FIU School of Computing & Information Sciences

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Mobile Judge Version 10

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Problem

- At the end of each semester, graduating seniors gather to showcase their capstone projects.
- Professors and industry professionals are invited to attend the showcase and grade the projects.
- A platform is needed to manage the tasks of inviting potential judges, accepting feedback from judges, and displaying grade information.
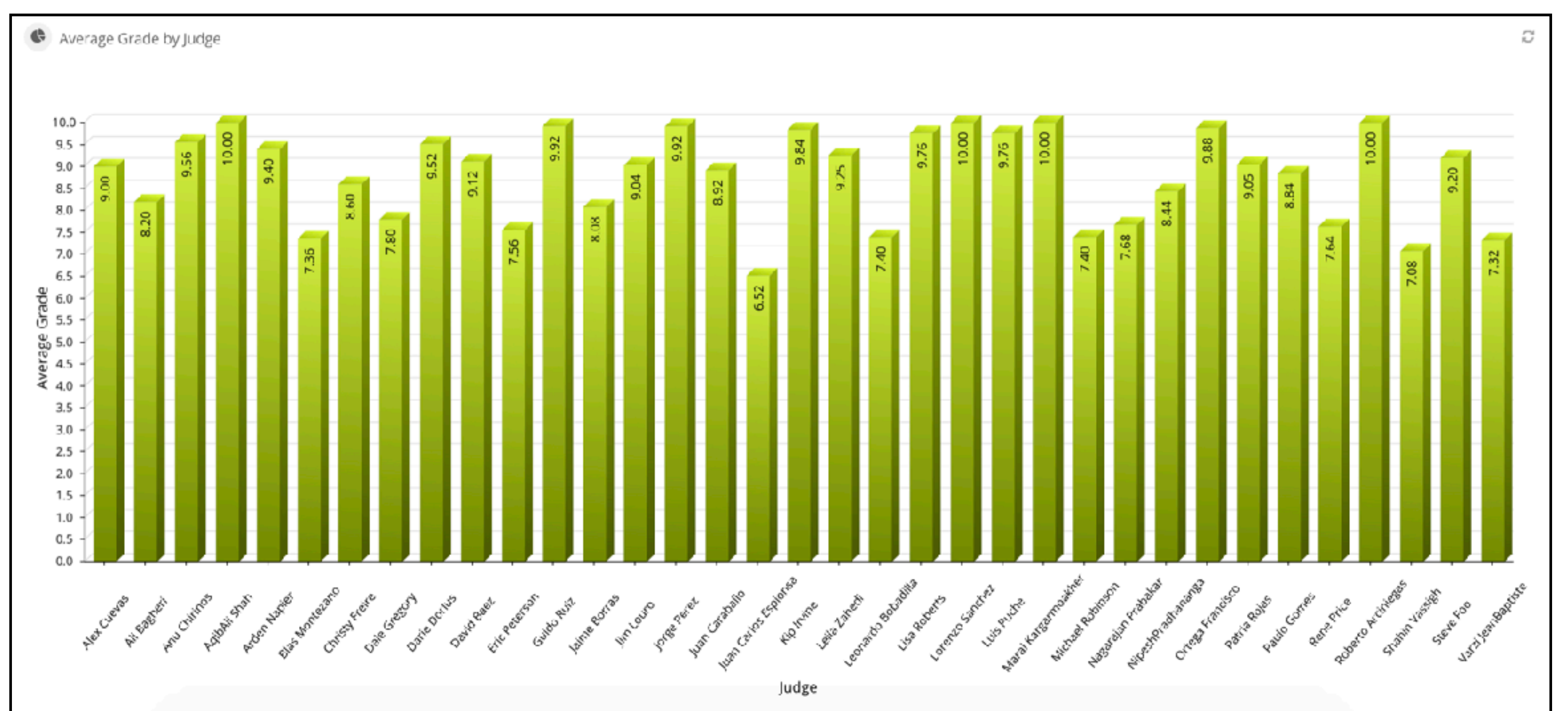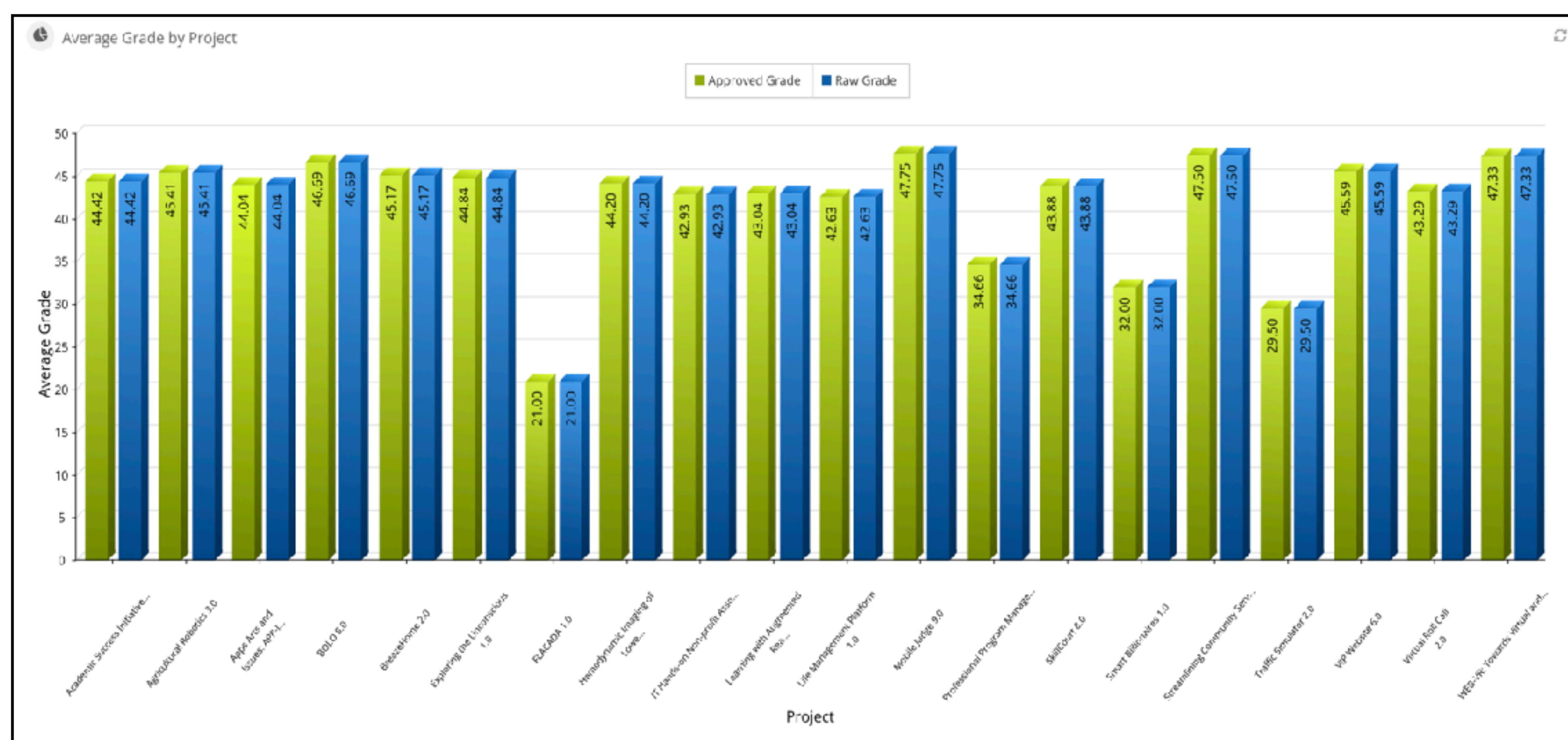
Solution

