

Our Goal

Provide a teacher-driven computer programming platform to ease transition for first-time programming students by promoting out-of-class learning and healthy competition in an unbiased environment.

Problem Motivation

The problem of student retention, especially females, in introductory programming courses is not one with an easy solution. Students introduced to computer programming for the first time often encounter problems including, but not limited to:

- Feeling peer pressured and unsure about speaking up in class due to fear of judgment.
- Understanding continuous out-of-class programming practice.
- Transitioning into an unknown environment, building community and a sense of belonging.

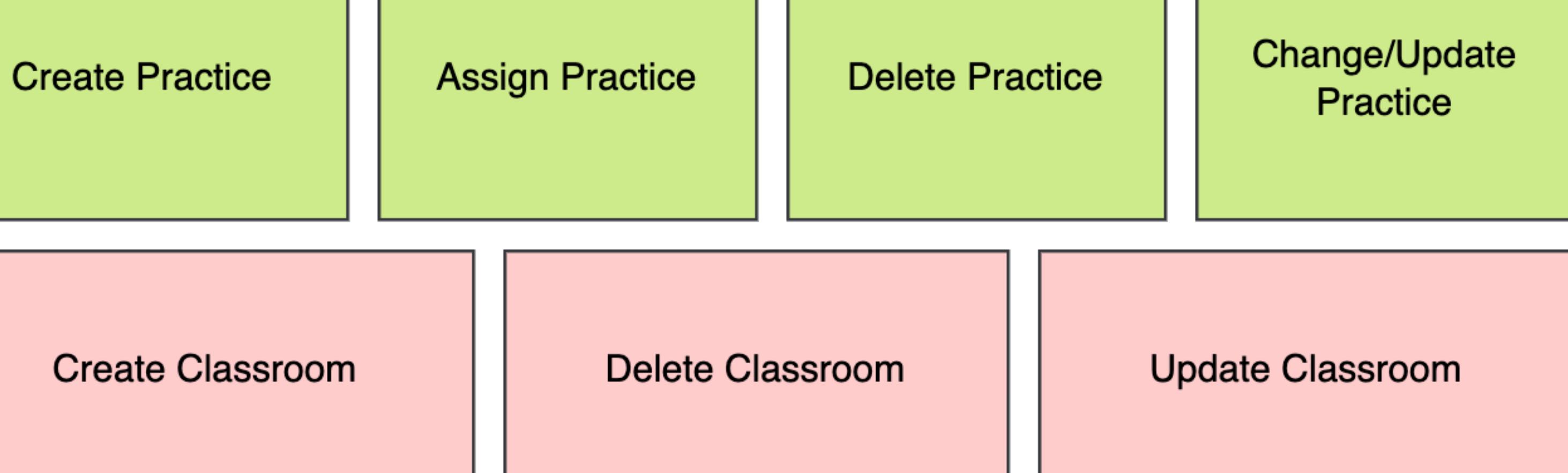
Code Karin is designed to address these common issues and increase student retention in CS.

