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Microservices Practical 5

Scenario : www.abc.com website owner wants to manage user's records in JSON files. Save visitor details like name, password, id, occupation, etc.

Admin wants to perform the following task on that file:

1. list out all users.
2. Add a new user with said detail
3. Create Rest API to work with JSON covering the following endpoints:

- /user/add - to add a new user(Check if any data is missing in the request or the user that you are trying to add already exists).

- /user/list - To get the list of all the existing users in the file

- /user/update/:username - To update the user's data by finding the user using the name and do it through the patch method. (Check if the user exists or not).

- /user/delete/:username - delete the user with the help of username(Check if the user exists or not).

Code :

```
const express = require("express");
const app = express();
const fs = require("fs").promises;
const bodyParser = require("body-parser");
app.use(bodyParser.json());


const jsonfile = "./user.json";
```

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```
async function read() {
try {
const data = await fs.readFile(jsonfile, "utf8");
return JSON.parse(data);
} catch (error) {
throw error;
}
}

async function write(users) {
try {
await fs.writeFile(jsonfile, JSON.stringify(users, null, 2));
} catch (error) {
throw error;
}
}

app.get("/user", async (req, res) => {
res.send("Welcome to YSL User Database!");
});

app.get("/user/list", async (req, res) => {
try {
const users = await read();
```

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```
res.json(users);
} catch (error) {
res.status(500).json({ error: "Internal server error" });
}
});

app.get("/user/:username", async (req, res) => {
const username = req.params.username;
try {
const users = await read();
const user = users.find((user) => user.username === username);
if (user) {
res.json(user);
} else {
res.status(404).json({ error: "User not found" });
}
} catch (error) {
res.status(500).json({ error: "Internal server error" });
}
});

app.post("/user/add", async (req, res) => {
const newUser = req.body;
if (
```

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```
!newUser.username ||
!newUser.id ||
!newUser.password ||
!newUser.occupation
) {
return res.status(400).json({ error: "Missing required fields" });
}
try {
const users = await read();
if (users.some((user) => user.username === newUser.username)) {
return res.status(409).json({ error: "Username already exists" });
}
users.push(newUser);
await write(users);
res.json({ message: "User added successfully" });
} catch (error) {
res.status(500).json({ error: "Internal server error" });
}
});

app.put("/user/update/:username", async (req, res) => {
const username = req.params.username;
const updatedFields = req.body;
try {
```

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```
const users = await read();
const index = users.findIndex((user) => user.username === username);
if (index !== -1) {
users[index] = { ...users[index], ...updatedFields };
await write(users);
res.json({ message: "User updated successfully" });
} else {
res.status(404).json({ error: "User not found" });
}
} catch (error) {
res.status(500).json({ error: "Internal server error" });
}
});

app.delete("/user/delete/:username", async (req, res) => {
const username = req.params.username;
try {
const users = await read();
const index = users.findIndex((user) => user.username === username);
if (index !== -1) {
users.splice(index, 1);
await write(users);
res.json({ message: "User deleted successfully" });
} else {
```

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```
res.status(404).json({ error: "User not found" });
}
} catch (error) {
res.status(500).json({ error: "Internal server error" });
}
});

const port = 4200;
app.listen(port, () => {
console.log(`\n\tThe server is running on port ${port}\n`);
});
```

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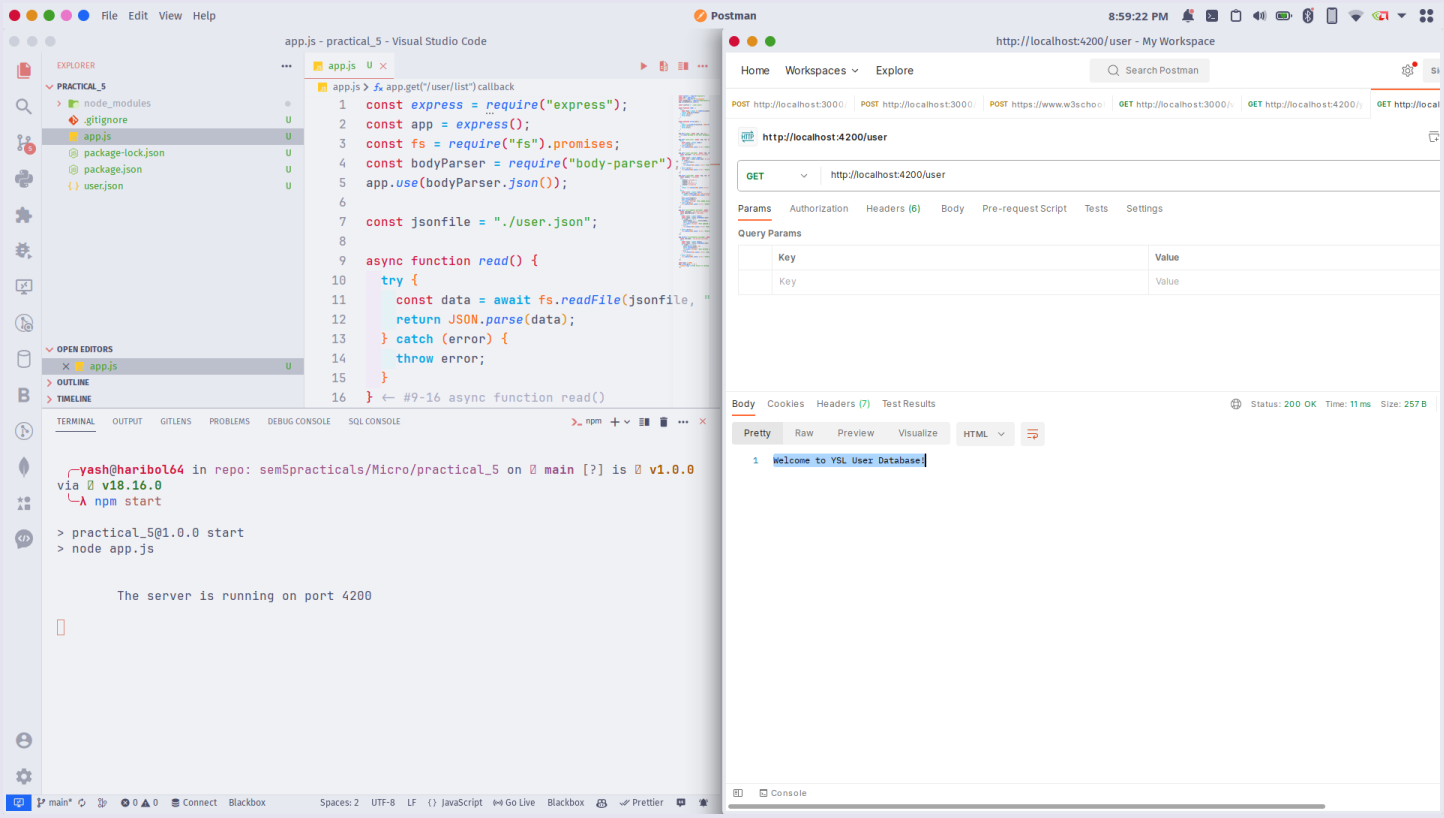
