

Assessment of Student Online Engagement

Students: Daniel Young, Mohammed Syed

Mentor: Dr. Prabakar, Dr. Rangaswami

Instructor: Dr. Masoud Sadjadi, Florida International University

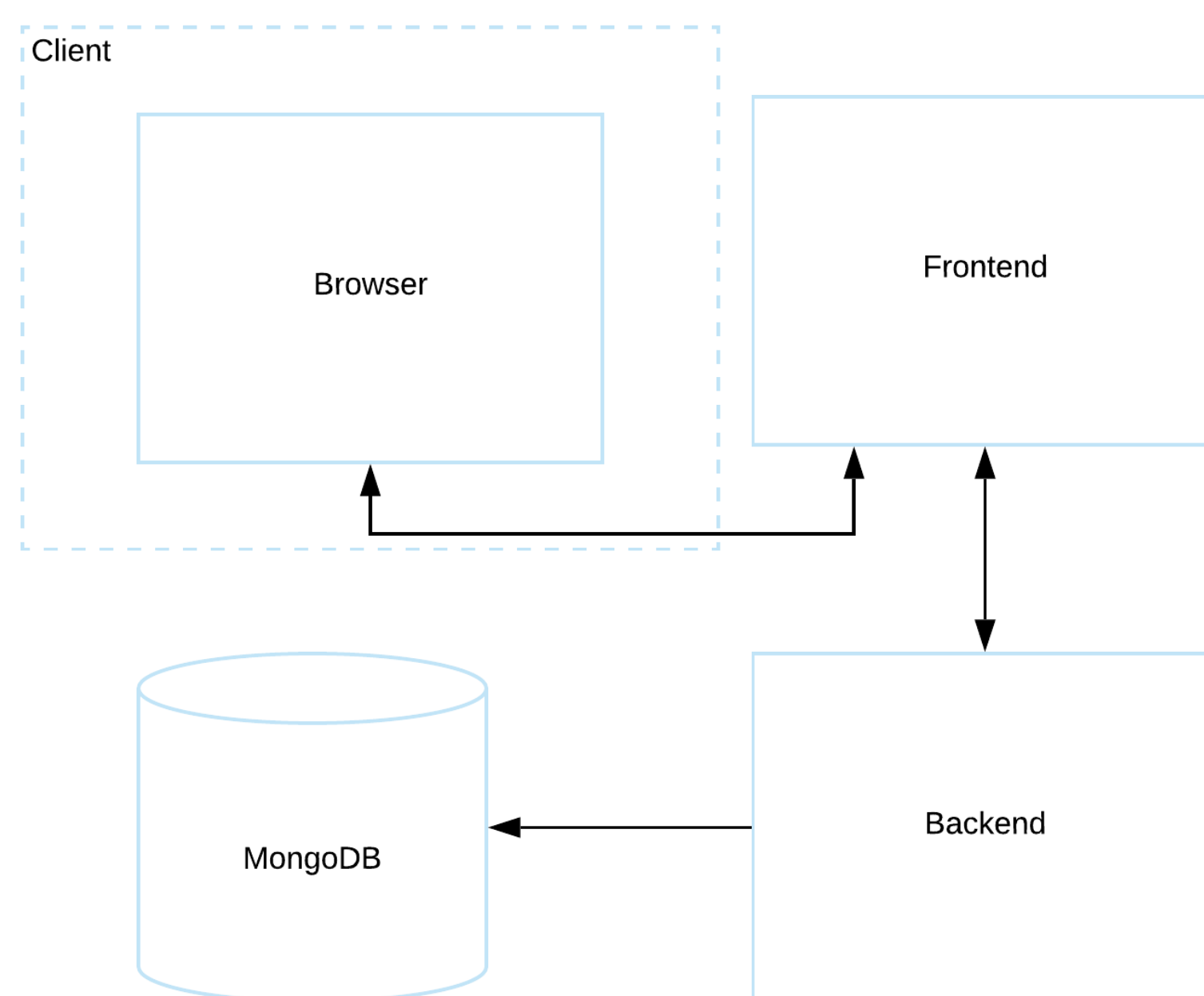
Problem

Online Course enrollment and recorded lectures are increasing in the modern academic environment but Instructors are missing out on crucial course consumption data.

Existing solutions do not give Instructors the tools to assess engagement on at varying levels, from the course down to a particular student.

