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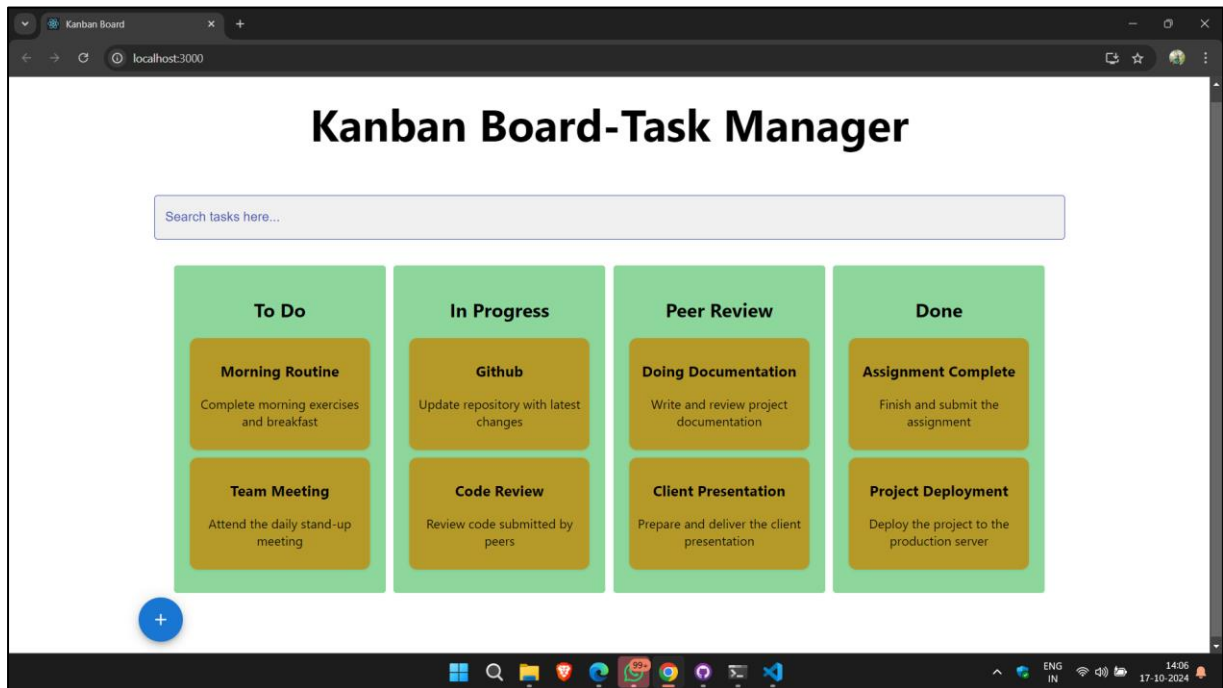


