 PM
npm
Practical Task-4
Employee Management
localhost:8080
Update Employee Data
Enter Employee ID:
4
Name:
shivam_4
Email:
shivammp019@gmail.com
Phone:
8511555669
Age:
12
Update Employee Data
Delete Employee Data
Enter Employee ID:


Chrome File Edit View History Bookmarks Profiles Tab Window Help
Tue 8 Aug 12:15 PM
npm
Practical Task-4
localhost:8080/api/all?
localhost:8080/api/all?
[{"id":1,"name":"abc","email":"xyz@gmail.com","phone":12345567890,"age":18},{"id":2,"name":"xya","email":"abc@gmail.com","phone":12345567890,"age":20},
{"id":3,"name":"bnm","email":"uyyt@gmail.com","phone":12345567890,"age":21},{"id":4,"name":"shivam_4","email":"shivammp019@gmail.com","phone":"8511555669","age":"12"},
{"id":5,"name":"shivam_5","email":"shivammp019@gmail.com","phone":"5555555555","age":"22"}]

→ Delete data


Chrome File Edit View History Bookmarks Profiles Tab Window Help
Tue 8 Aug 12:16 PM
npm
Practical Task-4
Employee Management
localhost:8080
Name:
Email:
Phone:
Age:
Update Employee Data
Delete Employee Data
Enter Employee ID:
4
Delete Employee Data
Get All Employee Data
Get All Data


Chrome File Edit View History Bookmarks Profiles Tab Window Help
Tue 8 Aug 12:16 PM
npm
Practical Task-4
localhost:8080/api/all?
localhost:8080/api/all?
[{"id":1,"name":"abc","email":"xyz@gmail.com","phone":12345567890,"age":18},{"id":2,"name":"xya","email":"abc@gmail.com","phone":12345567890,"age":20},
{"id":3,"name":"bnm","email":"uyyt@gmail.com","phone":12345567890,"age":21},{"id":5,"name":"shivam_5","email":"shivammp019@gmail.com","phone":"5555555555","age":"22"}]