Use Cases and the Use Goal Diagram



Professor

See students who attend which practice



Student

View Practice

Do Practice

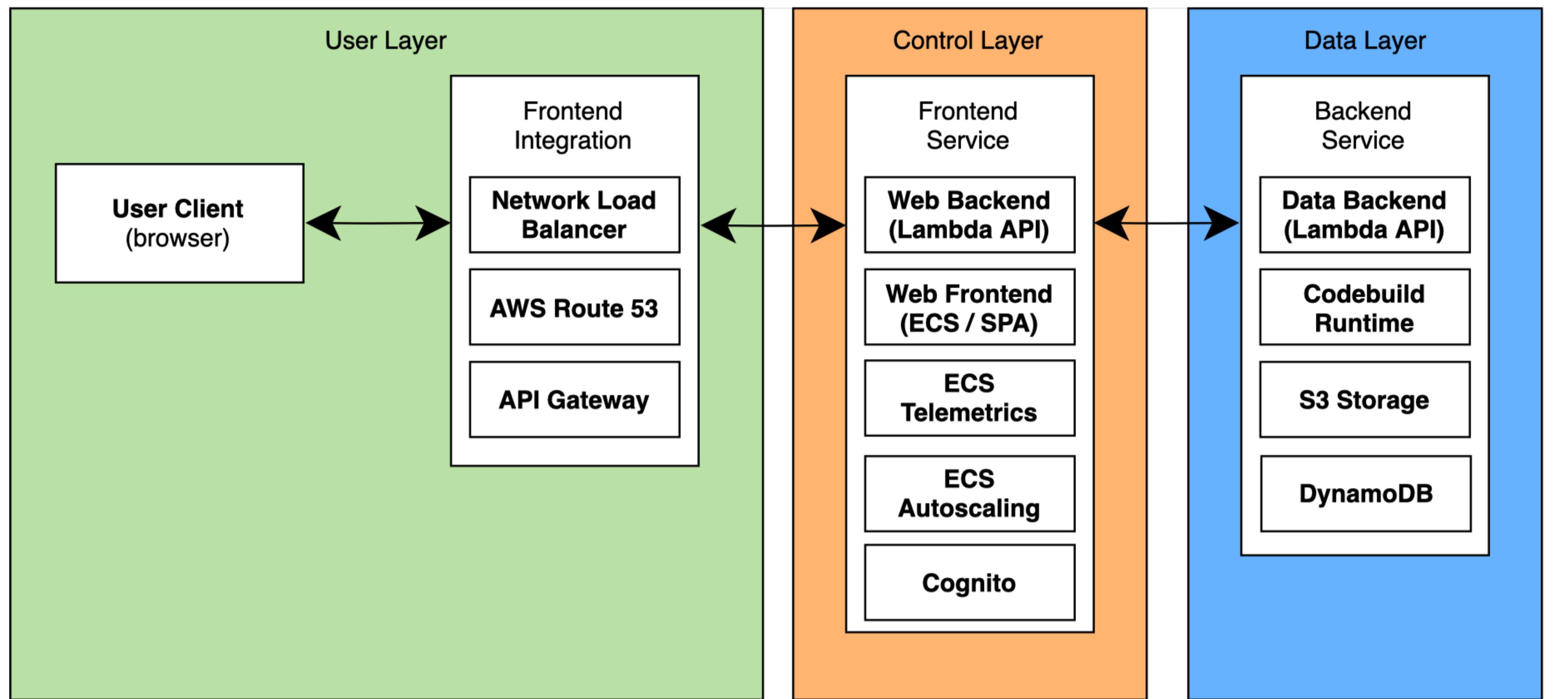
See Solutions

