

INTERNSHIP REPORT

On

**Development of a Full-Stack Todo web
application Using MERN Stack**

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Abstract

This project is a full-stack Todo web application developed using Node.js, MongoDB, HTML/CSS, and React (with Vite). It helps users manage daily tasks by allowing them to add, view, and delete tasks through a simple and responsive interface. The backend handles API requests and stores data securely in MongoDB, either locally or via MongoDB Atlas. Real-time communication between the frontend and backend ensures smooth task updates. The project provides a practical example of how modern technologies can work together to build efficient and user-friendly web applications.

Introduction

In today's busy world, managing daily tasks with the help of technology has become very important. This project is a web-based Todo application built using the MERN stack. The frontend is developed using React, which provides a smooth and interactive user interface. The backend is powered by Node.js and Express, which handle all the server operations. Task data is safely stored in MongoDB Atlas, a cloud-based database. Together, these technologies create a complete and user-friendly system to organize and track tasks efficiently.

Features

- Adding new tasks
- Viewing all saved tasks
- Deleting existing tasks

Implementation overview

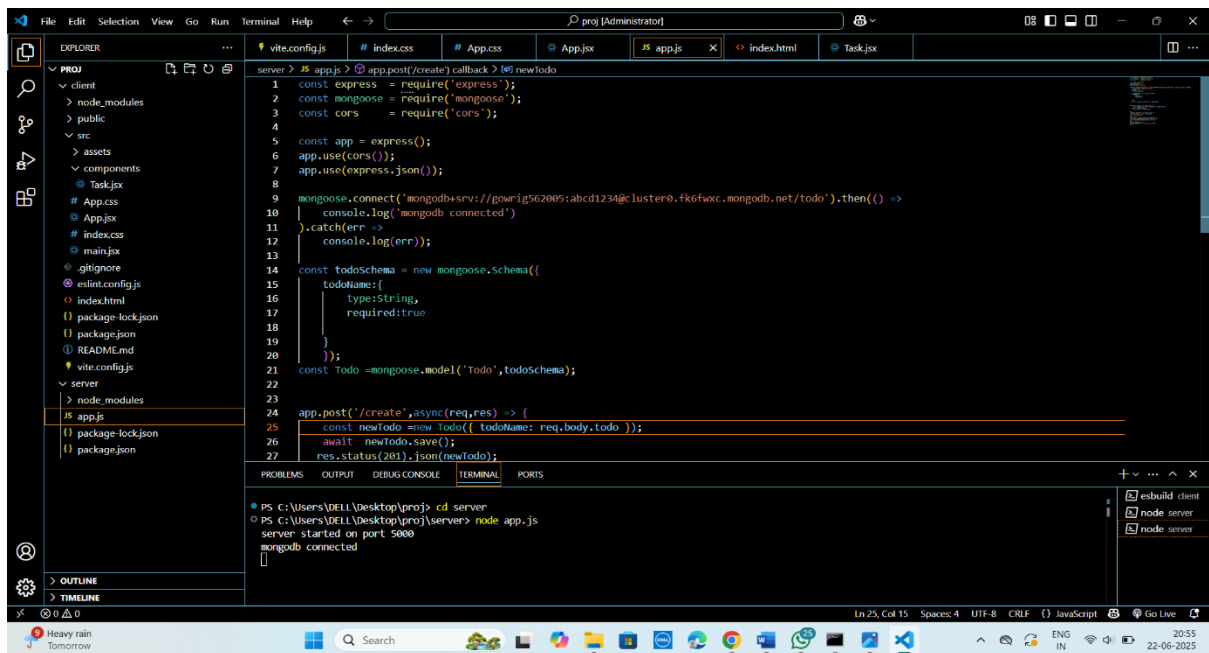
Project structure includes two main folders: **client** (React app) and **server** (Express backend).

Tasks are created via POST requests and stored in MongoDB.

GET requests fetch tasks from the backend to display.

DELETE requests remove tasks from the database.

