

# MERN Stack To-Do List App

```
# MERN Stack To-Do List App

## Backend (Node.js + Express + MongoDB)

### Install Dependencies
```sh
npm install express mongoose cors dotenv
```

### server.js
```javascript
const express = require('express');
const mongoose = require('mongoose');
const cors = require('cors');
require('dotenv').config();

const app = express();
app.use(express.json());
app.use(cors());

mongoose.connect(process.env.MONGO_URI, {
  useNewUrlParser: true,
  useUnifiedTopology: true,
});

const TodoSchema = new mongoose.Schema({
  task: String,
  completed: Boolean
});

const Todo = mongoose.model('Todo', TodoSchema);

app.get('/todos', async (req, res) => {
  const todos = await Todo.find();
  res.json(todos);
});

app.post('/todos', async (req, res) => {
  const newTodo = new Todo(req.body);
  await newTodo.save();
  res.json(newTodo);
});

app.put('/todos/:id', async (req, res) => {
  await Todo.findByIdAndUpdate(req.params.id, req.body);
  res.json({ message: 'Updated successfully' });
});

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

```

    await Todo.findByIdAndDelete(req.params.id);
    res.json({ message: 'Deleted successfully' });
  });

app.listen(5000, () => console.log('Server running on port 5000'));
...

## Frontend (React.js)

### Install React App & Dependencies
```sh
npx create-react-app client
cd client
npm install axios
...

### App.js
```javascript
import React, { useState, useEffect } from 'react';
import axios from 'axios';

function App() {
  const [todos, setTodos] = useState([]);
  const [task, setTask] = useState('');

  useEffect(() => {
    axios.get('http://localhost:5000/todos').then(res => setTodos(res.data));
  }, []);

  const addTodo = () => {
    axios.post('http://localhost:5000/todos', { task, completed: false })
      .then(res => setTodos([...todos, res.data]));
  };

  const deleteTodo = (id) => {
    axios.delete(`http://localhost:5000/todos/${id}`)
      .then(() => setTodos(todos.filter(todo => todo._id !== id)));
  };

  return (
    <div>
      <h1>To-Do List</h1>
      <input value={task} onChange={(e) => setTask(e.target.value)} />
      <button onClick={addTodo}>Add</button>
      <ul>
        {todos.map(todo => (
          <li key={todo._id}>
            {todo.task} <button onClick={() => deleteTodo(todo._id)}>Delete</button>
          </li>
        ))}
      </ul>
    </div>
  );
}

```

```
export default App;  
```
```

```
## Running the Application
```

```
### Start Backend
```

```
```sh  
node server.js  
```
```

```
### Start Frontend
```

```
```sh  
cd client  
npm start  
```
```

```
## Upload to GitHub
```

```
```sh  
git init  
git add .  
git commit -m "Initial commit"  
git remote add origin <GitHub_Repo_URL>  
git push -u origin main  
```
```