DRAG N DROP APP

CLIENT

package.json

```
{
  "name": "client",
  "version": "0.1.0",
  "private": true,
  "dependencies": {
    "@testing-library/jest-dom": "^5.17.0",
    "@testing-library/react": "^13.4.0",
    "@testing-library/user-event": "^13.5.0",
    "axios": "^1.7.7",
    "dotenv": "^16.4.5",
    "react": "^18.3.1",
    "react-dom": "^18.3.1",
    "react-draggable": "^4.4.6",
    "react-redux": "^9.1.2",
    "react-saga": "^0.3.1",
    "react-scripts": "5.0.1",
    "react-toastify": "^10.0.5",
    "web-vitals": "^2.1.4",
    "zustand": "^4.5.5"
  },
  "scripts": {
    "start": "react-scripts start",
    "build": "react-scripts build",
    "test": "react-scripts test",
    "eject": "react-scripts eject"
  },
  "eslintConfig": {
    "extends": [
      "react-app",
      "react-app/jest"
    ]
  },
  "browserslist": {
    "production": [
```

```
      ">0.2%",
      "not dead",
      "not op_mini all"
    ],
    "development": [
      "last 1 chrome version",
      "last 1 firefox version",
      "last 1 safari version"
    ]
  }
}
```

index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import App from './App';
import { Provider } from 'react-redux';
import reportWebVitals from './reportWebVitals';
import { ToastContainer, toast } from 'react-toastify';

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
      <App />
      <ToastContainer />
  </React.StrictMode>
);


reportWebVitals();
```

App.js

```
import { useEffect, useState, useRef } from 'react';
import axios from 'axios';
import User from './components/user.component';
import 'react-toastify/dist/ReactToastify.css';
import { toast } from 'react-toastify';

function App() {
  const [data, setData] = useState([]);
  const [loading, setLoading] = useState(true);
  const errorShown = useRef(false);

  const fetchUsersTasks = async () => {
    try {
      setLoading(true);
      const response = await
axios.get(`${process.env.REACT_APP_API_URL}/all_task_usernames`);
      setData(response.data.usersWithTaskTexts);
      setLoading(false);
    } catch (error) {
      if (!errorShown.current) {
        console.error('Error fetching tasks:', error);
        toast.error('Error fetching tasks');
        errorShown.current = true;
        setLoading(false);
      }
    }
  };

  useEffect(() => {
    fetchUsersTasks();
  }, []);

  const moveTask = async (sourceUserId, targetUserId, taskText) => {
    try {
      // Ensure the request URL matches your API endpoint
      const response = await
axios.post(`${process.env.REACT_APP_API_URL}/move-task`, {
        sourceUserId,
        targetUserId,
```

```
        taskText,
      });

      setData((prevUsers) => {
        // If the source and target users are the same, return previous
state without any changes
        if (parseInt(sourceUserId, 10) === parseInt(targetUserId, 10)) {
          return prevUsers;
        }

        const updatedUsers = prevUsers.map((user) => {
          if (user.user_id === parseInt(sourceUserId, 10)) {
            // Remove task from source user
            return {
              ...user,
              tasks: user.tasks.filter((task) => task.text !== taskText),
            };
          }

          if (user.user_id === parseInt(targetUserId, 10)) {
            // Add task to target user
            return {
              ...user,
              tasks: [...user.tasks, { text: taskText }],
            };
          }

          return user;
        });

        return updatedUsers;
      });
    } catch (error) {
      // Enhanced error logging
      console.error('Error moving task:', error.response ?
error.response.data : error.message);
      toast.error('Failed to move task');
    }
  };
```

```
  return (
    <div className="App bg-zinc-900 h-auto">
      <center>
        <h1 className="text-[145px] font-semibold text-white">Users
Tasks</h1>
      </center>

      <div className="flex flex-row flex-wrap justify-center items-center
gap-4 p-4">
        {loading ? (
          <p className="text-white">Loading...</p>
        ) : (
          data.map((element) => (
            <User
              key={element.user_id}
              data={element}
              moveTask={moveTask}
            />
          ))
        )}
      </div>
    </div>
  );
}

export default App;
```

user

```
import React from 'react';

const User = ({ data, moveTask }) => {

  //ondrop
  const handleOnDrop = (e) => {
    e.preventDefault();

    const droppedTaskText = e.dataTransfer.getData('text');
    const sourceUserId = parseInt(e.dataTransfer.getData('user_id'));
    const targetUserId = data.user_id;

    // Call the moveTask function from the parent component
    moveTask(sourceUserId, targetUserId, droppedTaskText);
  };


  //ondrag
  const handleOnDragOver = (e) => {
    e.preventDefault(); // Allow drop
  };

