# Project work documentation

## Technology choices

This project was built using the technologies introduced during the course:

Frontend:

* Vite + React
* TypeScript to enhance code quality by typing and this way reducing the runtime errors
* Material UI that provides components for consistent and responsive UI
* React Router to allow navigation without page reloads

Backend:

* Node.js + Express
* MongoDB + mongoose for database and database connection
* JWT authentication for authentication
* Bcrypt for password hashing

JWT authentication token is stored into a cookie.

Application uses MongoDB and name for database it expects to use is “projectdb”.

## Components

Relations between different components on frontend side.

Kuva, joka sisältää kohteen diagrammi, Suunnitelma, viiva, Tekninen piirros

Tekoälyn generoima sisältö voi olla virheellistä.

## Declaration of AI usage

ChatGPT was used in the development of the app. ChatGPT was used to get info about MongoDB queries. It was also used for error detection from the code while I tried to debug development time issues with useEffect not triggering when I wanted to.

No other AI was used during the project.

## Features and points

List of features and points I’m aiming for:

* Basic features 25
* Utilization of React 3
* Columns can be reordered 1
* User can set the color of a card 1

## Installation instructions

Prerequisites:

* MongoDB
* Node.JS
* Npm

Installation steps:

1. Clone the repository from github (https://github.com/Swinkkel/CT30A3204\_Project.git)
2. Run preinstall script. This will install backend dependencies.
3. Run install script. This will install frontend dependencies.
4. dev:server script will start backend (server) on port 1234.
5. dev:client script will start frontend (client) on port 3000.

## User manual

When a user first enters the site, he will see the page with only header: Kuva, joka sisältää kohteen teksti, kuvakaappaus, Sähkönsininen, sininen

Tekoälyn generoima sisältö voi olla virheellistä.

With Register, a new user can register into the system. It will redirect to the “\register” page.

With Login, existing users can log in to the system. It will redirect to the “\login” page.

### Register page

Kuva, joka sisältää kohteen teksti, kuvakaappaus, Fontti, numero

Tekoälyn generoima sisältö voi olla virheellistä.

The register page asks user for Username, email address, password and a toggle which defines if the user is administrator. Email addresses must be unique in the system so that it is used to identify the user. Username must be 3 to 25 characters long. Password must be at least 8 characters long, contain uppercase and lowercase letters, a number, and a special character.

### Login page

Kuva, joka sisältää kohteen teksti, kuvakaappaus, Fontti

Tekoälyn generoima sisältö voi olla virheellistä.

The login page asks user for email and password.

### Main page when logged in

Kuva, joka sisältää kohteen teksti, kuvakaappaus, numero, Fontti

Tekoälyn generoima sisältö voi olla virheellistä.

Add column button will open dialog that asks title for new column and then column is added to the board.

Each column has Delete, Add task and Rename buttons. Delete will delete the column. Rename open a dialog where user can enter new title for the column. Add task opens a dialog where user need to enter title, content and color for the new task. Each column also has these left and right arrows that moves column to that direction making it possible to reorder columns on the board.

Each task contains delete and change column buttons. Delete will just delete the task. Change column button open an dropdown selection to which column user wants to move the task. There are also these up and down arrows that allows user to reorder tasks inside the column.

### Create task dialog

Kuva, joka sisältää kohteen teksti, kuvakaappaus, numero, viiva

Tekoälyn generoima sisältö voi olla virheellistä.

The create task dialog contains Title, Content and Color fields. All of them are just text fields but Color is directly used as background color for Card component so that should be valid CSS color value.