04.02.2024

GENERAL PLAN – 300 KANBAN BOARD

1. Student Information

Behram ULUKIR – 1022757

Aalto University English BSc Programme - Data Science

3rd-year student

2. General Description

A kanban board is one of the tools that can be used to implement kanban to manage work at a personal or organizational level. Kanban boards visually depict work at various stages of a process using cards to represent work items and columns to represent each stage of the process. Cards are moved from left to right to show progress and to help coordinate teams performing the work. A kanban board may be divided into horizontal "swimlanes" representing different kinds of work or different teams performing the work.[1] By definition, a kanban board includes text-editable cards and the user is free to add new cards and categories. Mostly, the cards contain tags to filter and group. In this project, the intermediate level requires that these files are importable and exportable. Also, it requires that a single user can have multiple boards to manage. In addition to those, it requires several other features at the challenging level, which I intend to complete the project at. Those features are card templates, card checklists, interactive cards, card repository to store files attached the cards, customizable backgrounds, polished UI and UX.

3. Functionality

As the Kanban boards are for organizing projects and schedules, they can be used for these purposes in various ways. A common approach is considering each column on the Kanban board as a different phase of the project and listing things to do at that phase in the specific column. The additional features make each card more detailed and make it possible to organize different things. This includes adding checklists, deadlines, progress bars, action buttons, and file attachments. With that, a user can add more information to cards and make them more detailed. An also important feature of the Kanban board is flexibility. By drag-drop motions, users can move a card between columns/stages so that they can reorganize the project schedule. They also search cards with tags, they can archive them and return them from archive pile. With these features, Kanban board is a handy tool that users can use in different ways to organize projects, their personal schedules, or anything they want.

