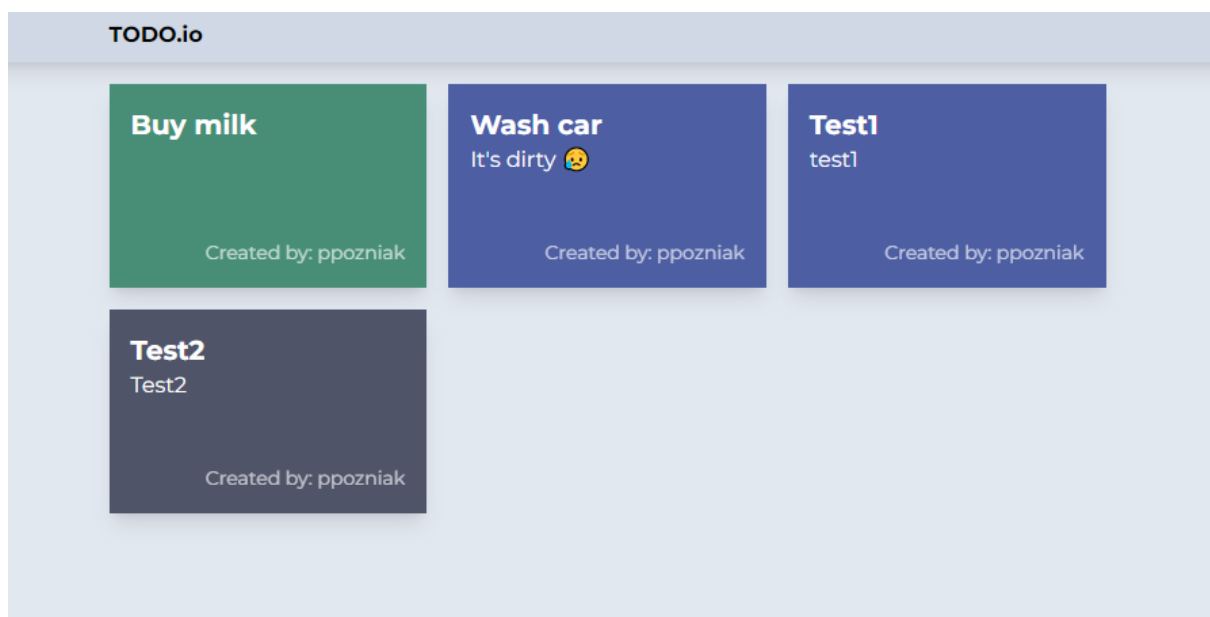


Design document: Movable TODOs

This feature enables creating TODOs in specific places on a board and freely moving them when needed.

Problem



- Currently TODOs aren't interactive and it's impossible to **re-order**, **organise** or **group** them.
- This feature has been observed in many of our competitors and is a standard.

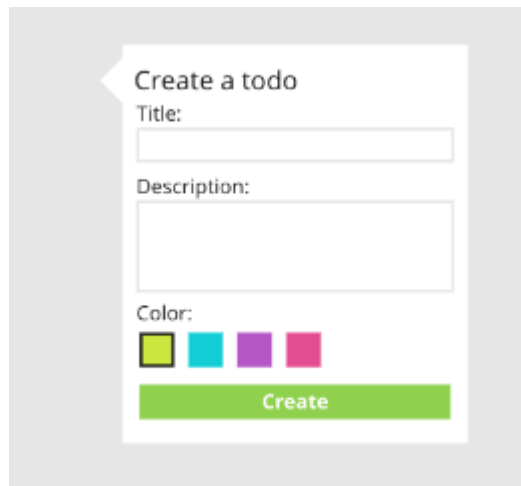
Proposal

The following sections applies to desktop users only.

Creating new TODOs

On desktop when user clicks on an empty space on a board a modal should appear.

This then allows users to create TODO in **that exact position**.



Coordinates of the TODO should be sent to the server along with other data. This should automatically update other users' screens and also show TODO in the same position.

It's important to keep in mind position of the modal, especially when clicked near viewport's border.

Moving TODOs

TODOs should be **movable with drag and drop gesture**.

This should update in real time for other online users as TODO is being dragged.

Performance: It's worth testing and it may be necessary to add throttling to the emitted updates

(to prevent it from firing too often)

- While moved, TODO should be **disabled for any interactions** from other users.

Server performance: Server should send data of a single TODO being moved, as sending out every TODO with each update would be a waste.

Different screen sizes

It's important to remember that users have different screen sizes.

The whole board should become scrollable if any TODOs are outside the viewport.

Mobile users

It would be much harder to use this feature on mobile devices, so preferably this feature is disabled on smaller screen.

TODOs will instead render in a **organised manner in a grid**.

Coordinates of a TODO should matter for **ordering** (*based on coordinates, left to right on a board*) and an animation should show users when TODOs are moved.

To create a TODO user would need to click a button that opens a **popup**, which feels much more native for a mobile.

Plan

1. Given the current implementation of the application it's best to start with mobile
 - a. Ensure items appear in a grid
 - b. Create modal for mobile and a button that toggles it
 - c. For better UX: Animation of TODOs changing their order
2. Next step is to introduce TODO coordinates into the system and allow users on desktop to create TODOs when clicking on a board.
 - a. Scrollable board
3. The last step is to implement drag and drop functionality