

# CSCI 3130 - Group Project

As a group project, you are expected to develop an application similar to **Trello**. You can take a look at their interface, usage details and other features provided at [this link](#) . The following list of features are expected in this project from you to develop.

## 1. User Management

- a. **Sign-up:** Register/Sign-up a user through their email address and a password. Follow basic password validation by having a minimum length of 8 characters, at least 1 uppercase character, 1 lowercase character, 1 number and 1 special character.
- b. **Login:** A user must be able to login through their registered email address and password.
- c. **Forgot password:** Reset the user's password in your database through this functionality.

## 2. Create a workspace and boards

**Workspace:** A workspace is something that can hold multiple boards. For e.g., CSCI 3130 Workspace can have a board for planning the syllabus, classes and tutorials, or a board for each project group.

**Board:** A board contains tasks which will be displayed in the form of cards. Each task would have a status as To-Do, Doing or Done. For e.g., your group project has several features and each one has some tasks. You can create a card for each task and assign it a status. This way you will be able to track how many tasks you have completed or are yet to complete.

The following features are expected w.r.t. workspace and board.

- a. Create a workspace
- b. Add members to your workspace
- c. Update workspace details
- d. Create a board inside the workspace
- e. Delete a board

## 3. Task management

- a. **Create tasks** in the form of cards. Note that tasks are a part of boards and workspaces contain one or more boards
- b. **Assign a task** to a particular member belonging to the workspace
- c. **Change the status** of the task. For e.g., move it from *To-Do* to *Doing*
- d. **Create a date field** and set a date of completion

## 4. Search and filter

- a. **Search for task cards** based on task names
- b. **Filter** based on member names, cards assigned to the logged in user and date of completion

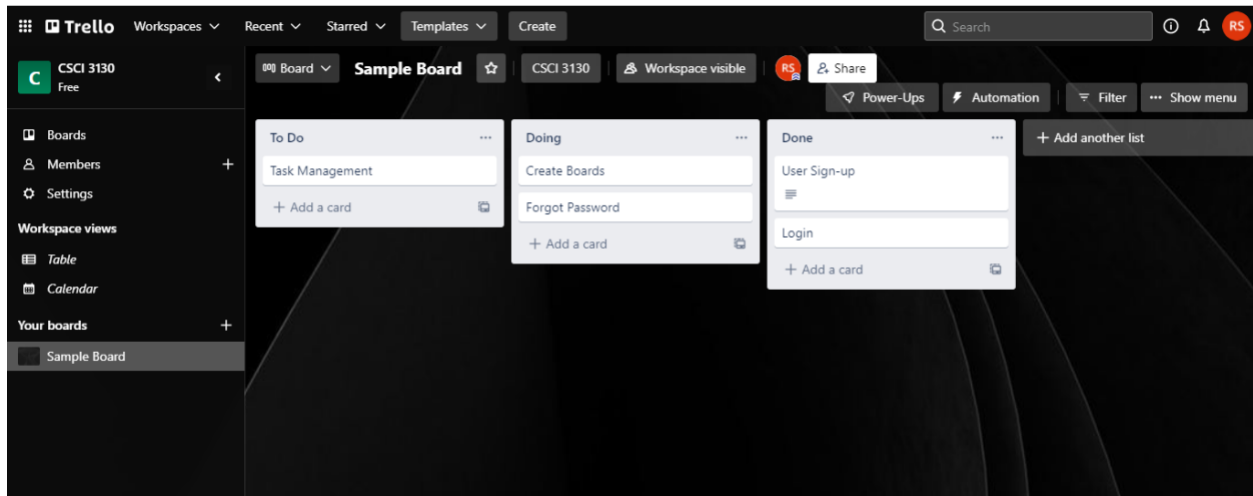


Figure 1: Sample view of the dashboard

## Optional features

1. **Analytics:** Display the number of users currently working on open issues, i.e., tasks which are not in *Done* state
2. **Notification and alerts:** Send emails on the tasks that are in progress and must be done by the next day
3. **Role based access:** Create roles like *Project Manager* and *Developer*. A project manager is responsible for creating workspaces, boards, and adding members to a workspace. Developers can create tasks, assign them, and change their status.

## Deliverables

- **Release-1:** Create a data model, set up your frontend and backend projects – Due after week 4
- **Release-2:** CI pipeline, TDD for backend (include test cases only for the business logic and database), complete feature 1 and 2 – Due after week 8
- **Release-3:** Complete features 3 and 4, refactor your project as per the software design principles taught in class – Due after the last week of classes

## Tech Stack

- **Frontend:** React JS
- **Backend:** Spring Boot with Java Persistence API (JPA)
- **Database:** MySQL hosted on Dal Servers (credentials will be provided to you by your TAs)
- **Hosting:** Heroku