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Semester: V   **Student ID: 22106027**
Class / Branch: T.E./ CSE(AI&ML) **Roll No: 61**
Subject: WCN Lab
Name of Instructor: Prof. Poonam Tiware

Experiment No. 6

Aim: Create webpage using react and express js

Program:

For creating the express backend:

1. **mkdir backend**
2. **npm init -y**
3. **npm install express cors nodemon concurrently**
4. Modify the scripts section of *package.json* as mentioned below
5. Run the development server using: **npm run dev**

Server.js:

```javascript
const express = require("express");      // File is a CommonJS module; it may be converted to an ES module.
const path = require("path");
const app = express();
const cors = require("cors");
const PORT = process.env.PORT || 5000;
app.use(cors());

// Serve static files from the React app
app.use(express.static(path.join(__dirname, "client/build")));

// API route example
app.get("/api/message", (req, res) => {      // 'req' is declared but its value is never read.
  res.json({ message: "Hello from the backend!" });
});

// For the home page
app.get("/api/homeMessage", (req, res) => {      // 'req' is declared but its value is never read.
  res.json({ message: "The backend knows you're on the home page!" });
});

// For the about page
app.get("/api/aboutMessage ", (req, res) => {      // 'req' is declared but its value is never read.
  res.json({ message: "The backend knows you're on the about page!" });
});
// Catch-all handler for any requests not matching the above
app.get("*", (req, res) => {      // 'req' is declared but its value is never read.
  res.sendFile(path.join(__dirname, "client/build", "index.html"));
});

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

package.json

```
1  {
1      "name": "backend",
2      "version": "1.0.0",
3      "main": "index.js",
4      "scripts": {
5        "start": "node server.js",
6        "server": "nodemon server.js",
7        "client": "npm start --prefix client",
8        "dev": "concurrently \"npm run server\" \"npm run client\""
9      },
10     "keywords": [],
11     "author": "",
12     "license": "ISC",
13     "description": "",
14     "dependencies": {
15       "concurrently": "^9.0.1",
16       "cors": "^2.8.5",
17       "express": "^4.21.0",
18       "nodemon": "^3.1.7"
19     }
20 }
```

Create the frontend:

1. **npx create-react-app frontend**

2. **npm install react-router-dom**

3. Create 2 files in **src: Home.js** and **About.js**

4. Create the build using**: npm run build**

App.js

```jsx
import React, { useState, useEffect } from "react";
import { BrowserRouter as Router, Route, Routes } from "react-router-dom";
import Home from "./Home";
import About from "./About";

function App() {
  const [message, setMessage] = useState("");

  useEffect(() => {
    fetch("http://localhost:5000/api/message")
      .then((res) => {
        if (!res.ok) {
          throw new Error("Network response was not ok");
        }
        return res.json(); // Make sure to return the parsed JSON
      })
      .then((data) => setMessage(data.message)) // Set the message from the parsed data
      .catch((error) => {
        console.error("There was an issue with the fetch:", error);
      });
  }, []);

  return (
    <Router>
      <div>
        <h1>{message}</h1>
        <Routes>
          <Route path="/" element={<Home />} />
          <Route path="/about" element={<About />} />
        </Routes>
      </div>
    </Router>
  );
}

export default App;
```

About.js

```
1  import React from "react";
1  import { Link } from "react-router-dom";
2  import { useState, useEffect } from "react";
3
4  const About = () => {
5    const [message, setMessage] = useState("");
6    useEffect(() => {
7      fetch("http://localhost:5000/api/aboutMessage")
8        .then((res) => {
9          if (!res.ok) {
10           throw new Error("Network response was not ok");
11         }
12         return res.json(); // Make sure to return the parsed JSON
13       })
14       .then((data) => {
15         setMessage(data.message);
16         console.log(message);
17       }) // Set the message from the parsed data
18       .catch((error) => {
19         console.error("There was an issue with the fetch:", error);
20       });
21   }, []);
22   return (
23     <div>
24       <h1>About Page</h1>
25       <Link to="/">Go to Home</Link>
26       <h2>{message}</h2>
27     </div>
28   );
29 };
30
31 export default About;
```

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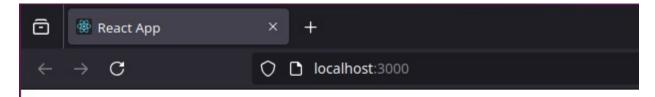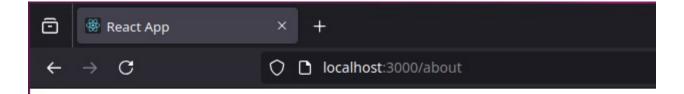(Religious Jain Minority)

Home.js

```javascript
import React from "react";
import { Link } from "react-router-dom";
import { useState, useEffect } from "react";

const Home = () => {
  const [message, setMessage] = useState("");
  useEffect(() => {
    fetch("http://localhost:5000/api/homeMessage")
      .then((res) => {
        if (!res.ok) {
          throw new Error("Network response was not ok");
        }
        return res.json(); // Make sure to return the parsed JSON
      })
      .then((data) => setMessage(data.message)) // Set the message f
      .catch((error) => {
        console.error("There was an issue with the fetch:", error);
      });
  }, []);
  return (
    <div>
      <h1>Home Page</h1>
      <Link to="/about">Go to About</Link>
      <h2>{message}</h2>
    </div>
  );
};

export default Home;
```

Output: