FullStack Kanban Task

**Prepared by:** Kaim Arvas

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# Documentation

# Introduction

# The FullStack Kanban Task is an advanced project management tool designed to streamline task creation and workflow management. Users can easily create tasks and manage them through a dynamic drag-and-drop interface.

## Creating Next.js for Kanban Task

The Kanban Task application was built using Next.js technology to ensure a strong and efficient development framework. Initially, we established a mock folder and created the kanbanlist.ts file for handling data. With these foundational components in place, a responsive design was developed to match the layout specified in Figma meticulously.

## Implementing Drag-and-Drop Functionality with @hello-pangea

Following the creation of the design and mock data for the Kanban board, we integrated the @hello-pangea library to enable drag-and-drop functionality. This involved creating a “Column” component for the board to manage the draggable and droppable features effectively.

## Building the Backend API using Express.js

With the frontend framework in place, the next step was to develop the backend API using Node.js and the Express.js framework. We defined models and interfaces tailored to the task requirements. PostgreSQL was chosen as the database solution for permanent data storage. Additionally, we utilized Tanstack/React-Query to optimize the handling of API requests and responses, ensuring efficient data management and communication within the application.

## Enhancing the Project with UI Improvements and Dynamic Routing

With the backend API in place, we completed the project’s core functionality and ensured smooth operations. We then introduced dynamic routing for the Kanban board, allowing users to access specific boards via unique URLs, formatted as “kanban/{id}”. For improved user interface quality, we integrated the Shadcn framework, particularly utilizing its Button and Form components. Controllers and interfaces were refined to provide superior solutions, some new components were added, and React-Toastify was implemented to enhance user feedback for API responses. Furthermore, we added a Postman collection to facilitate API testing and documentation.

# Summary

# Through the steps outlined above, we successfully developed a Kanban Board leveraging cutting-edge technologies to support advanced project management capabilities. In line with the project requirements, we created a default board with four columns: Backlog, To Do, In Progress, and Designed, allowing users to add and manage tasks efficiently. The integration of high-quality UI frameworks such as Shadcn and React-Toastify significantly enhanced the overall user experience.