- How much of the lectures are student viewing?
- Are they re-watching?
- When are the students viewing? (Before a test? On Release?)
- Which Lectures receive the most view time?

System Design



The solution consists of a simple React Frontend interacting with a Express.js backend that serves the objects defined in the **Object Design** section.

Verification

The solution utilizes **Jest** for the Frontend and Backend testing.

Further work is required to automate testing for some UI features.

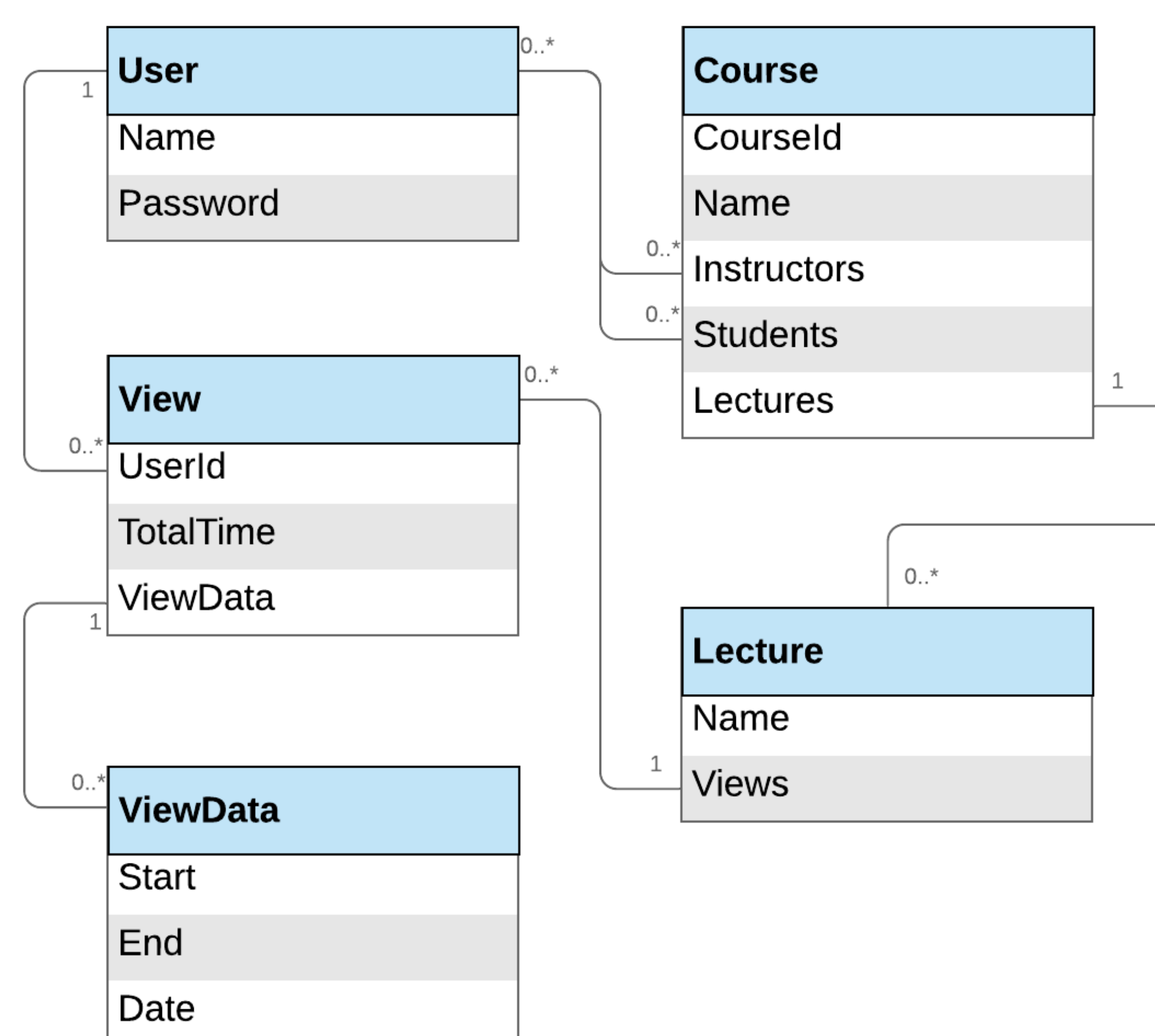


Current System

The current system **Momentos** does not offer any analytical features for student viewership.