See Ranks

Technologies

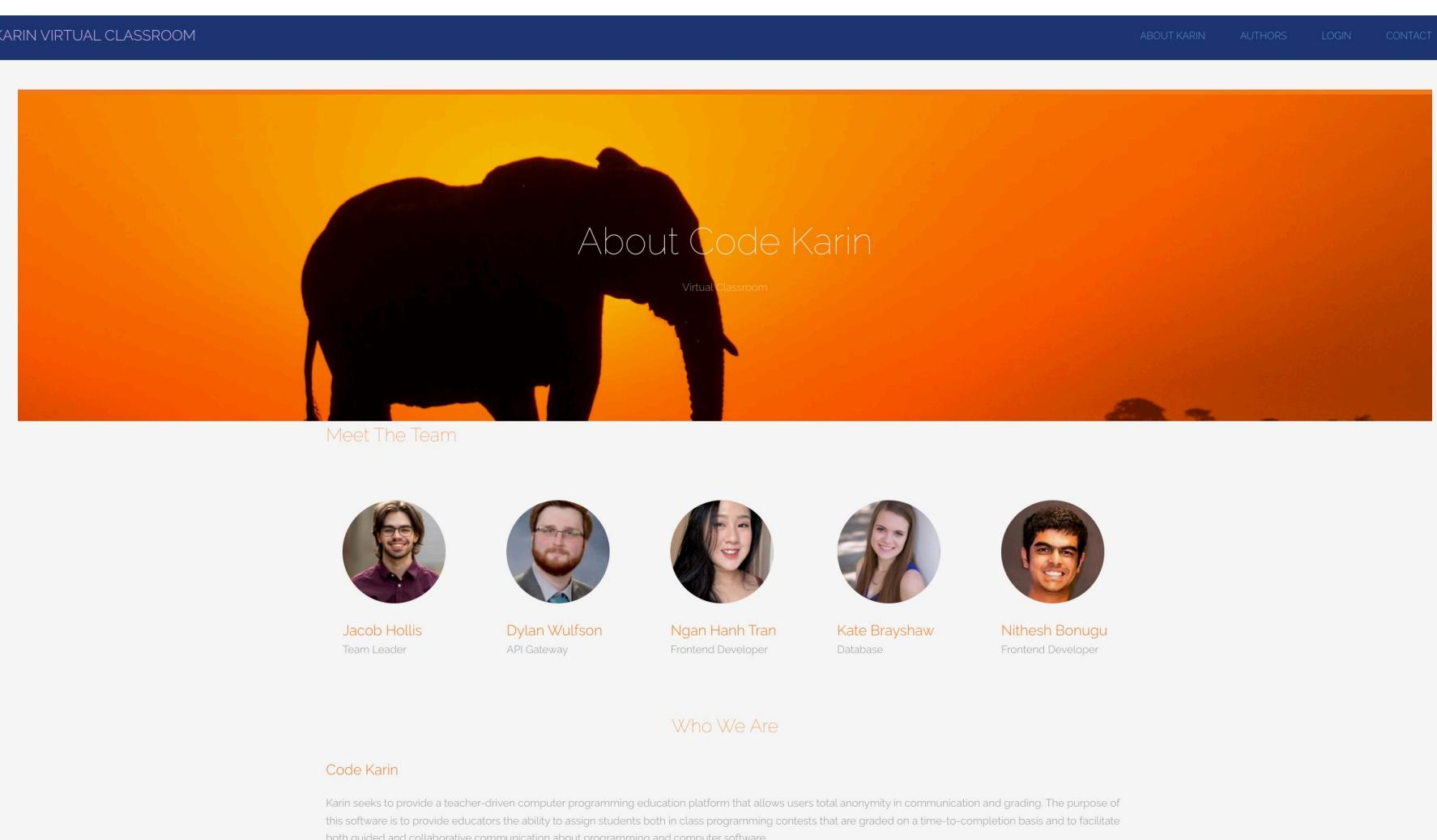


System Architecture

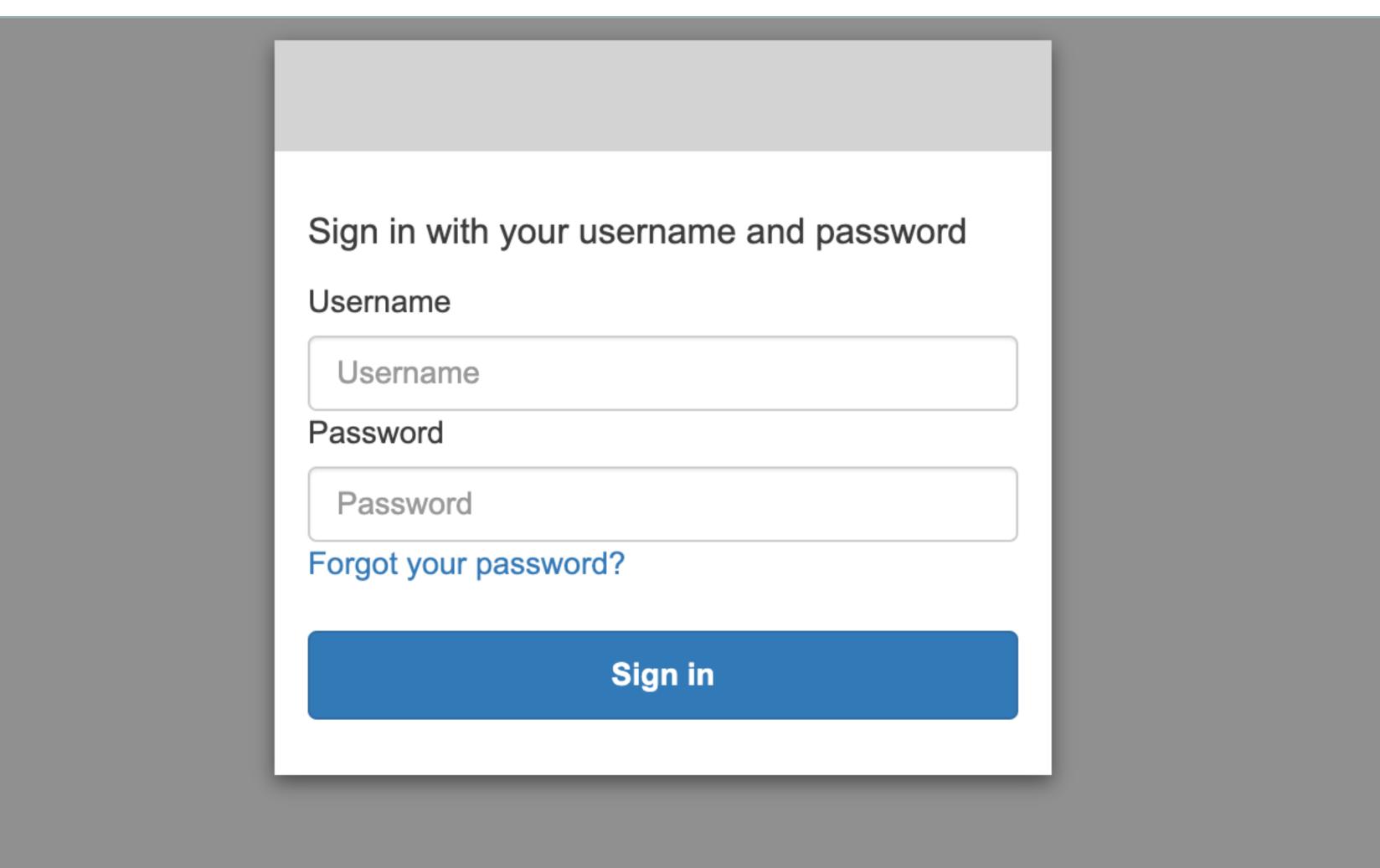


Screenshots

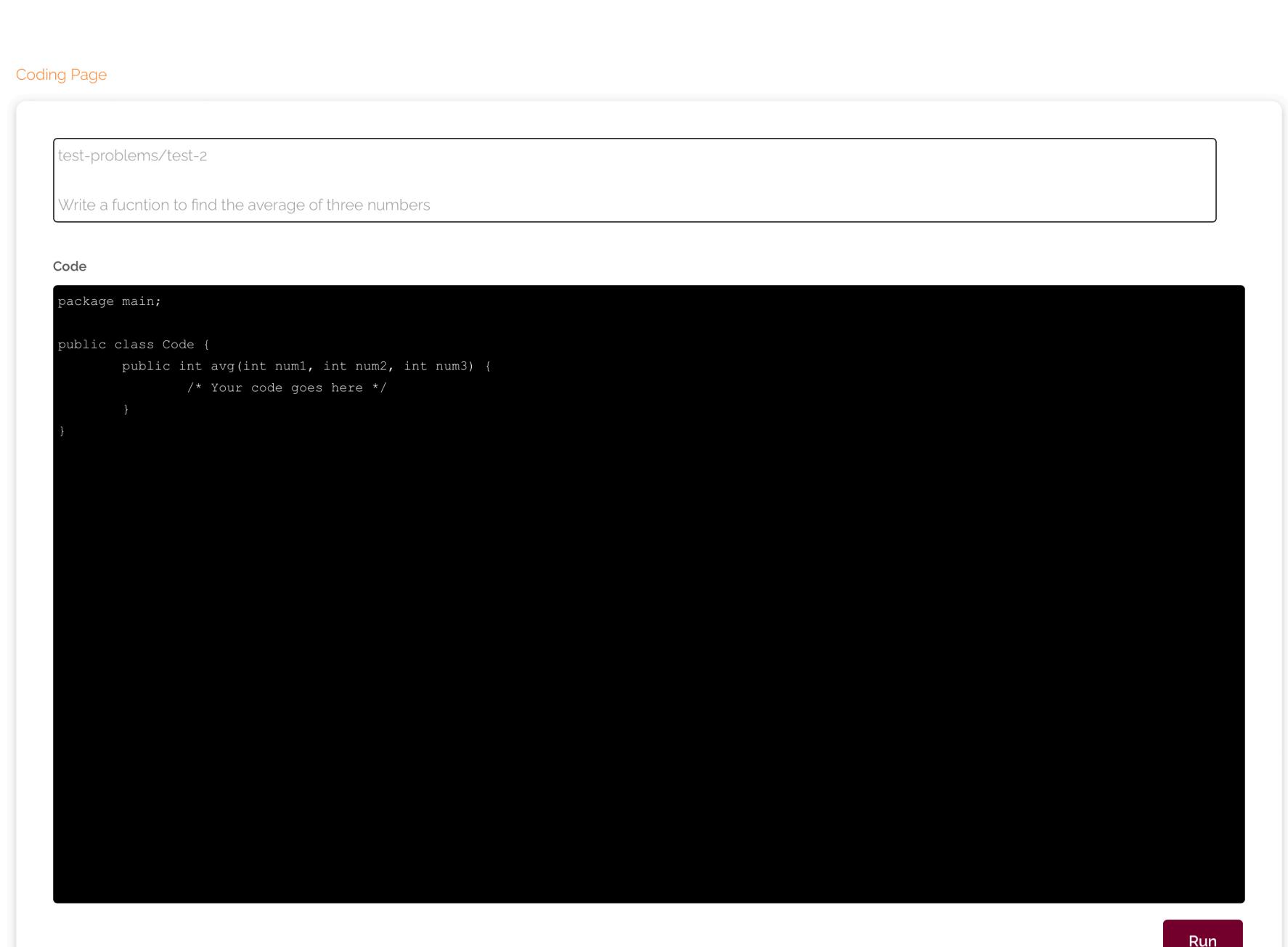
