

# CS4530 Final Project: NUBoard

Group 309: Aayush Turakhia, Lawrence Osher, Jylah Bah and Jason Leon

## Our Feature: NUBoard

In the original build that NUBoard was created off of, dubbed “Fake StackOverflow”, users are able to post questions to a common forum where other user may answer them. They are also able to play games of Nim with other users and begin direct messages. The primary feature however, is the question-answer system that allows users to overcome blockers in projects they may be working on. In this state, the program does not support the capability of actually tracking the progress you make on a specific project, and users need to use external software to do so. What if users could track their progress through a native project-planning dashboard?

To remedy this, we developed a new features, called NUBoard, that does exactly that. It creates a Jira-esque project planning dashboard that allows users to create sets of tasks, assign them to sprints/backlog, and adjust their statuses as they make progress accordingly. We also have the ability to construct a roadmap of tasks using dependencies as edges.

## Demo and Source

Our demo site can be found at:

<https://cs4530-s25-309.onrender.com> and our code can be found at:

<https://github.com/neu-cs4530/spring25-team-project-spring25-project-group-309>

## Our Technology Stack and Design

We added Project, Sprint, and Task schemas, models, and types with the Task having relevantQuestions as a field that connects to the questions asked in the existing FakeStackOverflow architecture. Then, we created services, controllers, and corresponding automated tests with mockingoose and jest for each of our three new data models. On the client-side, we utilized React Bootstrap for clean and consistent styling, React DND Kit for drag-and-drop functionality, React Redux for application-wide state management, and vis-network for our Roadmap Graph. Redux came in useful for ensuring that we used consistent project data throughout the three different screens and so that our code was cleaner by not having to pass props and callback functions all throughout multiple components. “Prop drilling” can be error-prone and messy, and Redux helped to avoid this. We have a pipeline to run an automated test suite, and have deployed the software on render connected to a MongoDB.

## Future Work

There are some proposed extensions to our product that could be built. First, support for multiple projects - we have made our code extensible for such a change, by having the projects endpoints currently return a list of projects, but the UI cannot support displaying multiple or switching between them. Furthermore, the ability to add attachments/documents via upload to different tasks could also be beneficial in adding context to each task.

NU Board

Search ...

Log out

View Profile

Questions

Tags

Messaging

Users

Games

Project Planning

Sprint Planning

Kanban Board

Task Roadmap

### NUBoard - Sprint Planning

Filter by User: All

+ Create Sprint + Create Task

Sprint 1 02/26/25 - 03/12/25 Done 19

- [UI] Project Roadmap Page Prototype Done 2
- [UI] Navigation and Routing Done 2
- [UI] Kanban Board Page Prototype Done 3
- [UI] Sprint Planning Page Prototype Done 4
- [DB] Create DB Models Done 5
- [API] API Skeleton Done 3

Sprint 2 03/12/25 - 03/26/25 Not Started 11

[DB] Create DB Models

Sprint 1

Priority: High

Assigned To: aturakhia

Status: Done

Task Points: 5

Creating database schemas, data models, and types for Task, Sprint, Project in the backend of the project.

Relevant Questions:

- Quick question about storage on android
- Object storage for a web application
- Programmatically navigate using React router

Task Dependencies:

- [UI] Project Roadmap Page Prototype
- [UI] Navigation and Routing
- [UI] Kanban Board Page Prototype

NU Board

Search ...

Log out

View Profile

Questions

Tags

Messaging

Users

Games

Project Planning

Sprint Planning

Kanban Board

Task Roadmap

### NUBoard - Board

Sprint 1: 02/26/25 - 03/12/25

Filter by User: All

Complete Sprint + Create Task

Cannot update task: All prerequisite tasks must be finished.

Backlog (2)

- [UI] Roadmap Filters 2
- [UI] Roadmap Task Details 1

To-Do (2)

- [API] API Skeleton 3
- Create Poster 3

In Progress (1)

- Create Presentation Slides 2

Done (5)

- [UI] Project Roadmap Page Prototype 2
- [UI] Navigation and Routing 2
- [UI] Kanban Board Page Prototype 3
- [UI] Sprint Planning Page Prototype 4
- [DB] Create DB Models 5