An application which can be used by an administrator to manage invitations, accept feedback, and display grade information. Mobile Judge allows an users to view live stats based on grades given at the showcase, and stay informed.

Current System

- Mobile Judge serves is an all-in-one solution for administrators.
- Judges have the ability to grade and comment on projects.
- Students have access only to a map of the event and a homepage with their grade.
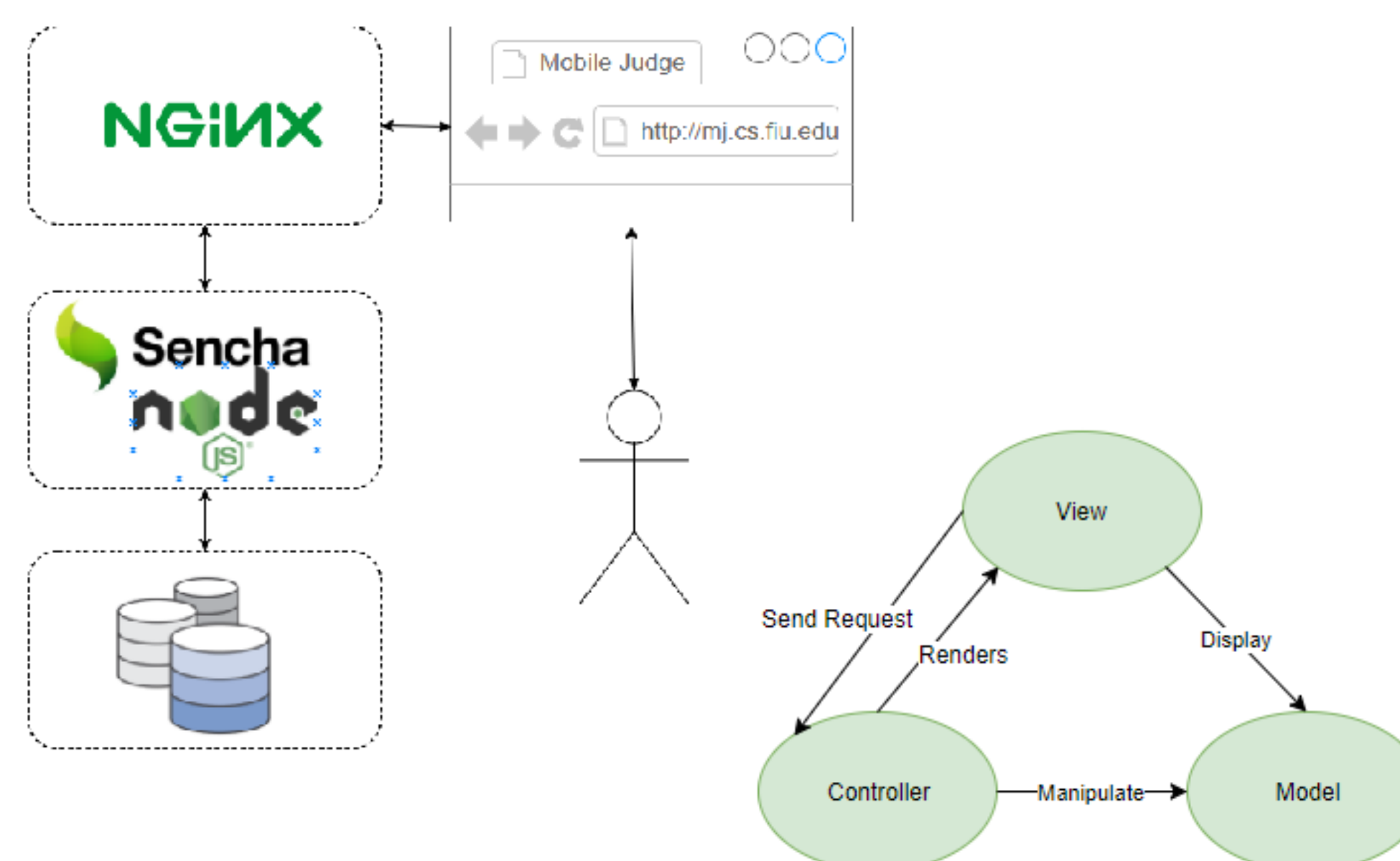
Screenshots

Requirements

- Extend the API to parse correct DB tables.
- A new page for administrators to view charts based on live grades given at the showcase.
- A new page for students to view grades they've received.
- A new page for judges to view grades they've given.
- Users can click on charts for more an in depth view into the data.
- Certain charts can be filtered by the type of data, such as raw grade vs accepted grade.