Online video services such as Youtube and Vimeo offer analytics dashboards that serve as an inspiration. These solutions do not offer viewer level data and present aggregate data for privacy reasons.

Object Design



Requirements

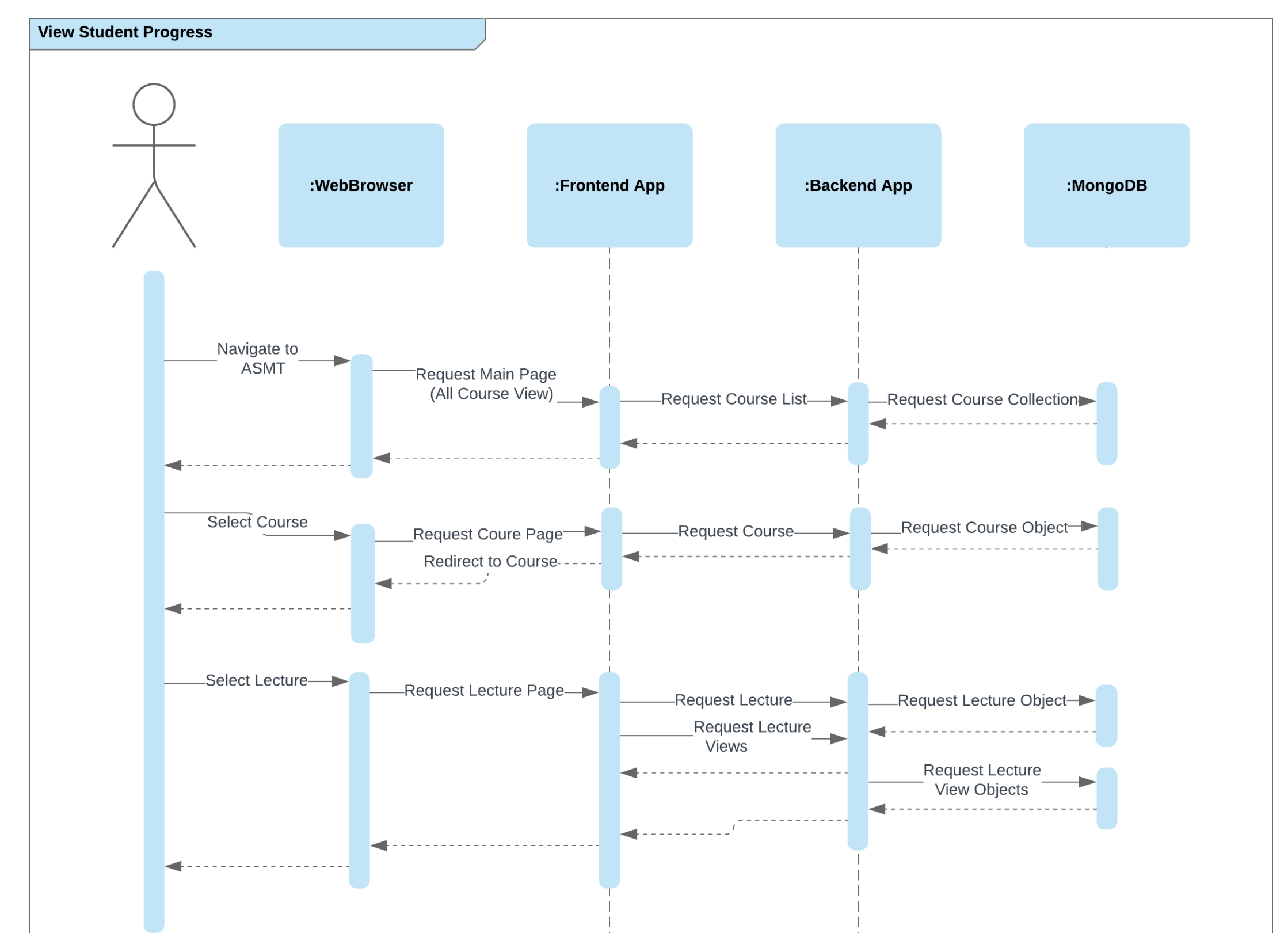
Business Requirements

- Instructors can view their courses, lectures, and students and at different levels view relevant engagement information (viewership, date, sorting)
- The solution also needs to present a clean API for storing/retrieving this data from other applications.
- The Solution generates test viewership data

