**Dr.SIVANTHI ADITANAR COLLEGE OF ENGINEERING**

**TIRUCHENDUR**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**FULL STACK DEVELOPMENT WORKSHOP**

**DAY-5**

***Assignment- V***

**Coding:**

***backend***

***package.json***

{

"name": "backend",

"version": "1.0.0",

"main": "index.js",

"scripts": {

"test": "echo \"Error: no test specified\" && exit 1"

},

"keywords": [],

"author": "",

"license": "ISC",

"description": "",

"dependencies": {

"body-parser": "^1.20.3",

"cors": "^2.8.5",

"express": "^4.21.2"

}

}

***server.js***

const express = require('express');

const cors = require('cors');

const bodyParser = require('body-parser');

const app = express();

const PORT = 5000;

app.use(cors());

app.use(bodyParser.json());

let todos = [];

// Routes

app.get('/todos', (req, res) => {

res.json(todos);

});

app.post('/todos', (req, res) => {

const { task } = req.body;

if (task) {

const newTodo = { id: Date.now(), task, completed: false };

todos.push(newTodo);

res.status(201).json(newTodo);

} else {

res.status(400).json({ error: 'Task is required' });

}

});

app.put('/todos/:id', (req, res) => {

const { id } = req.params;

const { completed } = req.body;

todos = todos.map(todo =>

todo.id === parseInt(id) ? { ...todo, completed } : todo

);

res.json({ message: 'Task updated' });

});

app.delete('/todos/:id', (req, res) => {

const { id } = req.params;

todos = todos.filter(todo => todo.id !== parseInt(id));

res.json({ message: 'Task deleted' });

});

app.listen(PORT, () => {

console.log(`Server running on http://localhost:${PORT}`);

});

***frontend***

***App.js***

import React, { useState, useEffect } from 'react';

import axios from 'axios';

const API\_URL = '<http://localhost:5000/todos>';

function App() {

const [todos, setTodos] = useState([]);

const [task, setTask] = useState('');

useEffect(() => {

fetchTodos();

}, []);

const fetchTodos = async () => {

const response = await axios.get(API\_URL);

setTodos(response.data);

};

const addTodo = async () => {

if (task.trim()) {

const response = await axios.post(API\_URL, { task });

setTodos([...todos, response.data]);

setTask('');

}

};

const toggleComplete = async (id, completed) => {

await axios.put(`${API\_URL}/${id}`, { completed: !completed });

fetchTodos();

};

const deleteTodo = async id => {

await axios.delete(`${API\_URL}/${id}`);

fetchTodos();

};

return (

<div style={{ padding: '20px', maxWidth: '400px', margin: 'auto' }}>

<h1>To-Do App</h1>

<div>

<input

type="text"

value={task}

onChange={e => setTask(e.target.value)}

placeholder="Add a new task"

style={{ width: '70%', marginRight: '10px' }}

/>

<button onClick={addTodo}>Add</button>

</div>

<ul style={{ listStyleType: 'none', padding: 0 }}>

{todos.map(todo => (

<li key={todo.id} style={{ margin: '10px 0' }}>

<input

type="checkbox"

checked={todo.completed}

onChange={() => toggleComplete(todo.id, todo.completed)}

/>

<span

style={{

textDecoration: todo.completed ? 'line-through' : 'none',

marginLeft: '10px',

}}

>

{todo.task}

</span>

<button

onClick={() => deleteTodo(todo.id)}

style={{

marginLeft: '10px',

backgroundColor: 'red',

color: 'white',

border: 'none',

borderRadius: '5px',

cursor: 'pointer',

}}

>

Delete

</button>

</li>

))}

</ul>

</div>

);

}

export default App;

***package.json***

{

"name": "frontend",

"version": "0.1.0",

"private": true,

"dependencies": {

"react": "^17.0.2",

"react-dom": "^17.0.2",

"react-scripts": "4.0.3",

"axios": "^0.21.1"

},

"scripts": {

"start": "react-scripts start",

"build": "react-scripts build",

"test": "react-scripts test",

"eject": "react-scripts eject"

}

}

***index.html***

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8" />

<meta name="viewport" content="width=device-width, initial-scale=1.0" />

<title>React App</title>

</head>

<body>

<div id="root"></div>

</body>

</html>