Screenshots :

- Homepage of local server



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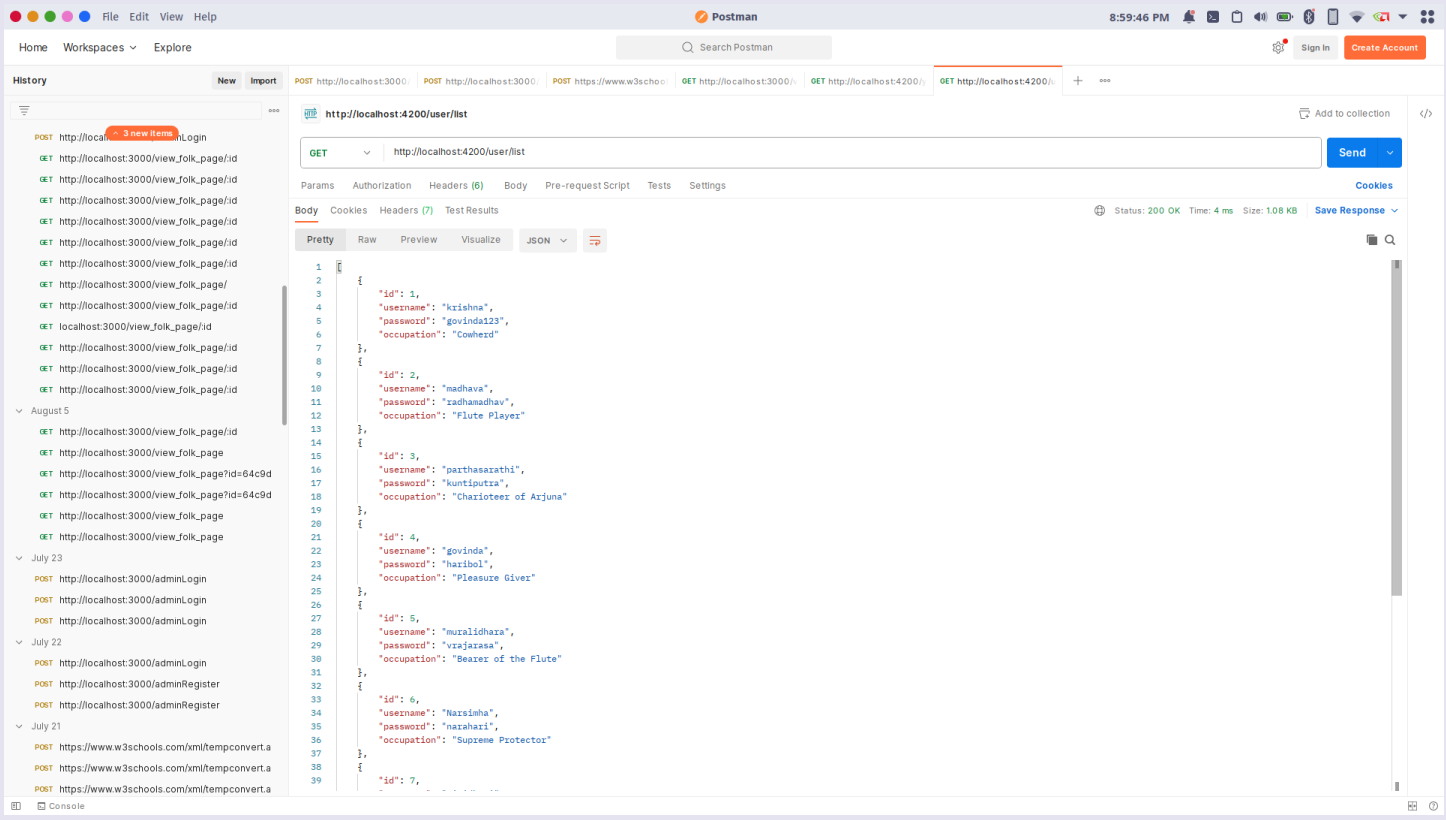
- List users



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