

Grade Getter Requirements Specification

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Product Vision

FOR students seeking a simple and easy-to-use program to calculate their grades,

WHO are tired of the overly complex and confusing nature of existing grade calculators,

THE Grade Getter is the grade calculator of the future,

THAT delivers a streamlined user interface that allows for a simplified user experience while still encapsulating all the features a user could possibly need,

UNLIKE traditional grade calculators with complicated user interfaces that often aren't intuitive or compatible with the user's specific needs,

OUR PRODUCT shines with features that seamlessly integrate with popular learning management systems like D2L and Canvas and state-of-the-art data security features,

AS MEASURED BY overwhelmingly positive user reviews from college students across the country, superior data security, and metrics that display lightning-fast data input time to grade output time.

Requirements

Grade input:

- The system shall allow the user to input a grading scale
- The system shall allow the user to input their current grades
- Each current grade shall include categories (e.g. homework, tests, projects), the number of assignments within each category, the percentage of the total grade each category is worth, and the percentage of the total grade each assignment within each category is worth

Grade output:

- The system shall output the letter grade the user has in each user-specified class (calculated from the user's current grade input)
- The system shall round the the student's grade if the user specifies this in the grading scale (e.g. if the user specifies that 89.5% (B+) rounds to 90% (A-)); otherwise it shall not round the student's grade

Saving multiple grades:

- User data shall persist across user sessions; the system shall save all of the grade data that the user inputs and the letter grade that the system outputs
- The system shall allow more than one class's grades to be calculated and saved at a time

Future grades:

- The system shall provide the user with the total percentage they need to to achieve on the remaining assignments in the class to get a user-specified grade in the class
- The system shall allows students to input future grades and shall output the letter and number (percentage) grade the student will receive if they get these future grades

Features/User Stories

Feature 1: Grade input

Acceptance Criteria:

GIVEN I want to calculate my grades

WHEN I am a new Grade Getter user

THEN I want to be able to input the grades that I want to calculate in a convenient and easy manner

1-1. As a user, I want to be able to input a grading scale so that Grade Getter knows what percentage I need to achieve to in a class to get a certain letter grade in that class

1-2. As a user, I want to be able to input my current grades quickly and simply

1-3. As a user, I want to be able to input each of my grades by category (e.g. homework, tests, projects), the number of assignments within each category, the percentage of the total grade each category is worth, and the percentage of the total grade that each assignment within each category is worth as that is how my grades appear in D2L, Canvas, and on my syllabi

Feature 2: Grade output

Acceptance Criteria:

GIVEN I have inputted all of my grades into Grade Getter

WHEN I am a Grade Getter user

THEN I want to see my letter grade in each of my classes

2-1. As a user, I want to be able to see my current letter grade in each of my classes as calculated from my current grade input

2-2. As a user, I want Grade Getter to round my current grade if I specify this in the grading scale (e.g. if I specify that 89.5% (B+) rounds to 90% (A-)); otherwise I do not want grade getter to round my grade

Feature 3: Saving multiple grades

Acceptance Criteria:

GIVEN I inputted my current grades and Grade Getter outputted my current letter grade

WHEN I am a Grade Getter user

THEN I don't want to have to input my grades again; I want Grade Getter to save both my grade inputs and my current letter grade in the class

3-1. As a user, I want Grade Getter to save the grades I input and the current letter grade I have in the class as I don't want to have to input the same grades more than once

3-2. As a user, I want to be able to calculate and save my grades for all my classes at the same time; I don't want to be forced to clear my grade data for one class to calculate my grade in another

Feature 4: Future grades

Acceptance Criteria:

GIVEN I want to know what total percentage I need to get on the rest of my assignments to get a certain grade in my class or I want to know what grade I will get in my class if I get certain grades on my future assignments

