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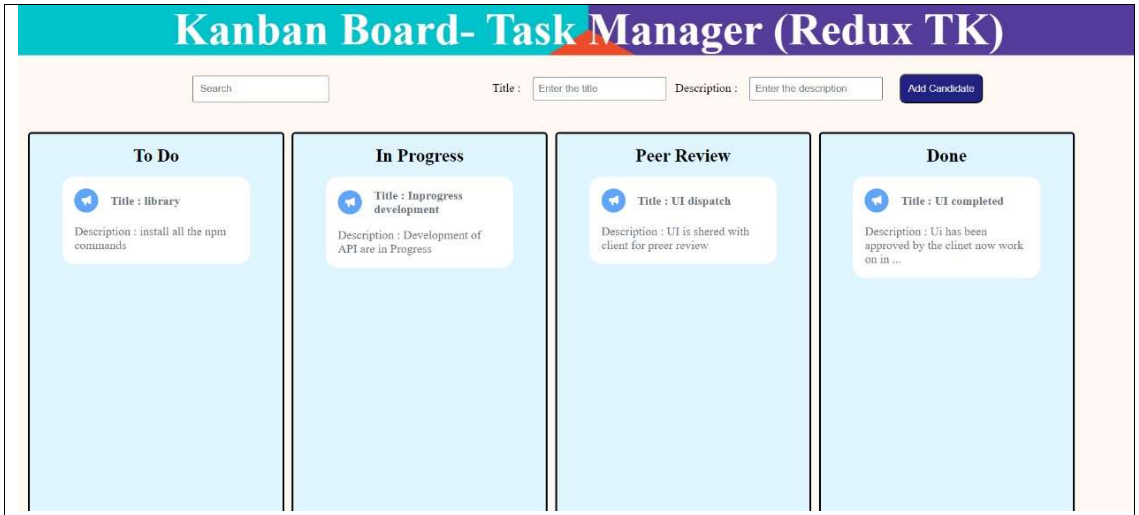
1. List of Figures & Tables



Kanban Board- Task Manager (Redux TK)

To Do

Title : library
Description : install all the npm commands

In Progress

Title : Inprogress development
Description : Development of API are in Progress

Peer Review

Title : UI dispatch
Description : UI is shered with client for preer review

Done

Title : UI completed
Description : Ui has been approved by the clinet now work on in ...