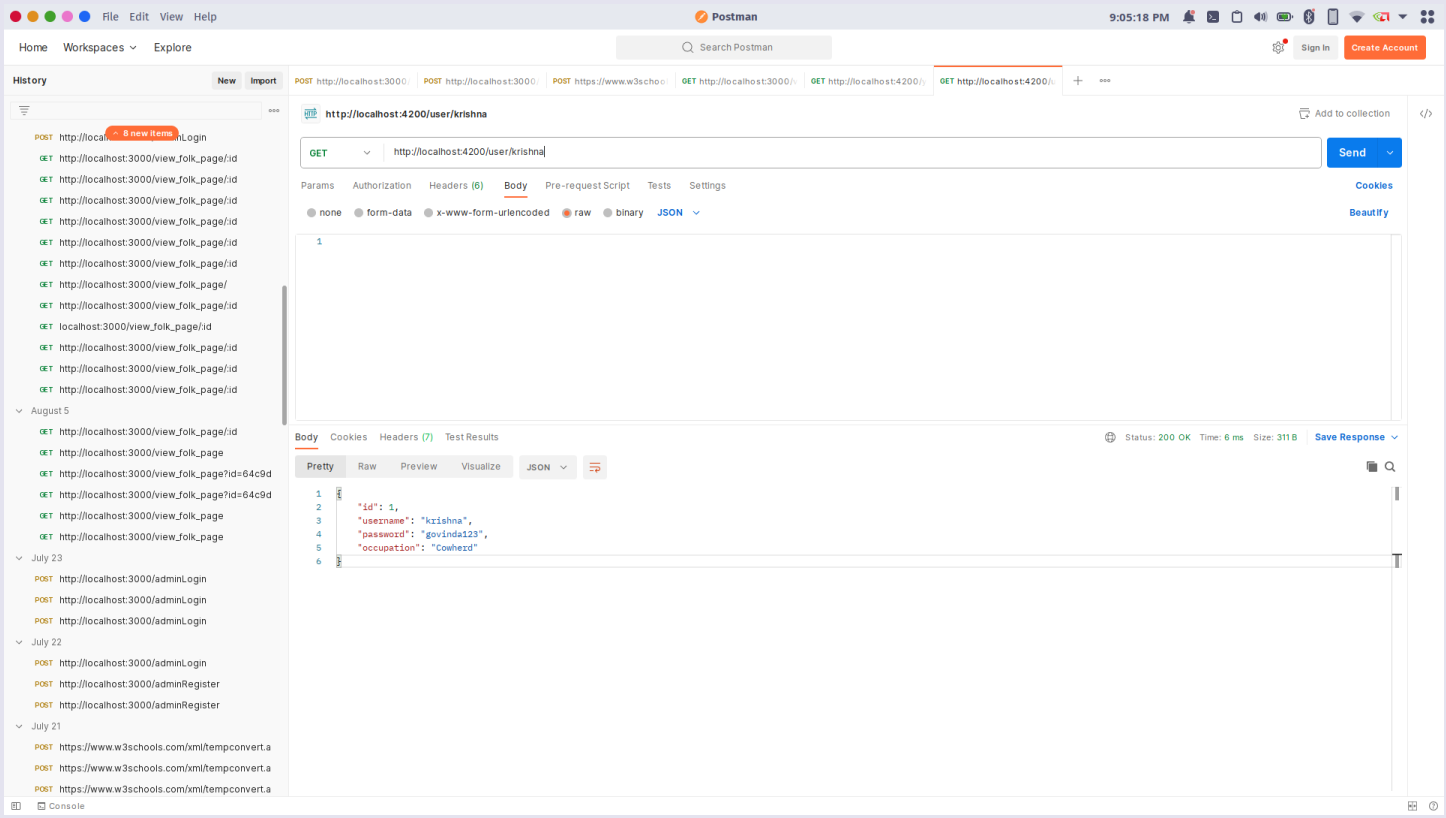
- GET users by its username



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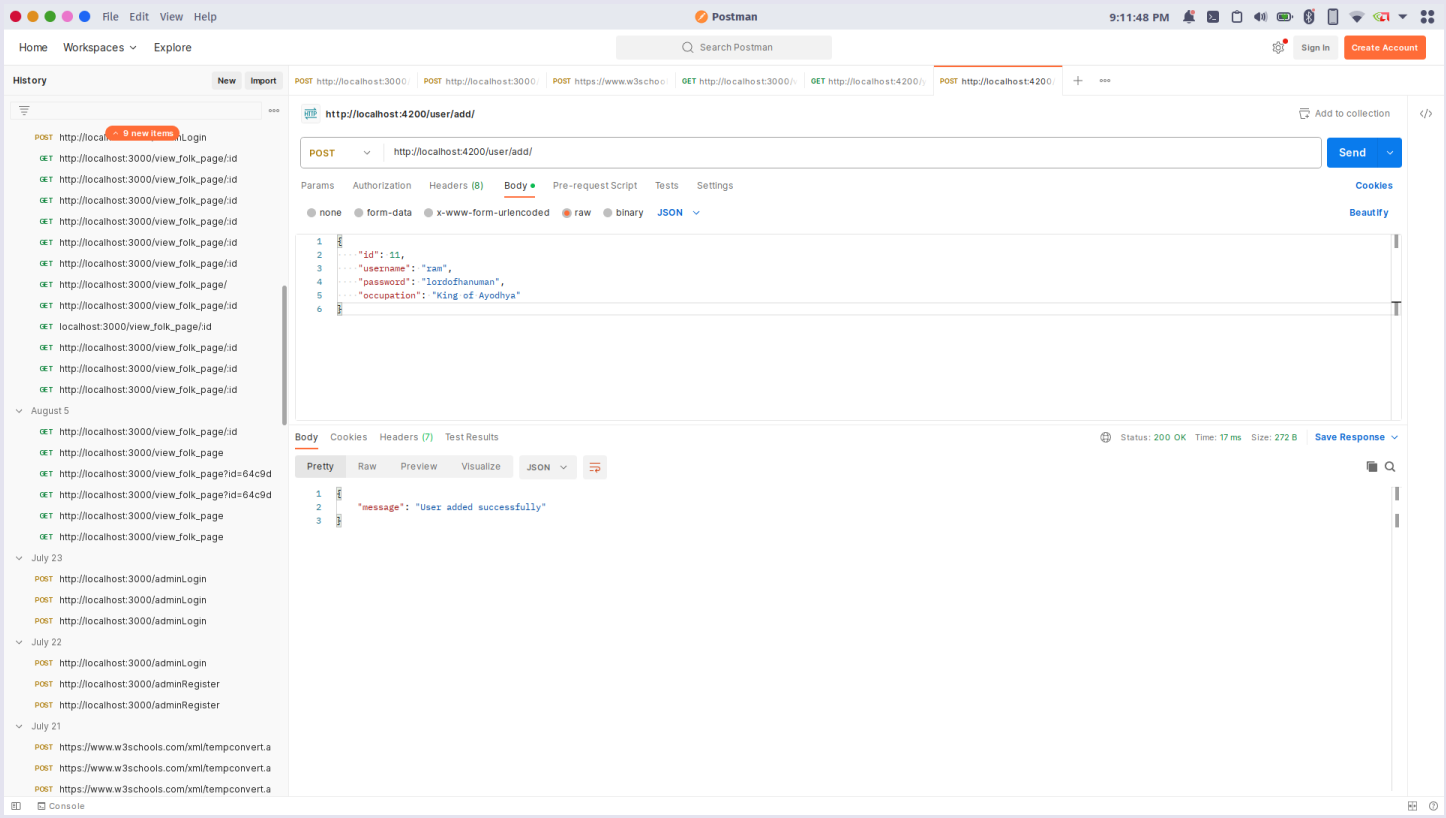
- Add user by POST