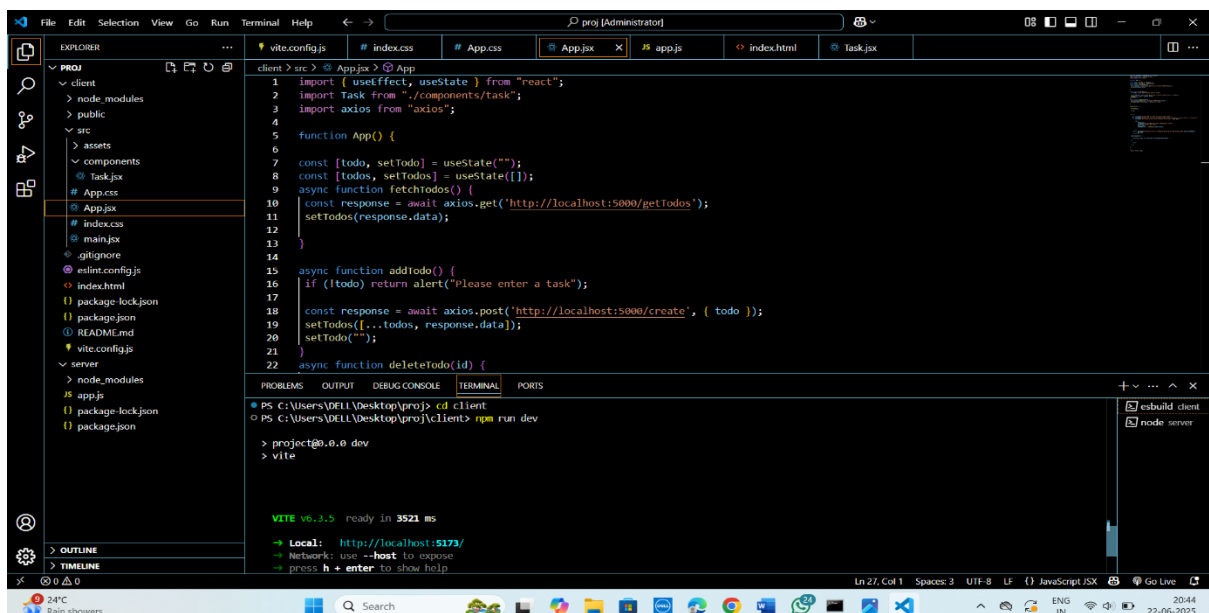
Vite is used for faster React development and live reload.



```
server > .\app.js > app.post('/create') callback > let newTodo
1 const express = require('express');
2 const mongoose = require('mongoose');
3 const cors = require('cors');
4
5 const app = express();
6 app.use(cors());
7 app.use(express.json());
8
9 mongoose.connect('mongodb://localhost:27020:562805:abcd1234@cluster0.fk6fwcc.mongodb.net/todo').then(() =>
10   console.log('mongodb connected')
11 ).catch(err =>
12   console.log(err);
13 );
14
15 const todoschema = new mongoose.Schema({
16   todoName: {
17     type: String,
18     required: true
19   }
20 });
21 const Todo = mongoose.model('Todo', todoschema);
22
23
24 app.post('/create', async (req, res) => {
25   const newTodo = new Todo({ todoName: req.body.todo });
26   await newTodo.save();
27   res.status(201).json(newTodo);
28 });
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\DELL\Desktop\proj> cd server
PS C:\Users\DELL\Desktop\proj\server> node app.js
server started on port 5000
mongodb connected
```



```
client > src > App.js > App
1 import { useEffect, useState } from 'react';
2 import Task from './components/task';
3 import axios from 'axios';
4
5 function App() {
6
7   const [todo, setTodo] = useState("");
8   const [todos, setTodos] = useState([]);
9   async function fetchTodos() {
10     const response = await axios.get('http://localhost:5000/getTodos');
11     setTodos(response.data);
12   }
13
14   async function addTodo() {
15     if (!todo) return alert("Please enter a task");
16
17     const response = await axios.post('http://localhost:5000/create', { todo });
18     setTodos([...todos, response.data]);
19     setTodo("");
20   }
21
22   async function deleteTodo(id) {
23
24   }
25 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\DELL\Desktop\proj> cd client
PS C:\Users\DELL\Desktop\proj\client> npm run dev
> project@0.0.0 dev
> vite

VITE v6.3.5 ready in 3521 ms
→ Local: http://localhost:5173/
→ Network: use --host to expose
→ press h + enter to show help
```

Result