System Requirements

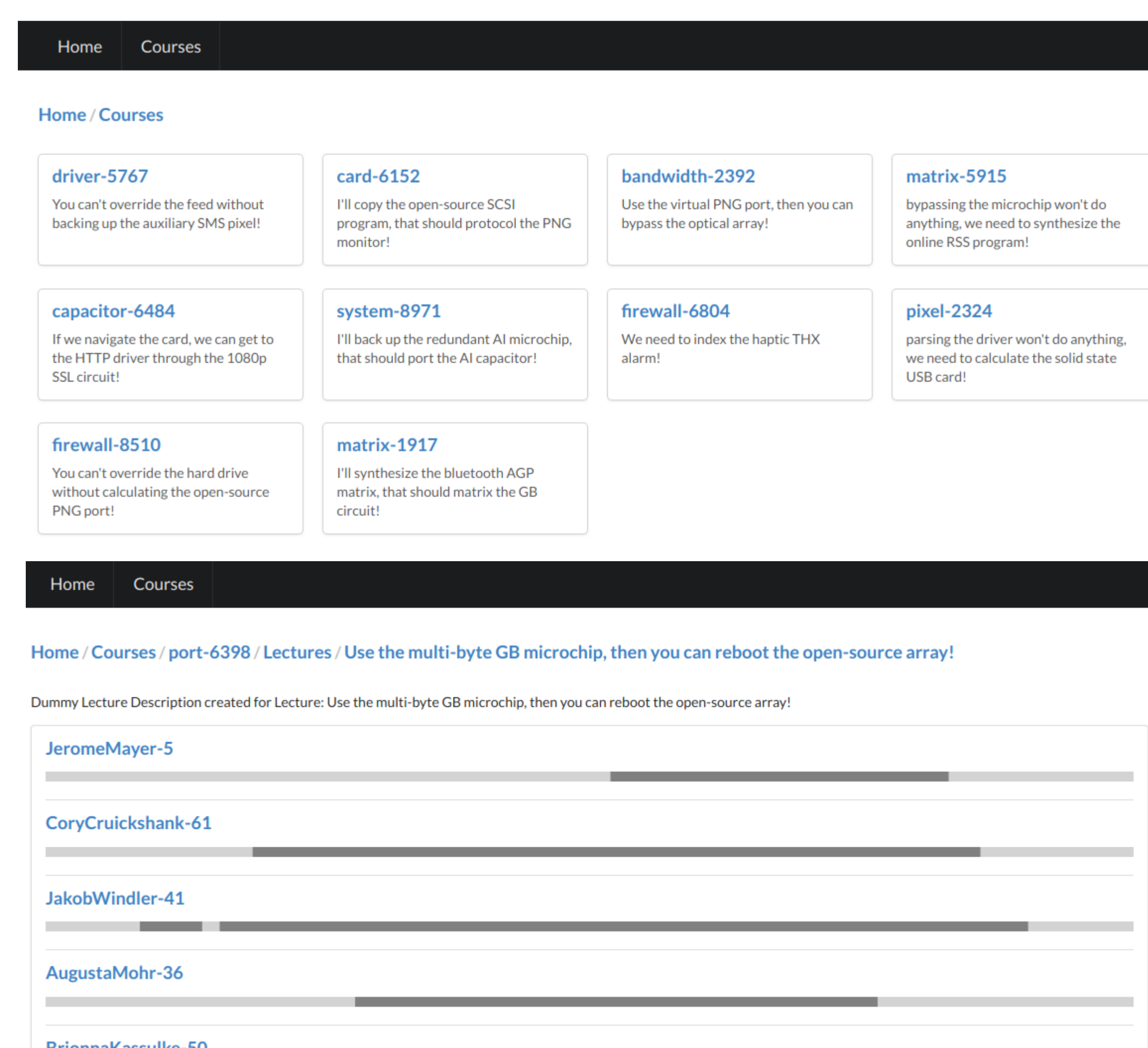
- Developed in JavaScript
- Uses React

Implementation



An Example Use Case for an Instructor navigating from the ASMT home page to a particular Lecture to view his/her student progress.

Screenshots



Summary

- Solution for viewing and analyzing student viewership data.
- Generated (Dummy) viewership data is configurable.
- The data is viewable from multiple levels
 - Course level
 - Lecture level
 - Student level

Acknowledgement

The material presented in this poster is based upon the work supported by Daniel Young. I thank Dr. Prabakar and Dr. Rangaswami for assistance, cooperation and mentorship that I received throughout this process