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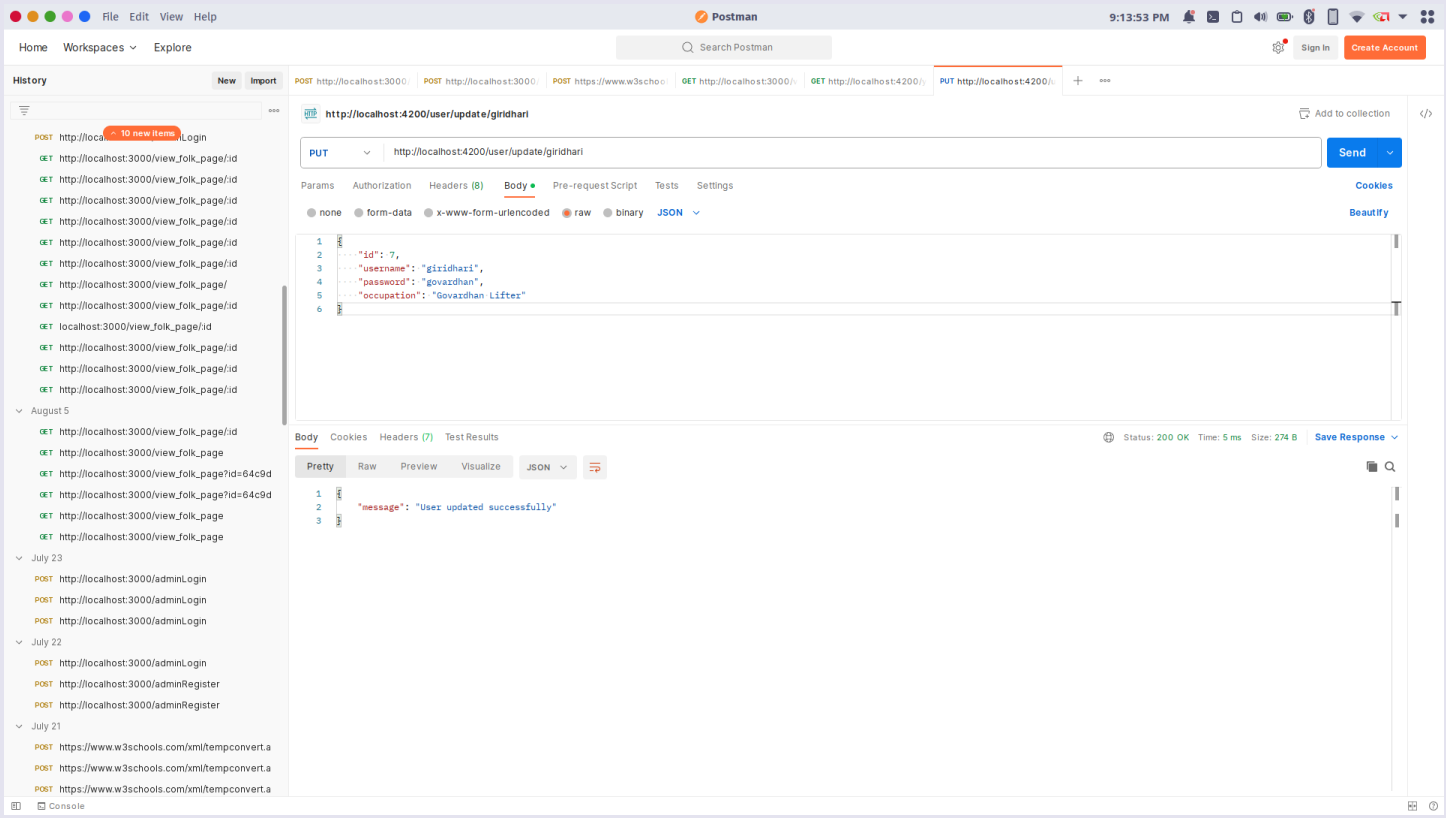
- Update user by username



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- Delete user by username