System Design

Mobile Judge incorporates both the client-server model and the MVC model.
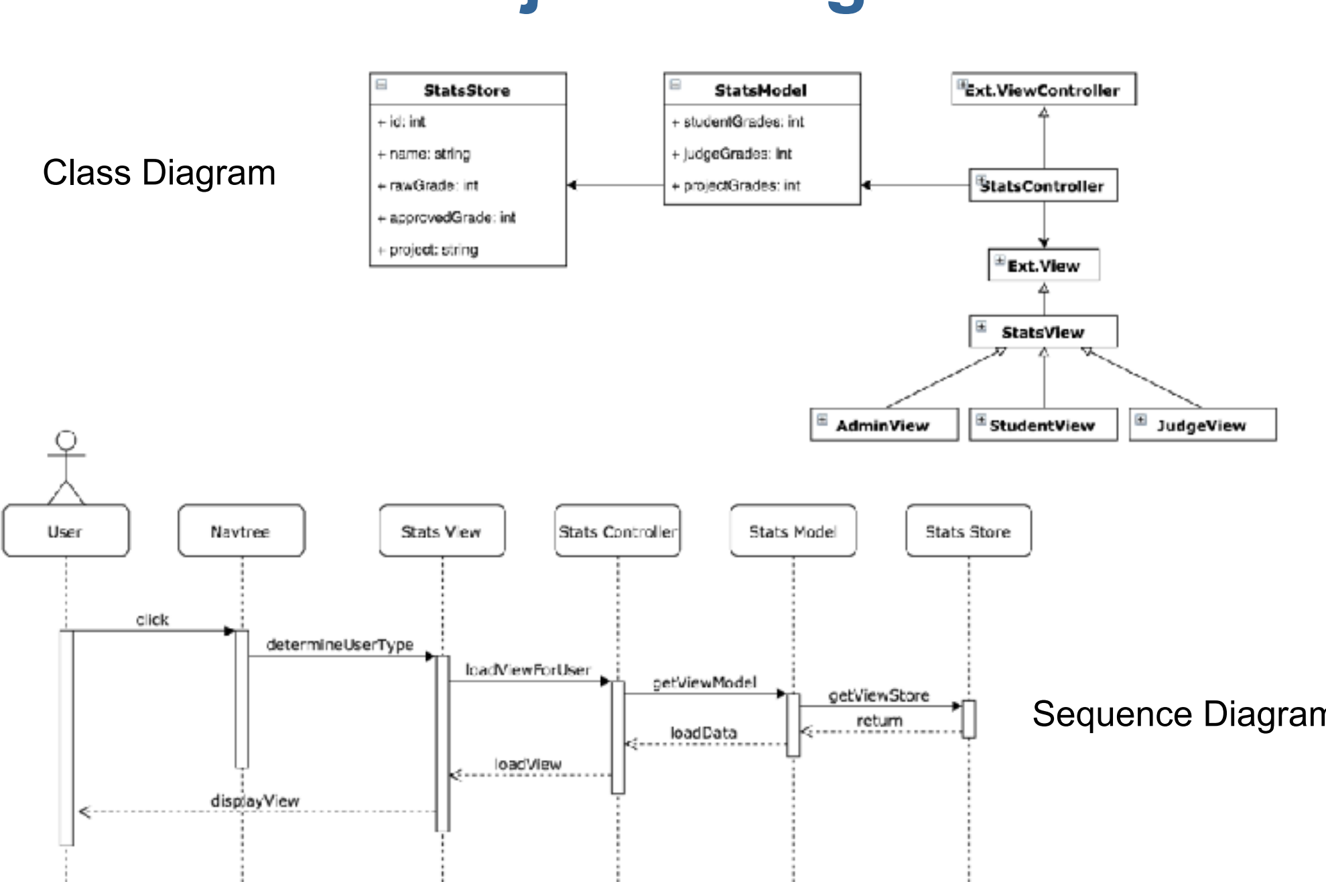

Implementation

- Sencha provides build process.
- ExtJS provides cross-browser compatibility and mobile support.
- NGINX used to run the API.
- Oauth used for third-party authentication.
- Redis used to store keys for Oauth.
- PM2 and Keymetrics used to monitor server and processes.
- PHPMyAdmin and MySQL used to store data and manage database.

Verification

Test case ID: 722-01
Description/Summary of Test: View graphs of average project grades.
Pre-condition: Admin is logged in and clicks on Stats in navbar.
Expected Results: Page displays a graph with title 'Average Grade by Project' with two bars: raw grade and accepted grade.
Actual Result: Page displays a graph with title 'Average Grade by Project' with two bars: raw grade and accepted grade.
Status (Fail/Pass): Pass

Test case ID: 722-02
Description/Summary of Test: View modal with students in project and grades.
Pre-condition: Admin is logged in, clicks on Stats in navbar, clicks on a bar in the graph.
Expected Results: Modal displays with the students in the project and their grades.
Actual Result: Modal displays with the students in the project and their grades.
Status (Fail/Pass): Pass

Object Design

Summary

The Mobile Judge application is currently in its 10th version. My work for this version was focused primarily in creating live stats in the form of graphs and charts, which contain insightful and useful information for the specific user type.

The challenges of learning new technologies, picking up where the previous version left off, and working with a new team made this project a satisfying achievement.