<GradSchoolZero>
Software Requirements Specification
For <Graduate Program Management System>
Version <1.0>

Revision History

Date	Version	Description	Author
<dd/mmm/yy>	<x.x>	<details>	<name>
<24/Oct/2021>	<1.0>	Updated use case diagram and sec 3	Jia Cong Lin
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Software Requirements Specification

1. Introduction

1.1 Purpose

   The Software Requirements Specification provides a detailed report on the GradSchoolZero system. GradSchoolZero is a graduate program management system similar to CUNYfirst. Included in the SRS will be the description of the system, terminology and overview of the overall features. Features described in specific detail will be shown in the Use-Case Report, Assumptions and Dependencies and Use-Case Model Survey sections. Through completing this SRS the team has developed a better understanding of the system.

1.2 Scope

   The vision of GradSchoolZero is to create a system similar to CUNYfirst but for managing graduate programs. The system will be used by visitors, students, instructors and the registar. Visitors can browse the site viewing basic information such as classes and students. Students can manage courses they are taking. Instructors access courses assigned by the registrar and the registrar is the administrator that manages the whole site. The features in this system will allow these users to smoothly access the information needed. Included in the system is the home, user info, course page and complaints. Home will be the main page where all users will start off. User info will have basic information about the student and instructor. Course page manages the courses for students and instructors. Lastly, the complaints are for the complaints about other students, instructors or courses. A more detailed explanation on user functionality and features will be in the use-case model survey.

1.3 Definitions, Acronyms, and Abbreviations

  Actor: User interacting with system
  Registrar: an official responsible for keeping a register or official records.
  Visitor: User not yet logged in browsing basic info such as class and students
  Student: User that has access to courses being taken
  Instructor: User that has access to student course taught
  Home: Starting page of website
  User Info: Page relating to information of user
  Course Page: Page viewing course
  Complaints: Page where complaints are sent and processed

1.4 References

  Lucidchart. *UML Use Case Diagram Tutorial. Youtube.com*, Lucidchart.com, 7 Feb. 2018, https://www.youtube.com/watch?v=zid-MVo7M-E.

1.5 Overview

The following sections of the documentation discusses the use-case and functionality of the software as a whole. The Overall Description includes the use-case model survey which incorporates brief descriptions of all use cases and actors, along with applicable diagrams and relationships. The Use-Case Model Service goes into detail about each type of user permissions and privileges. The Use Case Reports section illustrates an overview of the system and its relations to users.

2. Overall Description
2.1 Use-Case Model Survey

Actors:

External User (s):

> **Visitor -** Visitors are considered users who have not logged in or do not have an account on GradSchoolZero.

Registered Users:

> **Student** - Student users who can manage their classes, write reviews and apply for graduation.
>
> **Instructors** - Instructor users have access to courses they teach and can manage their own courses.
>
> **Registrar** - Super Users who have access to all parts of the system.

Use Cases:

Home:

> **Log in:** A handler that prompts users to submit their credentials in order to gain access to their account.
>
> **Register/Apply**: Handler that allows visitors (non registered users) to create an account and apply to be a student or Instructor.
>
> **Review Application**: Handler that is only accessible by the Registrar. Functionality includes the ability to accept/reject visitors who applied to become a student or an instructor.
>
> **Continue as Visitor**: is an option available to visitors that allows them to continue accessing GradSchoolZero without using a registered account. Visitors will only be allowed to view limited information about courses.

User Info:

> **Personal Record**: This handler grants student users access to their Personal Record that includes their history of courses taken listed with instructors and their grades.
>
> **Apply for Graduation**: A handler intended for students who're finishing up their

credits and preparing to graduate with a Master Degree. The Registrar is responsible to review student graduation applications to check for completion of required courses. Failure to meet requirements upon submitting a graduation application will result in the student receiving a reckless graduation application warning.

Tutorial: Handler intended for specifically new students who typically aren't familiar with GradSchoolZero.

All Academic Records: this router is meant to be exclusive to instructors and registrars. Functionality involves granting instructors access to basic information about their course's students and their academic records.

Course Page:

Basic Course Info: A handler that is meant to give general information about the courses available. General information includes the highest/lowest courses along with the highest student GPAs. All users are granted access to this information including visitors.

Register Course: Handler that allows matriculated students to sign up for anywhere between 2-4 courses for the next semester. Note that a student will be allowed to retake a class in which they received an F previously. However, the additional following criteria must be met per registering student: 1) no time conflict between selected courses; 2) the course capacity is large enough to accommodate said students otherwise they will be placed onto a waitlist.

Drop Course: Handler granted to students in which they can drop their selected courses. The drop must occur only between the registration and grading period of the term. Students who dropped a class will receive a grade W. In the event that a student drops all courses, they will be suspended unless the registrar states otherwise.

Review Course: A handler in which students can write reviews of their class along with a rating. With the exception of the registrar, no other user will be able to see the reviewer's information. In the case of an instructor receiving a rating below 2.0 will be given a warning. Any instructor with 3 accumulated warnings will be penalized and suspended. Students are not allowed to rate courses after the grades are posted. Reviews involving explicit words will be censored and authors will be warned.

Current Course Grades: Students will be able to view their current course grades through this handler. Their grades will be constantly changing throughout the semester and it is intended for students to use to keep track of their standings in each class. Registrar will also have access to this information.