WHEN I am a Grade Getter user

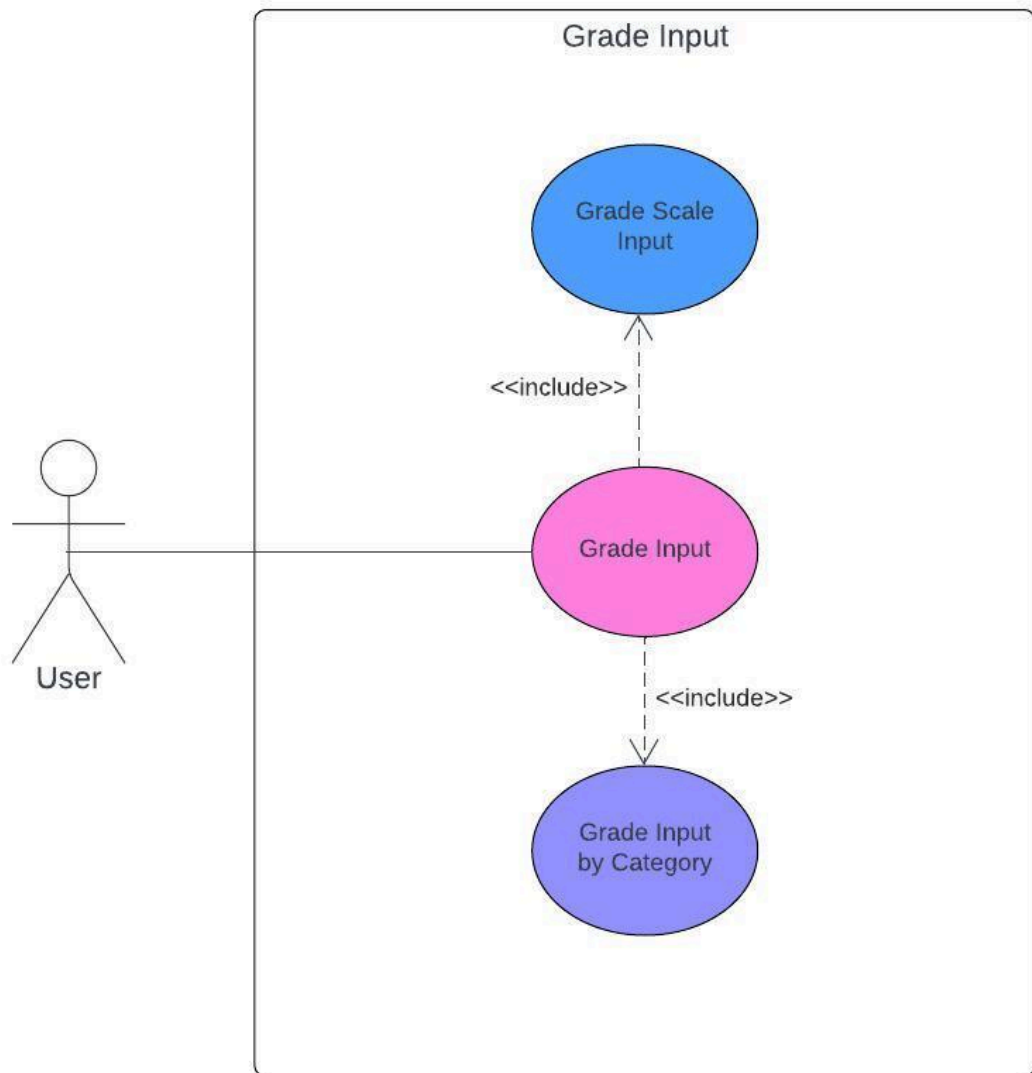
THEN I will be able to find out what total percentage I need on the rest of my assignments to get this grade by simply telling Grade Getter the grade I want in my class and I will be able to see what my grade will be if I get certain grades on my future assignments

4-1. As a user, I want to know the total percentage I need to achieve on my remaining assignments in the class to get the grade I want in the class

4-2. As a user, I want to know what grade I'll get in the class if I get certain grades on my future assignments and I want to be able to view this grade in both letter and number (percentage) forms

Use Cases

Use cases UC 1-1, 1-2, 1-3:



Use case UC 1-1:

Use Case name: Grade Scale Input

Related requirements: US 1-1, US 1-2

Goal in Context: A user is able to quickly and efficiently input their grades

Preconditions:

- 1) User has opened Grade Getter

Successful End Condition: User has input their grading scale into Grade Getter

Failed End Condition: User was unable to input their grading scale into Grade Getter

