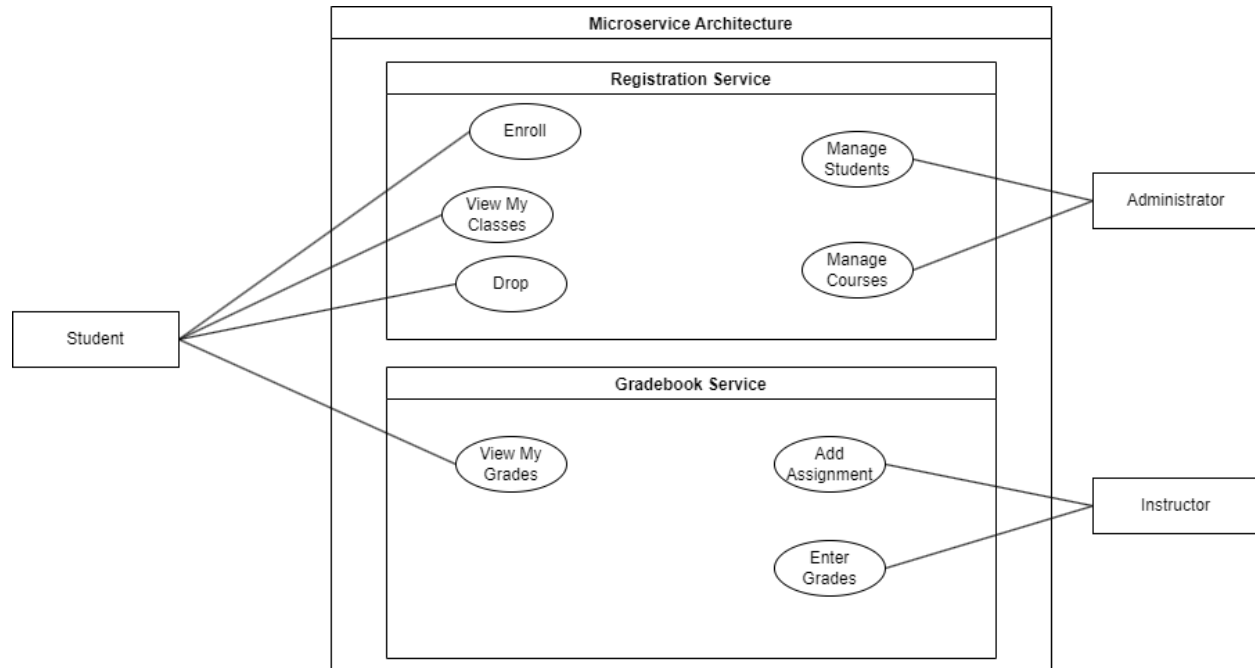


Software Requirements Specification
Version 1.0

By Sarom Thin
October 18, 2022

Submitted in partial fulfillment
Of the requirements of
CST 438 Software Engineering

2.1 System Environment



3.2 Functional Requirements

3.2.1 Instructor adds an assignment for a course

Use Case Name	Instructor adds an assignment for a course
XRef	Refer to section 2.1
Trigger	Instructor clicks add button to add new assignment to database
Precondition	Instructor must fill assignment form properly to submit
Basic Path	<ol style="list-style-type: none">1. After signing in with instructor's credential they will be directed to the homepage.2. Instructor's homepage lists created assignments in a grid.3. There will be an "add assignment" button at the bottom page where after clicking will have the assignment form appear.
Alternative Paths	If the form does not get filled properly then a message will appear that assignment failed to add
Postcondition	The new assignment will be added to the database.
Exception Paths	The instructor can cancel the form.
Other	The assignment requires title, due date in the form of YYYY-mm-DD, and course id.

3.2.2 Instructor enters scores for an assignment

Use Case Name	Instructor enters scores for an assignment
XRef	Refer to section 2.1
Trigger	Instructor clicks “submit” button in the assignment grades page
Precondition	Instructor must navigate to an assignment grade page and must update at least one student grade for the assignment.
Basic Path	<ol style="list-style-type: none">1. On the instructor’s homepage each assignment listed has a radio button.2. Instructor must click radio button of desired assignment to grade.3. Afterwards click the grade button at the bottom of page to which it will lead to the assignment grade page for the respective assignment.4. A gride of student names will be listed.5. In the field next to name instructor can update the value.
Alternative Paths	If one grade has not been updated, then submit button will be grayed out preventing instructor from clicking submit.
Postcondition	The database will update student grades based on input.
Exception Paths	The instructor can always return to the homepage
Other	Grades must be an integer value.

3.2.3 A student views their scores for a course

Use Case Name	A student views their scores for a course
XRef	Refer to section 2.1
Trigger	When the student clicks the view grades button.
Precondition	Student must sign in with student credential to see view grades button.
Basic Path	<ol style="list-style-type: none">1. After signing with student’s credential homepage will have a view grades button.2. After clicking button student will be directed to a new page to see grades.
Alternative Paths	It is possible for student to have no assignments yet.
Postcondition	No new data will be inserted into database nor updated.
Exception Paths	Student can return to homepage
Other	The grades page will be a list of assignments in a grid. The data consists of assignment title, course title and grade value.

