Task List Organizer

Stakeholders

- User: Any person that uses the task-list organizer
- Admin: A person that manages the server

Terminology

- Board: section of the task-list organizer that contains a collection of lists.
- Lists: collection of cards.
- Card: task.
- Key clash: situation in which two boards have the same name/key.

Epics

MINIMAL APPLICATION

As a user, I want...
- To be able to see a board from multiple devices at the same time, so that I can share the board with my friends.
  - Boards are stored on the server.
  - Every time a board is opened, it loads the board from the server.
- To be able to see the changes made from one tab appear on another, possibly on another device, in real time, so that I and others can work together.
  - Every change made by a user is immediately stored on the server.
  - Whenever the contents of a board are updated on the server, it automatically updates the board for every other user that is viewing it.
- To drag and drop tasks between lists, so that I can easily and intuitively organize my board.
  - Using the mouse you can click and hold to drag a card around the board.
  - If the user is dragging a card, releasing the mouse button moves the card to a position in the task list nearest to the cursor (if it exists).
- To add, remove and edit cards and lists, so that I can use the task organizer for anything I want.
  - The bottom of each task list has a button that can be used to append a new card to the task list.
  - There exists some way for the user to change the contents of a card.
  - Each individual card can be removed separately.

As an admin, I want…
- To stop and start the server without losing boards and their contents, so that I can update the application without having to manually do a backup.
  - Boards are stored in the database on shutdown.

- Boards to be continually saved, so that in the event of a crash boards and their contents are always stored safely such that they return when the application is started again.
  - Changes to boards are immediately updated in the database whenever they occur.

MULTI BOARD

As a user, I want...
- To create and delete my own boards, so that I can organize my task lists over separate boards, and remove boards that are no longer useful.
  - New boards can be created via a board creation page.
  - The board creation page can be accessed from any page.
  - Each board can be deleted.
  - Whenever the user tries to create a board with a name/key that is already connected to an existing board, the user is notified that the name/key already exists and they need to choose a different name/key.
- To access boards by inputting their name/key, so that each individual board can be accessed easily and directly.
  - Boards can be accessed via a board access page.
  - The board access page can be accessed from any page.
  - Input of a key that doesn't match to a board should ask the user if it wants to create a new board instead, and provide a button or link for the user to do so.
- To be able to add a title to my board that is independent of the key, so that I am always able to see what a board is about without getting the key clashes that are otherwise likely to occur if the title was not independent of the key.
  - When creating a board, a title may be entered.
  - If the title field is left empty, the title defaults to the key/name of the board.
  - The title can be changed by clicking on it, and writing a new one.

As an admin, I want…
- To be able to access a secret admin page, so that I can access and manage all existing boards easily.
  - By inputting a 'secret' board key in the board access page the admin page can be accessed.
  - Via the admin page any board can be accessed and edited.

ADVANCED CARDS

As a user, I want...
- To create detailed cards so that I can store more detailed information in a card.
  - Cards can contain a description
  - Cards can contain additional subcards within them.
- To be able to edit the description of detailed cards, so that I don't need to first remove and then create a card again just to change its description.
  - By clicking on the description of a detailed card, it allows the user to edit the description.

- To be able to individually add and remove subcards from a card, so that I don't need to first remove and then create a card again just to change its subtasks.
  - New subcards can be appended to the list of subcards.
  - Individual subcards can be removed separately.
  - Subcards can be reordered.
- To add deadlines to tasks, so that I can store the deadline separately and clearly from the rest of the description.
  - Cards can contain a deadline.
  - When a card has a deadline, it is displayed next to it when looking at it from the board.
- To get notified before the deadline of a certain task by pop-up, so that I don't forget to do it.
  - Users that are viewing a board get a pop-up notification/alert to remind them about an approaching deadline.
- To create cards with numerical goals, to track quantitative tasks.
  - Cards can contain numerical goals.
  - When a card has a numerical goal, a progress meter is displayed that shows how close the user is to the goal.
- To have cards change color based on my progress, for better readability.
  - Cards are one color when it is yet to be started.
  - Cards are a second color when it is "in progress".
  - Cards are another color when it is finished.

TAG SUPPORT

As a user, I want…
- To create tags and add them to cards, so I can group cards that are related to each other separately from task lists.
  - New or existing tags can be added to cards.
  - All existing tags are listed per board.
- To customize the colors of each of the tags, so that I can make them more distinguishable, or just change them to my preferences.
  - The color of each individual tag can be to any color.

CUSTOMIZATION

As a user, I want...
- To customize the background color of the board, lists, and tasks to make any board more visually appealing.
  - The background color of each card can be changed to any color.
  - The background color of each list can be changed to any color.
  - The background color of each board can be changed to any color.
- To customize my board by changing its background to an image, so that I can make it even more visually appealing.
  - There should be an option to choose a background image for a board while editing it.

KEYBOARD SHORTCUTS

As a user, I want...
- To perform basic app actions using keyboard shortcuts, so I can perform app actions faster and easier, and rely less on the use of a mouse.
  - Some keyboard combinations trigger actions, for example "Ctrl+N" for adding a new task.
  - There exists a shortcut to add a card to a list.
  - There exists a shortcut to stop adding cards to a list.
  - There exists a shortcut to delete a card.
  - There exists a shortcut to create a new list.
  - There exists a shortcut to add a tag to a card.
  - There exists a shortcut to start editing a card.

PASSWORD PROTECTION

As a user, I want…
- To be able to protect my boards with a password, making them read-only for users that don't know it, so that sharing a board, and allowing someone to edit the board can be done separately.
  - The board creation page contains a password field.
  - If the password field is left empty, the board will not be password-protected.
  - Password protected boards are view only and have an option for the user to enter the password.
  - If a user has entered the correct password, they gain FULL access to the board as if it were unprotected. This includes small actions like modifying board contents and styling, but also more drastic actions such as changing the password, removing password protection, or deleting the board itself.

QUALITY OF LIFE FUNCTIONALITIES

As a user, I want...
- To be able to set a favorite board on a particular device, so that when I open the app, I immediately gain access to the board without having to enter its name/key and password.
  - Boards can be marked as favorite, storing its name/key and password client side.
  - If a board is marked as favorite, it is opened automatically when opening the app, and the stored password is entered.
- To be asked to confirm closing the application, so that I do not accidentally close the window and drop out of the app.
  - When closing the application in some way, the user is asked to confirm in a popup window.
- To get a Telegram/WhatsApp notification on a chosen task, so that I don't forget about the task.
  - Connect to a bot that can send messages through WhatsApp.
  - Bot has access to the board and sends notifications to the users connected to the bot.