1. Homepage



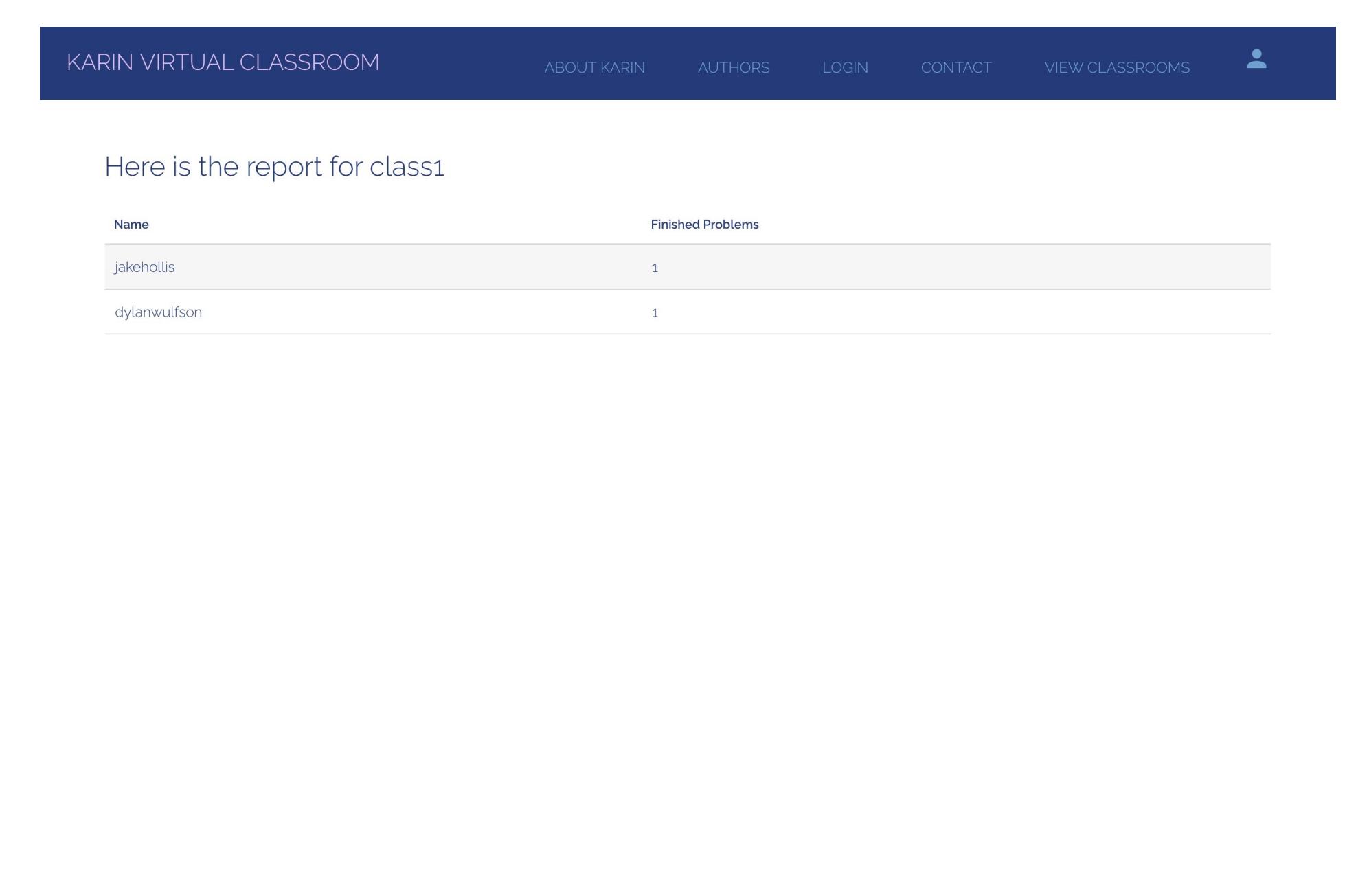
2. Login



3. Coding Contest



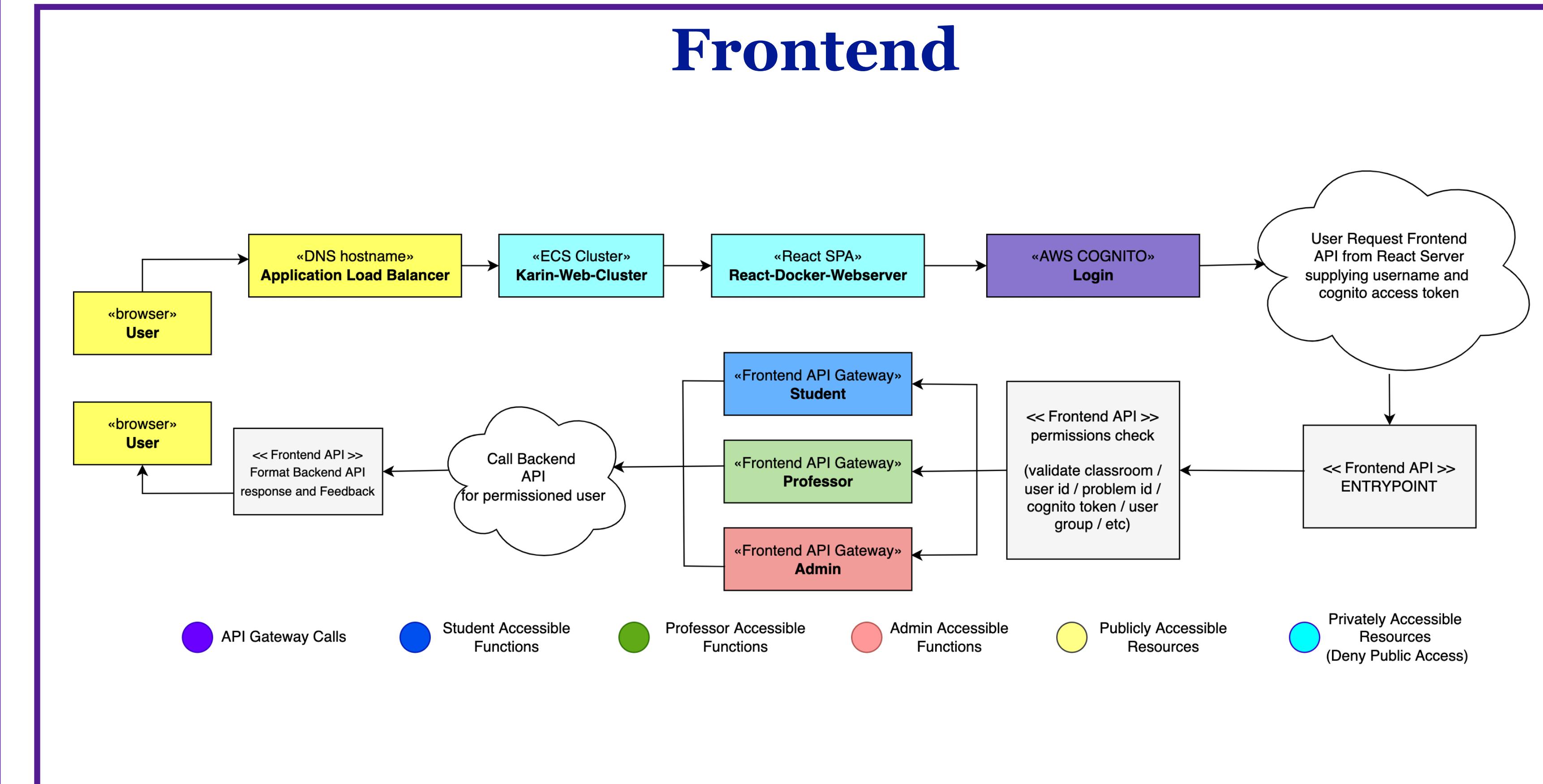
4. Rank



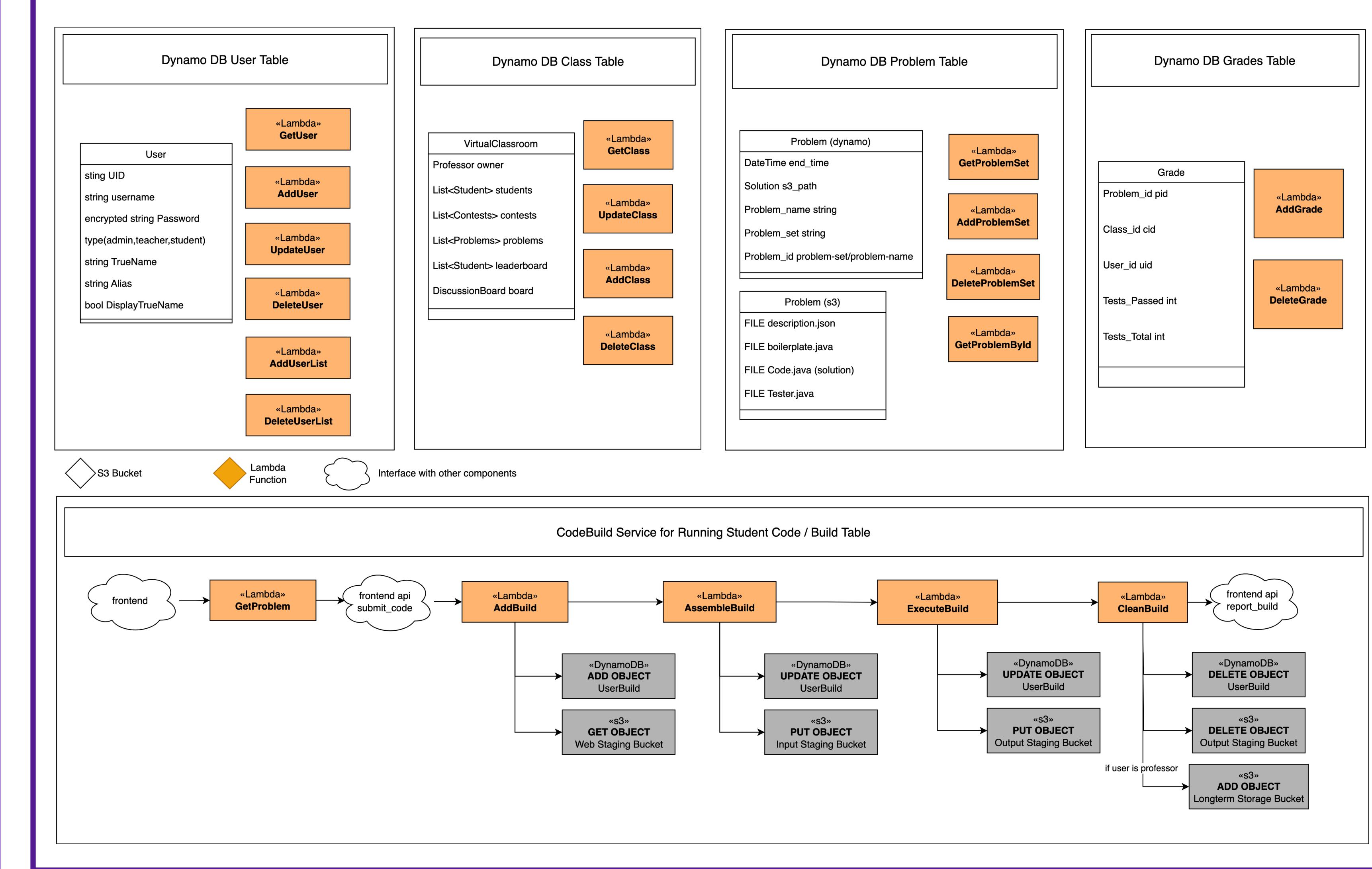
Rank report takes the students anonymous names

Workflow Diagrams

Frontend



Backend



Features

- Practice problems
- Hold programming contests
- Edit classrooms
- User anonymity

- Login
- Student Ranking
- Edit practice
- Edit contest

Challenges

- Utilizing AWS micro services architecture
- Learning new complex technologies
- Managing group work
- Adjusting to clients needs

Acknowledgments

Our team would like to thank Dr. Kadiyala and Dr. Wei for giving us the opportunity to create a programming platform.