Figure 1: Home Page

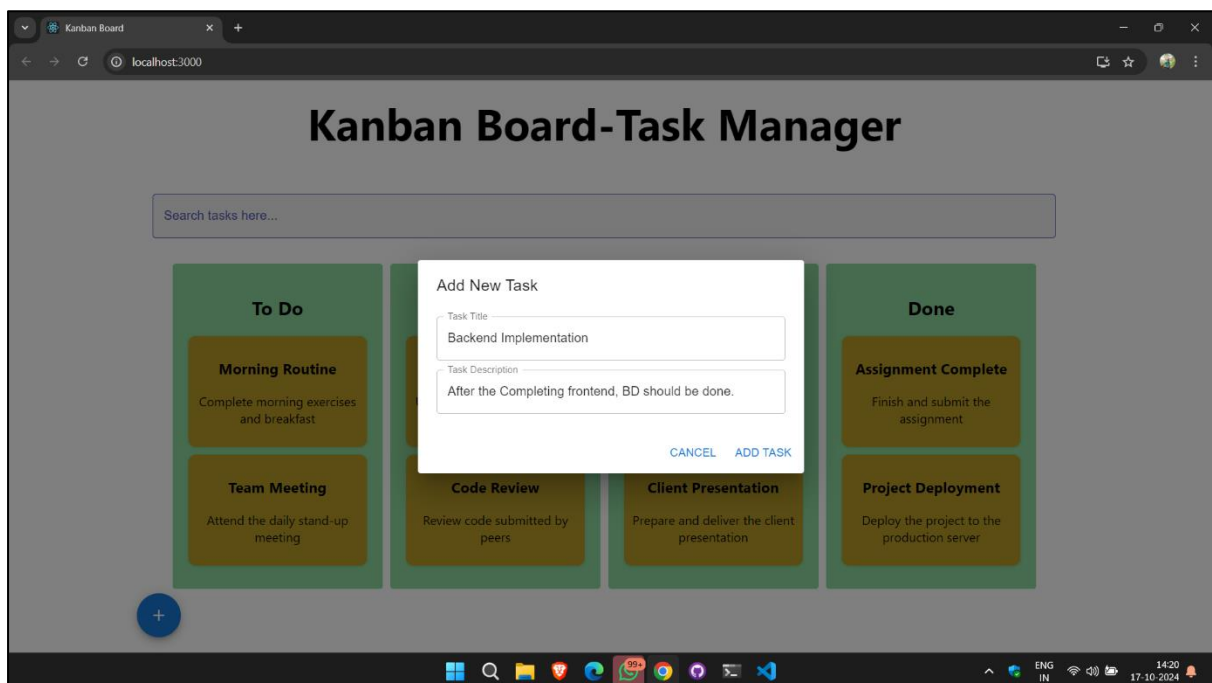


Figure 2: Adding task

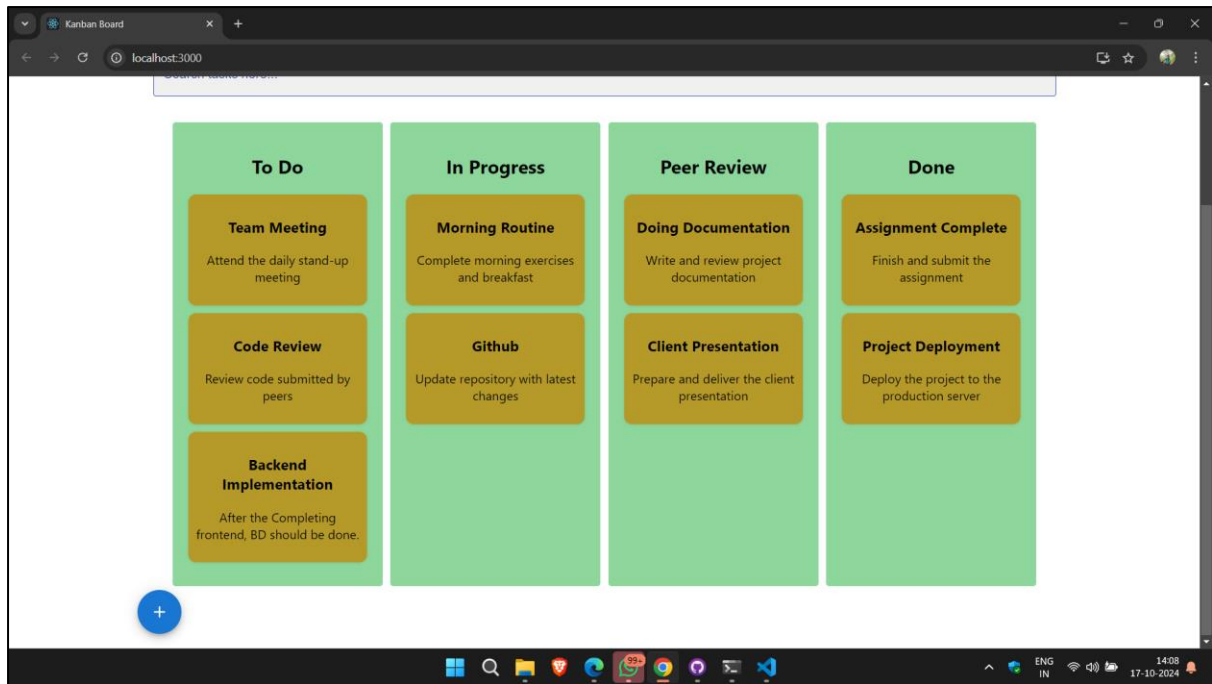


Figure 3: Drag and Drop one section to another

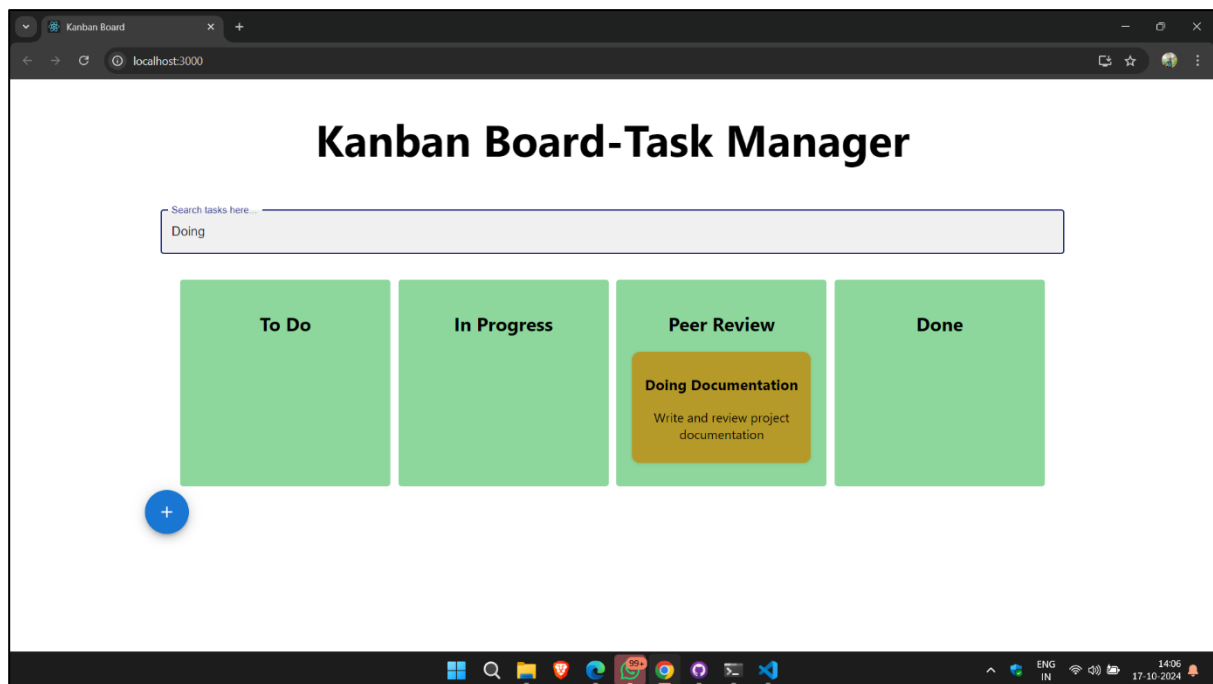


Figure 4: Search functionality

Abstract

This project describes how to create a Kanban board application using React and Redux Toolkit. A Kanban board is a visual tool for organizing tasks and projects, often used in agile methods. The app includes key features like task creation, moving tasks between columns, and customization options. It uses React for the user interface and Redux Toolkit for managing state, making it a strong and flexible solution.

Introduction

A Kanban board helps organize tasks and projects visually and is often linked to agile practices. This guide will show you how to build a Kanban board with React and Redux Toolkit.

Customization and Enhancements:

Styling:

Use CSS to change the look of the Kanban board, including:

- Background color
- Font styles
- Borders
- Spacing and padding
- Task card colors
- Column headers

Task Details:

Add more information to each task, such as:

- To Do
- In Progress
- Peer Review
- Done

Kanban Board Tasks

Column	Title	Description
To Do	Team Meeting	Attend the daily stand-up meeting.
In Progress	Github	Update repository with latest changes.
Peer Review	Doing Documentation	Write and review project documentation.

Done	Project Deployment	Deploy the project to the production server.
In Progress	Morning Routine	Complete morning exercises and breakfast.
Done	Assignment Complete	Finish and submit the assignment.
Peer Review	Client Presentation	Prepare and deliver the client presentation.

Literature Survey

Kanban boards have become popular for project management, especially in agile methods. This survey looks at research on Kanban boards, focusing on how effective they are, challenges in using them, and areas for future study.

Effectiveness of Kanban Boards

- Increased Productivity: Many studies show Kanban boards help people work better by clearly showing tasks and progress.
- Better Teamwork: They help team members work together and promote transparency.
- Reduced Work-in-Progress (WIP): Limiting tasks in progress helps avoid delays and improves workflow.

Implementation Challenges

- Resistance to Change: Some team members might resist switching from traditional methods.
- Defining Workflows: It's important to set clear workflows for successful use of Kanban.