Assign Grades: Instructors will be allowed to assign grades during the grading period. If an instructor fails to assign grades and the grading period has ended, the instructor will receive a warning.

Class setup: a handler exclusive to only the registrar in which they can access in order to create their courses, assign instructors and adjust class size.

Student/ Instruction Violations handling: a function meant for only registrar use. The purpose is for registrars to view both students and instructors with the greatest number of warnings and offers the registrar the ability to take action. For instance: Instructors with a class GPA above 3.5 and below 2.5 will face scrutiny by the registrars. Failure to provide reasonable justifications will result in the instructor's potential termination.

Complaints:

File complaint: a handler for students to complain about other students or instructors. An instructor can also in turn complain about a student.

Complaint review: the complementary handler to File complaint in which is exclusive to the registrar. Here the registrar will view the complaints and act accordingly upon them.

2.2 Assumptions and Dependencies

Dependencies for this project include python with flask framework. We can assume any student or instructor has internet access in order to access the system and also require a username and password, which will only be granted once accepted by the registrar.

3. Specific Requirements
3.1 Use-Case Reports

Login: Students and instructors will have to login to their own page with all the basic information. New students who logged in for the first time will have to change the login information.

Register/Apply: a visitor can apply to be either a student or instructor

Continue as Visitor: visitors can access the course page without a need to be a student or instructor.

Basic Course Info: basic introduction of the program and anyone can view the basic information of highest/lowest rated classes and students with the highest GPA

Review Application: restistars are able to view, accept, and decline visitor applications to become a student or instructor.

Class Setup: During class set-up period, registrars set up classes, class time, class size, and course instructor on register course.

Register Course: All matriculated students can register 2-4 courses while following the rules during the course registration period.

Drop Course: Students can drop courses between registration and grading period for a grade W.

Student/Instructor Violations Handling: The handling is done by registrars who will give out warnings and suspensions.

Review Course: Students can write reviews for their classes and assign stars (1-worst to 5-best), which will be summarized in the class. Only registrars know who wrote which review. Students can not rate the class after the instructor posted their grade.

Assign Grades: instructors assign grades during the grading period and registrars are able to see them to check the requirements before giving out warnings to instructors.

Current Course Grades: lets students see their current course grades in their course page.

All Academic Record: Instructors can see basic information and academic records of the student.

Personal Record: Students page to see their own version of basic information and academic records which is different from the instructors view.

Apply for Graduation: Students finishing 8 classes can apply for graduation and registrars will check if students covered all required courses before graduating them with a masters degree.

File Complaint: Students can complain about other students or instructors to the registrar. Instructors can complain about a student to the registrars to warn or deregister the student.

Complaint Review-Penalty: Registrars will process student complaints and issue a warning after an investigation. Registrars also process instructor complaints accordingly with a warning or deregister the student or punish the instructor with 1 warning.

3.2 Supplementary Requirements

Tutorial: a tutorial for new students on how to use the system.

Highest/Lowest Rated Classes: everyone is able to see what the ratings of the classes are

Highest GPA: everyone is able to see the gpa of the students with the highest GPA being first.

Review Application: If the quota is not reached, any student with GPA > 3.0 should be accepted. If they are rejected, a justification should be provided to the applicant if the registrar goes against the rule. If they are accepted, a unique student id and password will be issued. Rejections for instructor applications will not need justifications. Approvals for instructors will result in class assignment.

Course Registration Rules: Students are not allowed to have time conflict among classes, students will be put on wait-list if the class limit is reached where only the course instructor can let them in. Students can re-register if they got an F before. Students with less than 2 courses will be warned. While classes are running, no students can register for classes unless their class was cancelled due to less than 5 students enrolling to that class; the students will get a special registration period.

Student/Instructor Violations Handling: Students who drop all courses will be suspended for 1 semester automatically unless the registrars take action. Students with less than 2 courses registered will be warned. Instructors whose courses were ALL canceled will be suspended and can't teach in the next semester. Instructors receiving average rating <2 will be warned and instructors with 3 warnings will be suspended. Author with 1-2 taboo words in the reviews receives 1 warning while if there is >=3 taboo words, the author of the review will receive 2 warnings. Instructors who didn't assign grades to all students after the grading period will be warned. Any instructor whose class GPA is above 3.5 or below 2.5 will be questioned by registrars and get warned/fired if there is no justification. Students with <2 GPA or failed the same course twice will be terminated. Students with GPA (2, 2.25) will be given a warning demanding an interview with registrars. If a student applied for graduation without covering all required courses, the student will receive a warning for reckless graduation application. Students receiving 3 warnings from complaints will be suspended for 1 semester and must pay a fine to the registrar.

Personal Record/All Academic Records: shows all the information of a student during their time in college such as a transcript. There are different records for both instructor and student. Registrars can see everything. Students with overall GPA (>1 semester) will automatically be on the honor roll which allows them to remove 1 warning.

Current Course Grades: lets students see their current course grades in their course page. Students with semester GPA of over 3.75 will automatically be on the honor roll which allows them to remove 1 warning.

Taboo List: list of taboo words set up by the registrar changing 1-2 taboo words to *
while the WHOLE text containing 3 or more taboo words will not be shown.

4. Supporting Information

Use Case Diagram: https://bit.ly/3GpPDyZ