[1] https://en.wikipedia.org/wiki/Kanban_board

4. Draft User Interface

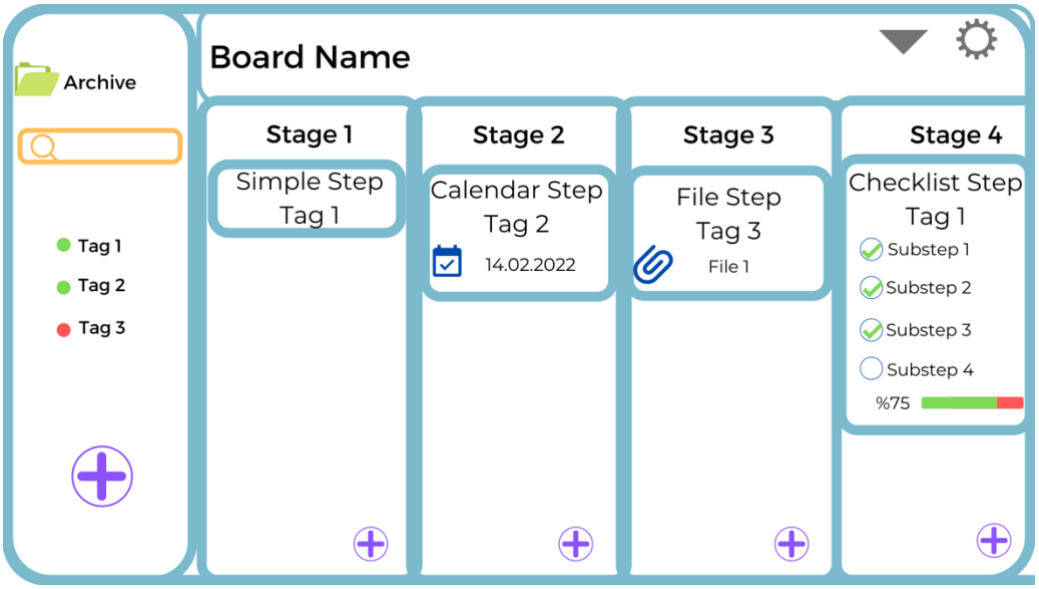

Figure 1: Main UI

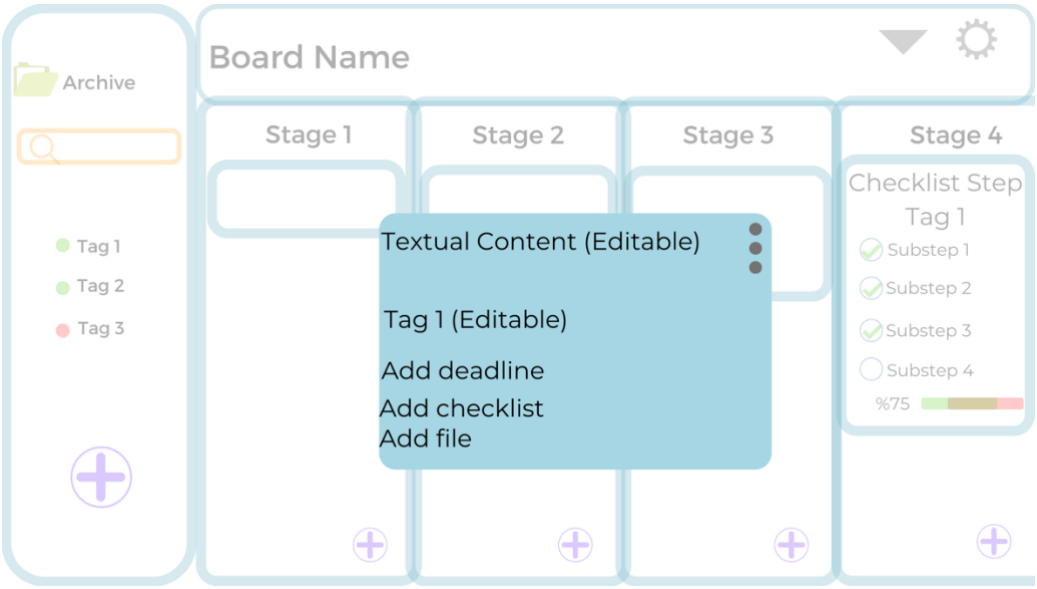

Figure 2: Card Edit UI

The two pictures above, give a vision of what the actual app will look like, despite their scaling problem. On the main screen, you will be able to change the stages of cards by the drag-drop method. You will also be able to search and filter the cards according to their tags. A card will be tagged as “untagged” if the user hasn’t assigned any tag for a particular card. With the big plus button under the tags section, users will be able to add new stages or new boards. The small plus buttons, however, are for adding cards for the stages they are located at. By clicking the wheel at the top corner, users will access settings and import-export ability. Down arrow just next to the wheel is for switching between different boards by a dropdown menu. Cards at the same stage will be ordered according to two different measures: 1. Time left to deadline 2.

The time that card was added. Same measures will be considered as well, for the cards at the same stage for ordering. However, users will be able to reorder them as they want to by dragging. By clicking the “archive” button at the top left, users will reach the archive of cards. There, they will be able to delete the cards permanently or bring them back.

The second draft photo is about the card edit screen. On that screen, users will be able to edit cards. This is also the screen when users try to add new cards. Here, they will be able to edit the description and tags of the card, add deadline, checklist, and file. By clicking the three dots at the top right of the card, they will see a dropdown menu to add card functionality, edit the card visually like changing color, and do other details.

As you know, those images don’t reflect the actual visuality of the app so much, since they are at the early early stages. However, I can say that I am considering preserving the pastel color palette and smooth curves, of course in an elegant way. I will decide on that later.

5. Files and File Formats

In this project, the challenging level requires that users should have the ability to add files to cards. This in fact leads to greater design changes than expected. Mainly, this requirement makes storing all data in a text file impossible. For that reason, I decided to design program files in a matryoshka doll-like method. That means whole program files will be represented by a file. Inside it, there will be different board files and an archive file. Inside the archive file, there will be card files. Card files will be named with unique random numbers, and they will contain a text file and other linked files. A text file will contain all the necessary information about the card and it will be structured as follows:

1. Stage: *StageName*
2. Text: *TextDescription*
3. Tags: *Tag1, Tag2, Tag3*
4. Color: *R: x, G: x, B: x*
5. Deadline: *DD.MM.YYYY*
6. ChecklistItems:

   Item1 – Status

   Item2 – Status

   Item3 – Status

   Item4 - Status
7. CardActivity: *ActivityKey*
8. LinkedItems: *ItemCodes*

The application will read a text file like that to draw the card visually.

6. Errors

In a project where you have a lot of different types of data, a highly possible error is information given in a wrong format. For example, a user can try to use a different format for dates, which might confuse the user later on while using other features such as the progress bar. To avoid that and any similar mistakes, the application will mandate using only accepted types of data while inputting data and any other data type will not be accepted. In that way, the application won't try to save and then read any incorrectly formatted input.