AMS Grader Database

Client

Dept. of Applied Mathematics & Statistics

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Background

The Dept. of Applied Mathematics & Statistics (AMS) is responsible for delivering approximately 200 sections of mathematics/statistics classes per year. To facilitate this demand, we also hire a multitude of undergraduate and graduate students to serve as graders for almost every section offered. We would like to consolidate the information necessary for assigning and tracking student hires per course.

Project Description[1]

Just prior to the beginning of each semester (Falls, Spring and Summer), AMS assigns graders to those course sections offered in the upcoming term. To consolidate the information necessary for the assignment of graders, the GraderDB must:

- Upload course information obtained from Trailhead including course name/number, credit hours;
- Upload student information obtained from survey data including
  - Student name, email, hours requested,
  - Course/instructor requested (if any)
  - Courses allowed (student must have earned A or B to grade a course)
  - Work study status
- Instructor information including name, email, type (tenure, teaching, or adjunct faculty), grader requested (if any), course coordinator status

Once loaded, the GraderDB should provide the following information:

- Grader per section; grader(s) per faculty member, graders per course
- Courses that a given grader can be assigned
- Hours assigned per grader

Over the course of the term the GraderDB should allow replacement of a grader for a section along with reasons why. Finally, at the end of each term, the GraderDB should allow updates of the students with feedback/performance (gathered from a departmental survey) that can be considered for future assignments.

As a potentially optional request (dependent upon workload and team assignment) the GraderDB should make a "first pass" attempt at grader assignments for the upcoming term based on data stored. Note that the final assignment will require human interaction, but an initial "seeding" of the assignments would be beneficial.

Skill Set / Team Size / Deliverable Requirements

1. Database design and implementation including views and stored procedures
2. Team size of 3-4 students
3. Deliverable should be a portable database that can (ideally) run on Windows/MacOS/Linux operating systems. Any requirements for 3rd party software requiring purchases will need prior approval.
4. The team can develop remotely.

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[1] More detailed requirements and user expectations will be available prior to project start.