Logic Document - Collaborative To-Do Board

Smart Assign Logic

Smart Assign Logic:

The "Smart Assign" feature is designed to automatically assign a task to the user with the fewest number of active (non-Done) tasks. Here's how it works:

1. Filter out tasks that are in 'Done' status to find only active tasks.

2. Create a map of user-task counts for each user.

3. Iterate through the list of active tasks and count how many each user has.

4. Find the user with the minimum number of active tasks.

5. Update the selected task with that user as the new assignee.

6. Log the assignment action in the activity panel.

This ensures balanced workload distribution among users in real time.

Conflict Handling Logic

Conflict Handling Logic:

To ensure collaborative integrity, we implemented a basic conflict resolution mechanism:

1. Each task object contains a 'lastUpdated' timestamp.

2. When a task update is attempted, the app checks the stored version's 'lastUpdated' timestamp against the current version.

3. If timestamps don't match, it means someone else has modified the task in the meantime.

4. In such cases, a modal appears showing both versions:

   - Local (user's current update)

   - Remote (latest from system)

5. The user is given 3 options:

   a. Merge: Combine content (e.g., append both descriptions)

   b. Overwrite: Replace remote with the local version

   c. Cancel: Do nothing

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6. The final decision is logged into the activity log.

This approach helps reduce data loss and encourages user-driven conflict resolution.