- Measuring Success: It can be hard to measure the benefits of Kanban without the right metrics.

Areas for Further Research

- Hybrid Approaches: Studying how Kanban can work with other methods like Scrum or Waterfall.
- Scalability: Finding out how to scale Kanban for larger projects.
- Customization: Creating tailored Kanban boards for specific industries.
- Technology Integration: Combining Kanban with project management tools for better automation.

Methodology

Building an online code editor requires careful planning. Here's a simple step-by-step approach to create a Kanban board application:

1. Planning:

- Define Project Scope: Clearly outline the features you want.
- Gather User Stories: Collect information on what users need.
- Technical Requirements: Specify what hardware and software are needed.

2. Design:

- UI Design: Create mockups that focus on user-friendliness.
- System Architecture: Plan the overall structure of the system, including the frontend.

3. Development:

- Agile Development: Use an Agile approach for ongoing development.
- Prioritize Features: Focus on key features like drag-and-drop.
- Modular Development: Break the project into smaller parts.
- Development Tools & Libraries: Use libraries like `@hello-pangea/dnd` for drag-and-drop and `Styled Components` for styling.

REACT JS

React is a library for building user interfaces that helps create complex web applications. It automatically compiles code and manages styles, making it a popular choice.

JAVASCRIPT

JavaScript is a high-level language used for creating dynamic web content and handling requests.

Redux / Redux Toolkit

Redux:

- A tool for managing state in JavaScript applications. It makes it easier to understand and predict changes in your application.

Redux Toolkit:

- Simplifies using Redux, reducing unnecessary code and making it easier to read. It includes helpful tools like `createSlice` for generating reducers and `createAsyncThunk` for handling data.

Conclusion

Kanban boards are useful for managing projects, offering advantages like better productivity and teamwork. While there are challenges in using them, ongoing research is helping to overcome these issues. Future studies should focus on combining Kanban with other methods, scaling it for larger projects, customizing it for specific needs, and integrating it with technology for better efficiency.