MVC Architecture Example with Node.js

Node JS Tutorial in Hindi #39 MVC Architecture Example with Node.js

When working on real-world Node.js projects, it's important to organize your code properly. One of the most common and effective patterns for doing this is the **MVC Architecture**.

What is MVC?

MVC stands for:

M – Model (Handles the data)

V – View (Handles the UI)

C – Controller (Handles the logic and routes)

MVC Flow Summary

Here's how everything connects:

```
User → Controller → Model → View → User
```

The **User** interacts with the app.

The **Controller** receives the request and communicates with the **Model**.

The **Model** processes data and sends it back.

The **View** displays the result to the user.

File Structure in MVC

Create the following folders in your project:

```
project/
├── controllers/
│     └── usersController.js
├── models/
│     └── usersModel.js
├── views/
│     └── users.ejs
├── index.js
```

Step-by-Step Setup

Create Basic Express App

In `index.js`:

```
import express from "express";
import { handleUsers } from "./controllers/usersController.js";
```

```
const app = express();
app.set("view engine", "ejs");

// Route
app.get("/user", handleUsers);

app.listen(3200, () => {
  console.log("Server is running on port 3200");
});
```

Create Controller – `controllers/usersController.js`

The controller connects the model and view.

```
import { userList } from "../models/usersModel.js";

export function handleUsers(req, resp) {
  const usersData = userList(); // Get data from model
  resp.render("users", { users: usersData }); // Send data to view
}
```

Create Model – `models/usersModel.js`

```
export function userList() {
  return ["Anil", "Sidhu", "Sam", "Peter", "Bruce"];
}
```

Create View – `views/users.ejs`

This is what the user sees on the browser.

```
<!DOCTYPE html>
```

```html
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-
scale=1.0" />
    <title>Users List</title>
  </head>
  <body>
    <h1>User List Page</h1>
    <ul>
      <% for (let i = 0; i < users.length; i++) { %>
        <li><%= users[i] %></li>
      <% } %>
    </ul>
  </body>
</html>
```

We loop through the users array and display each user in a list.

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