Figure 1 – UI Interface

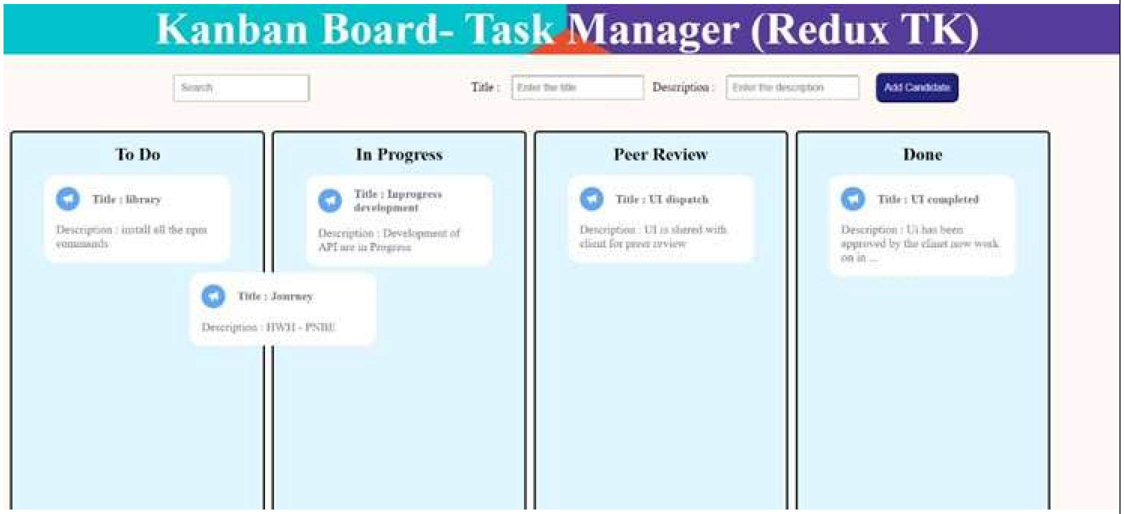


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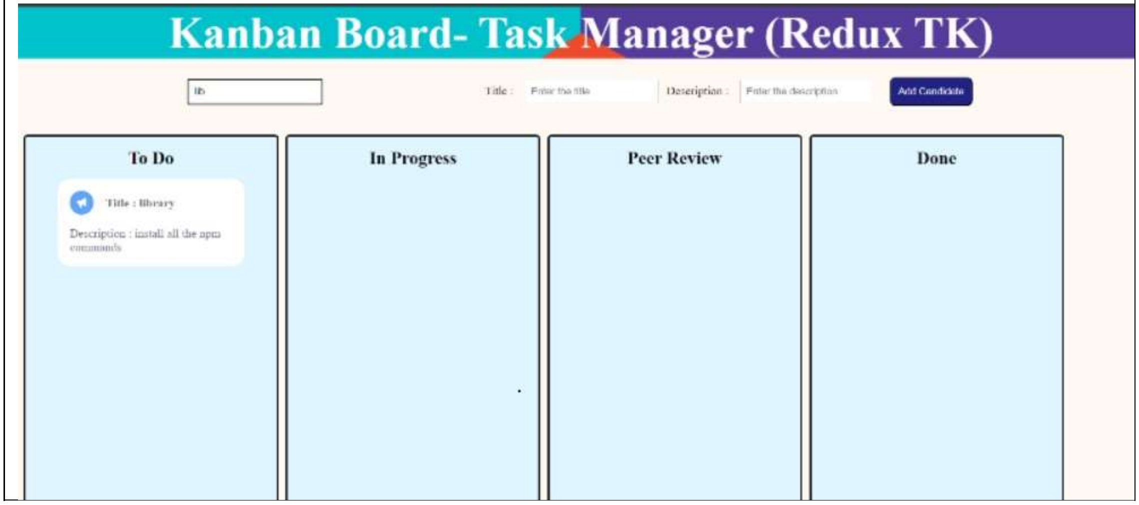
Figure 2 – Drag and Drop functionality



Kanban Board- Task Manager (Redux TK)

To Do

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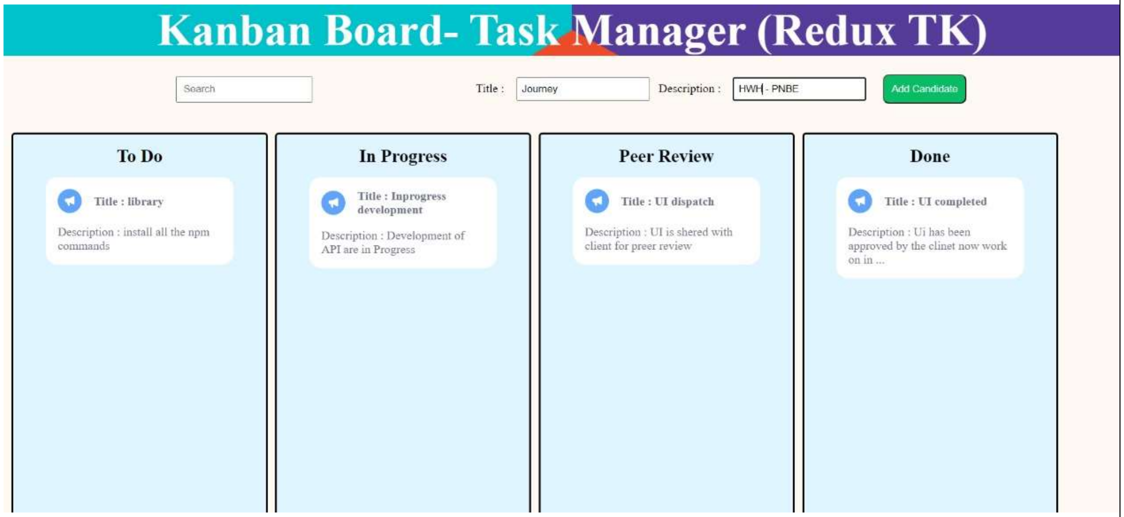
In Progress

Peer Review

Done

Figure 3- Search in Kanban Board



Kanban Board- Task Manager (Redux TK)

