SCORE MyCourses – A Course Scheduling System

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Scenarios

Context

The MyCourses scheduling system will allow program managers, program administrators, lecturers, and students to create, assign, detail and sign up for courses. This will be an end-to-end system that incorporates an algorithm that will automatically schedule courses based on a list of constraints. The program administrator will designate and list out all the possible courses, times, and location. The program manager determines which courses and lecturers that will be offered in the particular quarter. The lecturer fills out his constraints and information about the course. Finally, the students signs up for the courses.

Scenario 1

In this scenario, we will outline the initial roll of the Program Administrator who functions similar to the registrar’s office. They are in charge of the overall MyCourses system and managing the database across all departments

1. The Program Administrator signs into the browser-based MyCourses Portal with their credentials
2. Once logged in, the Program Administrator opens the database and sees that the database needs information to be filled in order for the system to run
3. The database will need the following information:
   1. List of all classrooms and buildings available
      1. Classroom size
      2. Subject preference (Social Sciences belong with Sociology)
   2. List of all the day slots
   3. List of time slots
   4. List of courses offered of every subject
      1. This will be done cross functionally with the Program Manager
   5. Initially, each classroom will have all the time and day slots open for signage
4. Once the information has been filled, the Program Administrator submits and the information will be stored and the Program Manager can start determining which courses to offer for the upcoming quarter

Scenario 2

In this scenario, we will outline the initial relationship between the Program Manager and the MyCourses system. For this particular system, Program Managers are segregated into different subjects (Art, Computer Science, Economics). The Lecturer has not yet submitted any constraint information.

1. The Program Manager signs into the browser-based MyCourses Portal with their credentials
   1. This particular Program Manager is in charge of the Computer Science department.
2. Once logged in, the Program Manager opens a database of all listed courses for the Computer Science department specified by the Program Administrator
   1. This database will be a complete list of courses (in this case Computer Science courses) offered at UCSC.
   2. The database will include course context, teacher (empty value), time (empty value), location (empty value).
3. The Program Manager selects the courses that will be offered for this particular quarter.
4. The Program Manager will also determine the possible lecturers to teach the offered courses.
5. When finished, the Program Manager clicks the “submit” button, and the courses selected will be stored onto another table in the database titled: “Fall 2010”
   1. At this point, the table used will wait till constraints from the lecturers are completed.
   2. Once the lecturers submit their constraints, the Fall 2010 database will be submitted for approval to the Program Administrator

Scenario 3

In this scenario, we will outline the initial relationship between a Lecturer’s first time logging into the MyCourses system before the new quarter begins. The lecturer submits constraint information.

1. The Lecturer signs into the browser-based MyCourses Portal with their credentials
   1. This lecturer is a Computer Science Professor
2. Once logged in, the Lecturer sees that he has not filled out his constraint information on the MyCourses system and he must fill it out in order to continue using the MyCourses portal
3. The lecturer opens the form and fills out the constraints which include, in pull down-menu-style:
   1. Courses - This will display the courses available to the professor pre-determined by the Program Manager
   2. Time – This will display his preferred time slots
   3. Days – This will display his preferred day slots
4. After the lecturer completes the form, they will submit the form into the database where it will await for further processing from the Program Manager

Scenario 4

In this scenario, the Program Manager has already determined which courses and which *preferred* lecturers will be teaching next quarter into a database table. The lecturer has also determined their scheduling and class constraints for the quarter into another database table. After both parties have submitted the proper information, the table is merged together and sent to the Program Manager.

1. The Program Administrator logs into the MyCourses Portal and sees that all the Program Managers and Lecturers have completed their necessary information and everything has been merged onto a database table.
2. The Program Administrator reviews everything and ensures that all the information has been filled and/or not missing
3. The Program Administrator runs the MyCourses algorithm to create the course schedule
4. Once the program has finished running, then the MyCourses Portal will send a message to the Program Administrator that it is complete
5. The Program Administrator reviews the course schedule and once he approves, he submits it to the Program Managers of each department for further review and approval
6. Once the Program Managers approve the course schedule, the schedule will be made available online and available to the public (students)

Scenario 5

In this scenario, the MyCourses scheduling system is complete and posted on the website. The students can now log into the system and sign up for classes

1. The student user logs into the MyCourses Portal and sees that he is able to sign up for classes
2. The student looks up courses and finds classes to sign up for
3. Once they find the classes they need, they will add it to their shopping cart
4. After filling their shopping carts with their desired classes, they can submit and they are officially signed up for the courses