  //dragStart
  const handleOnDragStart = (e, text, id) => {
    e.dataTransfer.setData('text', text);
    e.dataTransfer.setData('user_id', id);
  };

  return (
    <div
      className="text-white text-[24px] bg-zinc-700 rounded-lg p-2
m-2 h-[20rem] w-[20rem]"
      onDragOver={handleOnDragOver}
      onDrop={handleOnDrop}
    >
      <p className="text-white font-semibold">{data.name}</p>
```

```
      {data.tasks && data.tasks.length > 0 ? (
        data.tasks.map((task, index) => (
          <p
            key={task.text} // Ensure unique keys
            className="cursor-move bg-zinc-600 rounded-lg p-2 mb-2"
            draggable
            onDragStart={(e) => handleOnDragStart(e, task.text,
data.user_id)}
          >
            {task.text}
          </p>
        ))
      ) : (
        <p>No tasks available</p>
      )}
    </div>
  );
};

export default User;
```

SERVER

```
const express = require('express');
const app = require('./app');
const userRoutes = require('./router/userRoutes'); // Adjust the path
as necessary

// Middleware to parse JSON
app.use(express.json());

// Use the user routes
app.use('/api', userRoutes); // Prefix all routes with /api


// Error handling middleware
app.use((err, req, res, next) => {
    res.status(500).json({
        message: 'Internal Server Error',
        error: err.message
    });
});

const PORT = process.env.PORT || 8000;
app.listen(PORT, () => {
    console.log(`Server is listening on port ${PORT}`);
});
```

app.js

```
const express = require('express');
const cors = require('cors'); // Import CORS middleware
const app = express();

// Import routes
const userRoutes = require('./router/userRoutes');

// Middleware setup
app.use(cors());
app.use(express.json());
```

```
app.get('/', (req, res)=>{
      res.end("Server is running");
})


// Route setup
app.use('/api', userRoutes);

app.use((err, req, res, next) => {
    console.error('Error:', err.message);
    res.status(500).json({
        message: 'Internal Server Error',
        error: err.message
    });
});

module.exports = app;
```

userRoutes.js

```
const express = require('express');
const router = express.Router();
const userController = require('../controller/userController')

router.get('/all_users', userController.findAllUsers);
router.get('/all_tasks', userController.findAllTasks);
router.get('/all_usernames', userController.findAllUsersName);
router.get('/all_task_usernames',
userController.fetchTasksWithUserNames);

router.post('/move-task', userController.updateData);

module.exports = router;
```

userController.js

```
const { PrismaClient } = require('@prisma/client');
const Prisma = new PrismaClient();

exports.findAllUsers = async (req, res) => {
    try {
        // Fetch all users
        const users = await Prisma.user.findMany(); // No need for
include here

        // Send response
        res.status(200).json({ // Use 200 for success
            message: 'success',
            users
        });
    } catch (error) {
        // Handle error properly
        console.error('Error fetching users:', error); // Log the
error for debugging
        res.status(500).json({ // Use 500 for server errors
            message: 'fail',
            error: error.message
        });
    }
};


exports.findAllUsersName = async (req, res) => {
    try {
        // Fetch all users
        const users = await Prisma.user.findMany({
            select: {
                name: true
            }
        }); // No need for include here

        // Send response
```

```
        res.status(200).json({ // Use 200 for success
            message: 'success',
            users
        });
    } catch (error) {
        // Handle error properly
        console.error('Error fetching users:', error); // Log the
error for debugging
        res.status(500).json({ // Use 500 for server errors
            message: 'fail',
            error: error.message
        });
    }
};


exports.findAllTasks = async (req, res) => {
    try {
        // Fetch all tasks
        const tasks = await Prisma.task.findMany(); // Omit include
if not using

        // Send response
        res.status(200).json({
            message: 'success',
            tasks
        });
    } catch (error) {
        // Handle error properly
        console.error('Error fetching tasks:', error); // Log the
error for debugging
        res.status(500).json({
            message: 'fail',
            error: error.message
        });
    }
};
```

```
exports.fetchTasksWithUserNames = async (req, res) => {

    try {
        const usersWithTaskTexts = await Prisma.user.findMany({
            include: {
                tasks: {
                    select: {
                        text: true, // Only include the 'text' field
for each task
                    },
                },
            },
            orderBy: {
                user_id: 'asc', // Order users by their 'id' in
ascending order
            },
        });


        res.status(200).json({
            message: 'success',
            usersWithTaskTexts
        })
    } catch (error) {
        console.log("users with task", error.message);
        res.status(500).json({
            message: "fail",
            error: error.message
        })
    }
}

exports.updateData = async (req, res) => {
    const { taskText, sourceUserId, targetUserId } = req.body;
    console.log(req.body);