Search

Title : Journey

Description : HWH - PNBE

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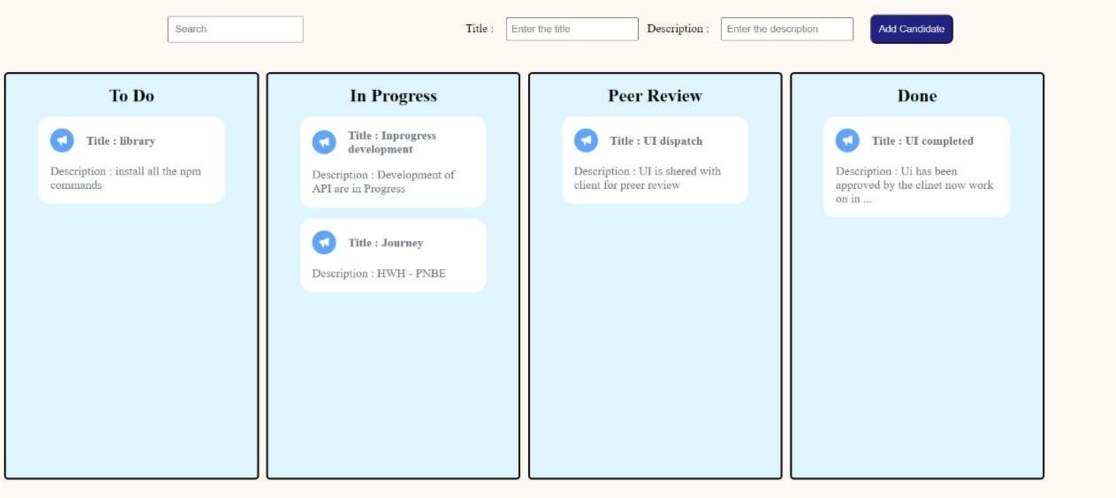
Figure 4 -Adding new task in board



Search

Title : Enter the title

Description : Enter the description

To Do

Title : library

Description : install all the npm commands

In Progress

Title : Inprogress development

Description : Development of API are in Progress

Title : Journey

Description : HWH - PNBE

Peer Review

Title : UI dispatch

Description : UI is shered with client for preer review

Done

Title : UI completed

Description : Ui has been approved by the clinet now work on in ...

Figure 5 – inserted value displayed.

2. Abstract

This project presents the development of a Kanban board application using React and Redux Toolkit. The Kanban board serves as a visual tool for organizing tasks and projects, commonly employed in agile methodologies. The application incorporates essential features such as task creation, movement between columns, and customization options. The underlying architecture leverages React for the user interface and Redux Toolkit for state management, ensuring a robust and scalable solution.

3. Introduction

A Kanban board is a visual tool used to organize tasks and projects, often associated with agile methodologies. This guide will demonstrate how to build a Kanban board using React and Redux Toolkit.
Show drafts

Customization and Enhancements:
Styling:

- Use CSS to customize the appearance of the Kanban board, such as:
    - Background color
    - Font styles
    - Border styles
    - Spacing and padding
    - Task card colors
    - Column headers

Task Details:

- Add more details to each task, such as:
    - To Do
    - In Progress
    - Peer Review
    - Done

Kanban Board Tasks

Column	Title	Description
To Do	Library	Install all the npm commands
In Progress	Inprogress development	Development of APIs are in progress
Peer Review	UI dispatch	UI is shared with client for peer review
Done	UI completed	UI has been approved by the client now work on it.
Done	Journey	HWH-PNBE

4. Literature Survey

Kanban boards have gained significant popularity in recent years as a visual tool for project management, particularly within agile methodologies. This literature survey aims to explore existing research and studies on Kanban boards, focusing on their effectiveness, implementation challenges, and potential areas for further development.

Effectiveness of Kanban Boards

- **Improved Productivity and Efficiency:** Numerous studies have demonstrated that Kanban boards can enhance productivity and efficiency by providing a clear visualization of tasks and their progress.
- **Enhanced Collaboration:** Kanban boards facilitate collaboration among team members by providing a shared workspace and promoting transparency.
- **Reduced Work-in-Progress (WIP):** By limiting the number of tasks in progress, Kanban boards can help prevent bottlenecks and improve workflow.

Implementation Challenges

- **Resistance to Change:** Introducing Kanban boards into existing workflows can face resistance from team members who are accustomed to traditional methods.
- **Defining Workflows:** Establishing clear and effective workflows is crucial for successful Kanban implementation.
- **Measuring Success:** Quantifying the benefits of Kanban can be challenging, requiring appropriate metrics and analysis.