3.2.4 Instructor submits final grades for a course

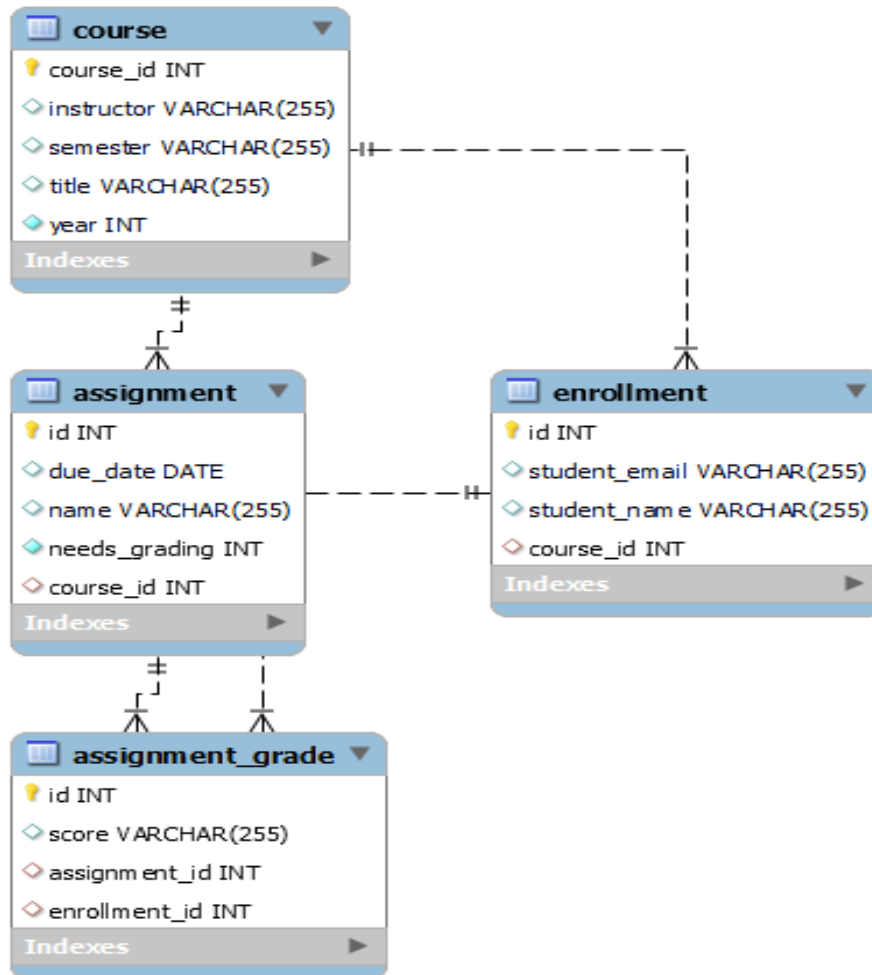
Use Case Name	Instructor submits final grades for a course
XRef	Refer to section 2.1
Trigger	When instructor clicks “Finalize Grades” button

Precondition	Must select a course
Basic Path	1. In the homepage click “Finalize Grades”.
Alternative Paths	Can use url to submit final grades.
Postcondition	Message of final grades will be sent to Register Service.
Exception Paths	
Other	

3.3 Security and Performance

The service will use Google’s OAuth2 Console to manage user’s login. For the gradebook service instructors and students will receive different data when they sign in. Any modern browser should support this version of the service.

3.4 Logical Database Diagram



Course Data Entity

Data Item	Type	Description	Comment
Course_id	Integer	Unique id number that identifies course	
Instructor	Text	Email will be used as the data	
Semester	Text	The season the course will be taken in	
Title	Text	Name of the course	
Year	Integer	The year the course will be taken in	

Enrollment Data Entity

Data Item	Type	Description	Comment
Id	Integer	Unique id will be given to students when enrolled	
Student_email	Text	Email of student	
Student_name	Text	Name of student	
Course_id	Integer	The id that identifies the course	Student will be enrolled in a course

Assignment Data Entity

Data Item	Type	Description	Comment
Id	Integer	Unique id will be given when assignment is created	
Due_date	Date	The date when the assignment is due	Must be in the form of YYYY-mm-DD
Name	Text	The name of the assignment	
Needs_grading	Integer	Marks an assignment if it needs grading or not.	Value will either be a 0 or 1. 0 for does not need grading 1 for it does need grading
Course_id	Integer	The id that identifies the course	An assignment will belong to a course

Assignment_Grade Entity

Data Item	Type	Description	Comment
Id	Integer	Once a grade has been inputted a unique id will be given	
Score	Text	The number grade of an assignment	
Assignment_id	Integer	The id that identifies the assignment	
Enrollment_id	Integer	The id that identifies the enrollment	