Primary Actors: User: person who wants to calculate their grades

Secondary Actors: none

Trigger: User wants to calculate their grades

Main Flow of Events

- 1) System asks for user's grading scale
- 2) User provides grading scale
- 3) System validates user's grading scale
- 4) System accepts user's grading scale

Extensions

3.1) System fails to validate user's grading scale

3.2) System provides message to user that the grading scale is not valid

Use case UC 1-2:

Use Case name: Grade Input

Related requirements: US 1-1, US 1-2, US 1-3

Goal in Context: A user is able to quickly and efficiently input their grades

Preconditions:

- 1) User has opened Grade Getter
- 2) User has inputted their grading scale

Successful End Condition: User has input their grades into Grade Getter

Failed End Condition: User was unable to input their grades into Grade Getter

Primary Actors: User: person who wants to calculate their grades

Secondary Actors: none

Trigger: User wants to calculate their grades and has already inputted their grading scale

Main Flow of Events

- 1) System asks for user's grades
- 2) User provides grades
- 3) System validates user's grades
- 4) System accepts user's grades

Extensions

3.1) System fails to validate user's grades

3.2) System provides message to user that their grades are not valid

Use case UC 1-3:

Use Case name: Grade Input by Category

Related requirements: US 1-1, US 1-2, US 1-3

Goal in Context: A user is able to quickly and efficiently input their grades

Preconditions:

- 1) User has opened Grade Getter
- 2) User has inputted their grading scale

Successful End Condition: User has input their grades by category into Grade Getter

Failed End Condition: User was unable to input their grades by category into Grade Getter

Primary Actors: User: person who wants to calculate their grades by category

Secondary Actors: none

Trigger: User wants to calculate their grades by category and has already inputted their grading scale

Main Flow of Events

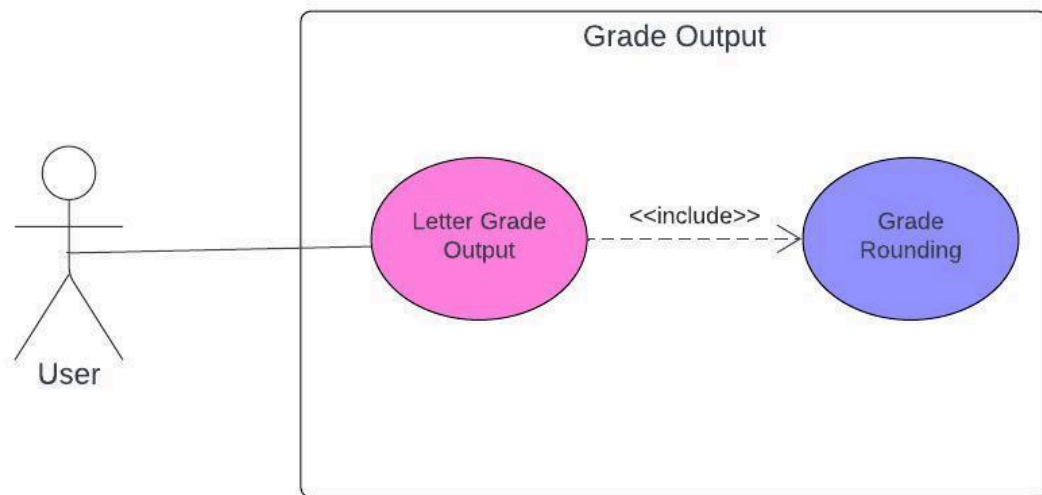
- 1) System asks for user's grades by category
- 2) User provides grades by category

- 3) System validates user's grades
- 4) System accepts user's grades

Extensions

- 3.1) System fails to validate user's grades
- 3.2) System provides message to user that their grades are not valid

Use cases UC 2-1 and UC 2-2:



Use case UC 2-1:

Use Case name: Letter Grade Output

Related requirements: US 2-1, US 2-2

Goal in Context: A user is able to see their current letter grade in a class

Preconditions:

- 1) User has opened Grade Getter
- 2) User has inputted their grading scale
- 3) User has inputted their grades

Successful End Condition: User is able to see their current letter grade in a class