Areas for Further Research

- **Hybrid Approaches:** Exploring the combination of Kanban with other methodologies, such as Scrum or Waterfall.
- **Scalability:** Investigating how Kanban can be effectively scaled to large-scale projects and organizations.
- **Customization:** Developing tailored Kanban board configurations to suit specific industry domains or project types.
- **Technology Integration:** Integrating Kanban boards with project management tools and software to enhance automation and data analysis.

5. Methodology

Designing and developing an online code editor website requires careful planning and consideration of various factors to ensure a seamless user experience and successful online work experience. Here's a step-by-step methodology for creating an online code editor:

1. Planning:

- **Define Project Scope:** Clearly outline the functionalities and features your online code editor will offer.
- **Gather User Stories:** Collect requirements from potential users to understand their needs and pain points.
- **Technical Requirements:** Specify hardware and software requirements (browsers, internet speed) for the editor.

2. Design:

- **User Interface (UI) Design:** Create mockups for the code editor interface, focusing on usability and clarity.
- **System Architecture:** Design the overall system architecture, including frontend,

3. Development:

- **Agile Development:** Consider adopting an Agile methodology for iterative development and continuous improvement.
- **Prioritize Features:**Drag and drop between different category.
- **Modular Development:** Break down the project into smaller, manageable modules for easier development and testing.
- **Development Tools & Libraries:** Utilize suitable libraries "@hello-pangea/dnd": "^17.0.0" for Drag and Drop , Styled Component for styling ,user interface (React libraries),

5.1 REACT JS

React is a framework that employs Webpack to automatically compile React, JSX, and ES6 code while handling CSS file prefixes. React is a JavaScript-based UI development library. Although React is a library rather than a language, it is widely used in web development. The library first appeared in May 2013 and is now one of the most commonly used frontend libraries for web development. React offers various extensions for entire application architectural support, such as Flux and React Native, beyond mere UI.

5.2 JAVASCRIPT

Javascript is a high-level language which could be used independently or inculcated into the webpage. It can be used to, handle requests and responses and also add dynamic behavior and also store information on a website.

5.3 Rdux /Redux toolkit

Redux

- A predictable state container for JavaScript applications.
- Centralizes application state, making it easier to manage and reason about.
- Uses a unidirectional data flow pattern, ensuring that changes to the state are predictable and traceable.
- Provides a set of tools and principles for building scalable and maintainable React applications.

Key Concepts:

- **State:** The current data of the application, stored in a single object.
- **Actions:** Plain JavaScript objects that describe the changes to the state.
- **Reducers:** Pure functions that take the current state and an action, and return a new state.
- **Store:** The central object that holds the application's state, listens to actions, and updates the state using reducers.

Benefits:

- **Predictability:** Changes to the state are always made through actions, making it easier to understand and debug the application.
- **Scalability:** Redux can handle complex applications with large amounts of state.
- **Reusability:** Reducers can be reused across different components, promoting code modularity.
- **Community Support:** Redux has a large and active community, providing extensive documentation, tutorials, and libraries.

Redux Toolkit

- A set of tools that simplify Redux development, making it easier to get started and write more maintainable code.
- Includes features like createSlice, createAsyncThunk, and RTK Query, which streamline common Redux patterns.
- Provides a more opinionated approach to Redux, offering default configurations and best practices.

Key Features:

- **createSlice:** Generates a slice reducer, actions, and selectors for a specific domain of the application.
- **createAsyncThunk:** Simplifies asynchronous data fetching and handling.
- **RTK Query:** Provides a powerful data fetching and caching solution.
- **Immer:** Uses Immer to create immutable updates to the state, making it easier to reason about changes.

Benefits:

- **Reduced Boilerplate:** Toolkit simplifies Redux setup and reduces the amount of boilerplate code.
- **Improved Readability:** The toolkit's conventions and best practices make code more readable and maintainable.
- **Enhanced Productivity:** Features like createSlice and createAsyncThunk can significantly improve development speed.

6. Conclusion

Kanban boards have proven to be a valuable tool for project management, offering benefits such as improved productivity, collaboration, and efficiency. While implementation challenges exist, ongoing research and development are addressing these issues and exploring new avenues for Kanban adoption. Future studies should focus on hybrid approaches, scalability, customization, and technology integration to further enhance the effectiveness of Kanban boards.