    try {
```

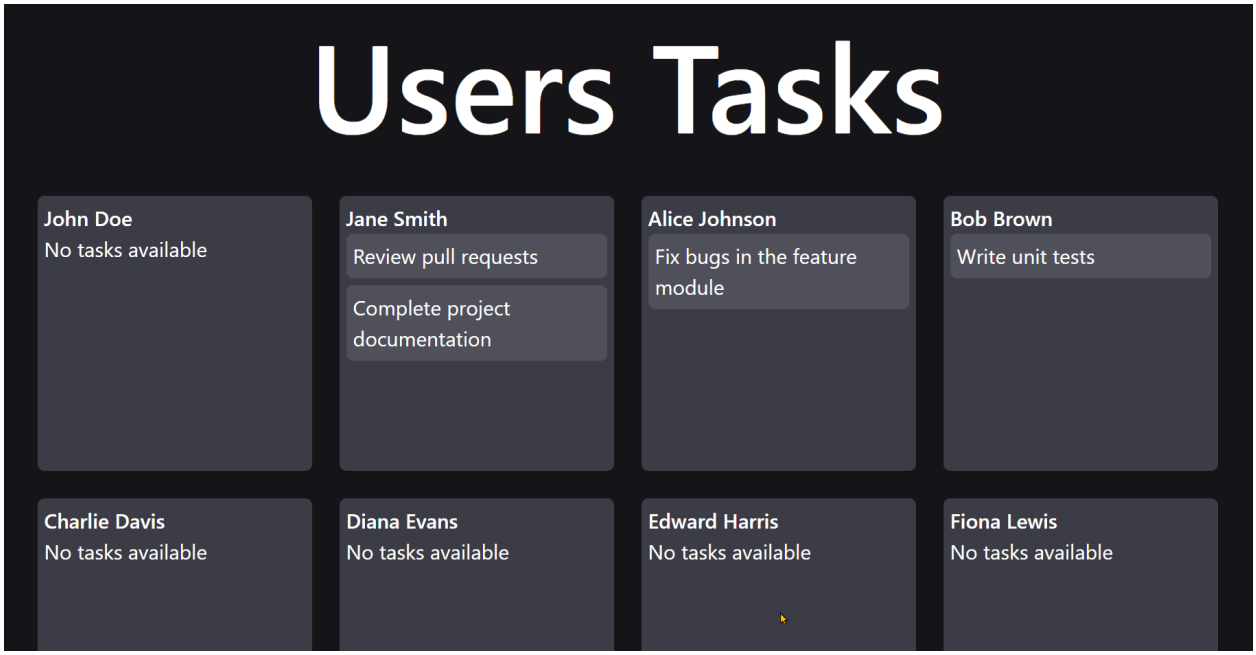
```
        // Validate input
        if (!taskText || !sourceUserId || !targetUserId) {
            return res.status(400).json({ message: 'Missing required
fields' });
        }

        // Find the task for the specific user
        const task = await Prisma.task.findFirst({
            where: {
                user_id: parseInt(sourceUserId, 10),
                text: taskText,
            },
        });

        // Check if the task was found
        if (!task) {
            console.log('Task not found');
            return res.status(404).json({ message: 'Task not found' });
        }

        // Check if source and target users are different
        if (parseInt(sourceUserId, 10) !== parseInt(targetUserId, 10)) {
            // Create the new task for the target user
            const newTask = await Prisma.task.create({
                data: {
                    user_id: parseInt(targetUserId, 10),
                    text: taskText,
                },
            });

            // Delete the original task
            await Prisma.task.delete({
                where: {
                    task_id: task.task_id,
                },
            });

            console.log('New task created:', newTask);
            res.status(200).json({
                message: 'Task moved successfully',
```

```
                newTask,
            });
        } else {
            // If the task is not moved, just respond with success
            res.status(200).json({
                message: 'Task remained with the same user',
            });
        }
    } catch (error) {
        console.error('Error moving task:', error.message);
        res.status(500).json({
            message: 'Failed to move task',
            error: error.message,
        });
    } finally {
        await Prisma.$disconnect();
    }
};
```

OUTPUT-

BEFORE

←T→			task_id	text	user_id
Edit	Copy	Delete	2	Review pull requests	2
Edit	Copy	Delete	3	Fix bugs in the feature module	3
Edit	Copy	Delete	4	Write unit tests	4
Edit	Copy	Delete	7	Complete project documentation	2



AFTER-

Moving task from user 2 to user 1

←T→			user_id	name
Edit	Copy	Delete	3	Alice Johnson
Edit	Copy	Delete	4	Bob Brown
Edit	Copy	Delete	5	Charlie Davis
Edit	Copy	Delete	6	Diana Evans
Edit	Copy	Delete	7	Edward Harris
Edit	Copy	Delete	8	Fiona Lewis
Edit	Copy	Delete	9	George Martin
Edit	Copy	Delete	10	Hannah Wilson
Edit	Copy	Delete	2	Jane Smith
Edit	Copy	Delete	1	John Doe