Failed End Condition: User is unable to see their current letter grade in a class

Primary Actors: User: person who wants to calculate their grades

Secondary Actors: none

Trigger: User has pressed the “see current grade” button

Main Flow of Events

- 1) User presses “see current grade” button
- 2) System outputs the user’s current letter grade in the class

Extensions

- 2.1) System fails to output the user's current letter grade in the class
- 2.2) System provides message to user that it failed to output their current letter grade in the class

Use case UC 2-2:

Use Case name: Grade Rounding

Related requirements: US 2-1, US 2-2

Goal in Context: A user is able to see their current letter grade in a class with proper rounding

Preconditions:

- 1) User has opened Grade Getter
- 2) User has inputted their grading scale
- 3) User has specified when a grade should be rounded within their grading scale
- 4) User has inputted their grades

Successful End Condition: User is able to see their current letter grade in a class with proper rounding

Failed End Condition: User is unable to see their current letter grade in a class with proper rounding

Primary Actors: User: person who wants to calculate their grades

Secondary Actors: none

Trigger: User has pressed the “see current grade” button

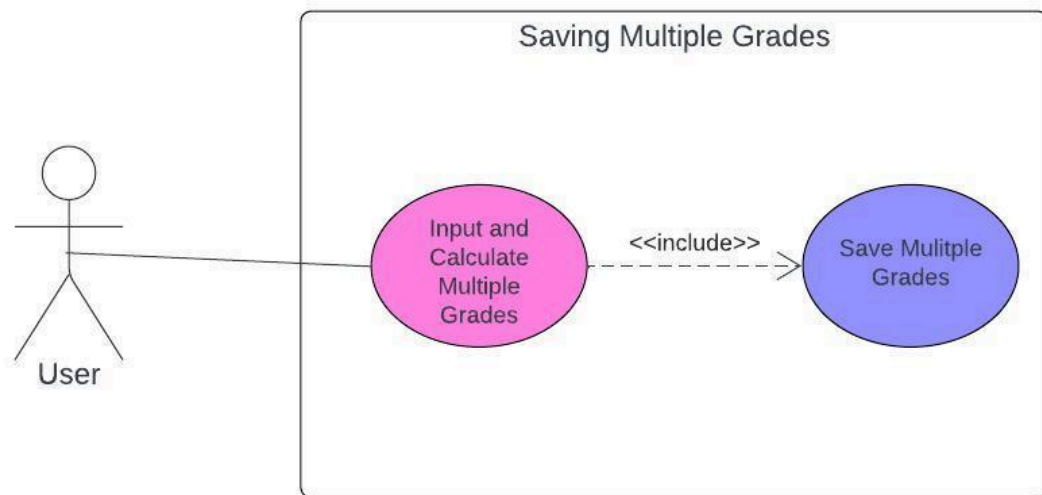
Main Flow of Events

- 1) User presses “see current grade” button
- 2) System outputs the user’s current letter grade in the class with proper rounding

Extensions

- 2.1) System fails to output the user’s current letter grade in the class with proper rounding
- 2.2) System provides message to user that it failed to output their current letter grade in the class with proper rounding

Use Cases UC 3-1 and UC 3-2:



Use case UC 3-1:

Use Case name: Input and Calculate Multiple Grades

Related requirements: US 3-1, US 3-2

Goal in Context: A user is able to input and calculate their grades in multiple classes at the same time

Preconditions:

- 1) User has opened Grade Getter

Successful End Condition: User is able to calculate their grade in multiple classes at the same time

Failed End Condition: User is unable to calculate their grade in multiple classes at the same time

Primary Actors: User: person who wants to calculate their grades

Secondary Actors: none

Trigger: User wants to calculate their grades

Main Flow of Events

- 1) User inputs their grades and calculates their letter grade in a class
- 2) User inputs their grades and calculates their letter grade in another class

Extensions

- 2.1) System fails to let the user input their grades and calculate their letter grade in another class simultaneously
- 2.2) System provides message to user that it failed to add a second class

Use case UC 3-2:

