# Homework Helper: A Proposal for a Front End Web Design Project

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## OVERVIEW

We are looking to create a homework helper app that will help students plan out their schedules and coursework. The web application will consist of separate user accounts that can enter in their respective schedules and assignments in a calendar-like manner. The two account types will be student and teacher each with the capacity generate schedules and share them (someone such as a TA may be both a student as well as a teacher). Students can go on the website and query for what assignments are due on a given day or even over the course of the week. The application will also create a “to-do-list”-like interface for students each day based on an assignment’s priority/scope. We will manually enter (our own and peer) schedule data to populate our database. However, as we are not teachers ourselves we will generate arbitrary teacher information for course creation.

An interesting challenge for this project in particular is the calendar’s functioning; recurrence intervals and the sheer amount of data storage pose a unique modelling problem within a relational data store. We will likely have to lazily load information based on view and cleverly store recurring events based on certain criteria for (relatively) quick retrieval.

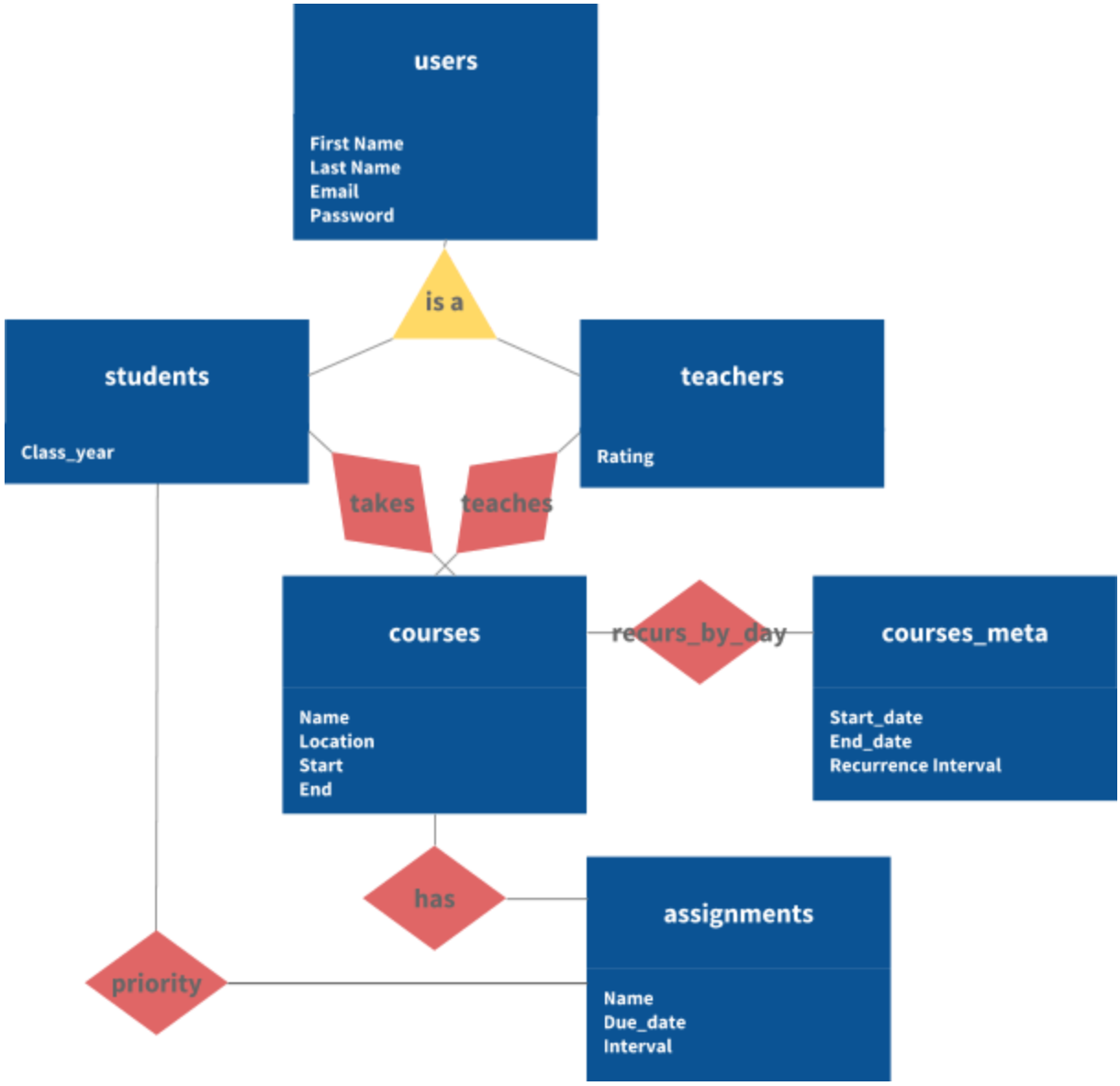
We plan to follow the Front End Web Design Option for Part 3.

## CONTINGENCY

A contingency plan is realistically unnecessary as we both happen to be graduating seniors, and will need this class. However, in the unlikely event that one of us were to drop the class, the remaining partner would drop the priority/scope portion of the project. More specifically, the implementation of both user classes would fall to one and the priority of having both classes and assignments with recurring intervals would be dropped.

## ER MODEL

Below is an abstract ER Diagram of the approach we are considering:




Our documented constraints are as follows:

- Every assignment must be associated with a course
- Every course has a teacher
- Students and Teachers encapsulates all types of users.
- Priority is an integer between 1 and 5
- Rating is an integer between 1 and 10

This approach would necessitate the application layer be responsible for generating the events in calendar view and populate an individual cache *(not displayed)* for quick indexing and retrieval.