SOFTWARE ENGINEERING
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Programming Language and Tech Stack:

For this project, we've decided to build the entire application in React, which includes both the front-end and managing data. React's component-based architecture makes it suitable for creating a dynamic and responsive user interface while handling data efficiently. We won't be using a separate back-end for this project.

User Interface (UI):

The UI design remains a crucial aspect of this project. We're working on creating a user-friendly and responsive interface using HTML, CSS, and JavaScript within the React framework. The task addition form will include input fields for the task title and status, making it easy for users to input their tasks. To track task completion status, we're implementing a delete option to delete the task once it's done. Our goal is to keep the UI intuitive and straightforward. We've also implemented a dark mode.

Portability:

We aim to make this to-do list website accessible from various devices. To achieve portability, we're ensuring that the UI is responsive and adapts well to different screen sizes, including desktops, tablets, and mobile phones. Additionally, we're considering turning it into a progressive web app (PWA) to enhance portability and allow for offline access, providing a seamless user experience.

Data Structures:

For managing tasks and their properties, we're using an array data structure. Each task is represented as an object with properties like title (a string) and task summary. These data structures within React will help us organize and manipulate tasks efficiently.

Desirable Characteristics:

Efficiency is a top priority, so we're optimizing data retrieval and updates within React for better performance, especially when dealing with a potentially large number of tasks. Scalability is considered in the design to ensure the system can handle growth. We're also implementing robust error handling and validation for a smooth user experience.

Additional Features :

We're also considering additional features, such as user accounts and authentication, task priorities or categories, task reminders or notifications, and sorting/filtering options for tasks, all implemented within the React application. These enhancements would make the to-do list website even more versatile and user-friendly. These enhancements will take more development time.