Use Case name: Saving Multiple Grades

Related requirements: US 3-1, US 3-2

Goal in Context: A user is able to input and calculate their grades in multiple classes at the same time and the system will save the grading scales and grades the user inputs as well as the letter grade that the system outputs

Preconditions:

- 1) User has opened Grade Getter
- 2) The user has inputted the grading scale and grades for at least one class
- 3) The user has pressed the “see current grade” button for that class

Successful End Condition: The system saves the grading scale and grades that the user inputted as well as the letter grade that the system outputted

Failed End Condition: The system is unable to save the grading scale and grades that the user inputted as well as the letter grade that the system outputted

Primary Actors: User: person who wants to calculate their grades

Secondary Actors: none

Trigger: User presses the “save” button

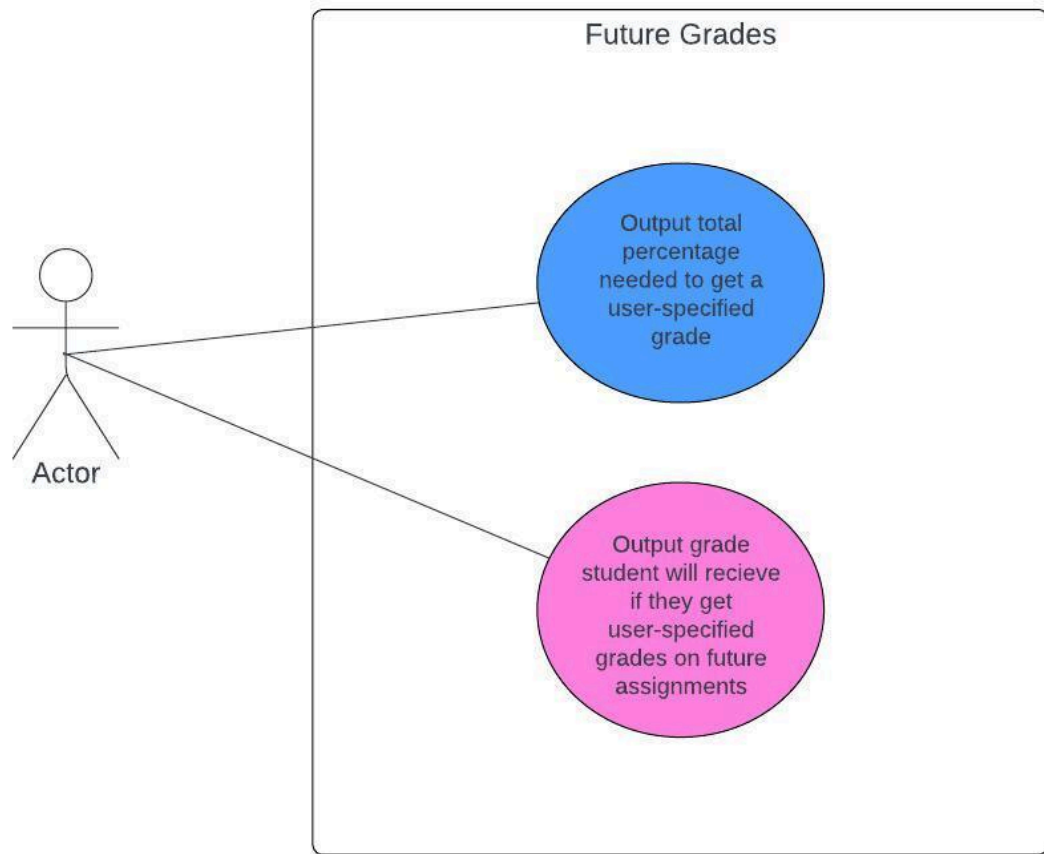
Main Flow of Events

- 1) User inputs their grades and calculates their letter grade in a class
- 2) User presses the “save” button
- 3) The system saves the grading scale and grades that the user inputted as well as the letter grade that the system outputted

Extensions

- 3.1) System fails to save the grading scale and grades that the user inputted as well as the letter grade that the system outputted
- 3.2) System provides message to user that it failed to save the grading scale and grades that the user inputted as well as the letter grade that the system outputted

Use Cases 4-1 and 4-2:



Use case UC 4-1:

Use Case name: Output total percentage needed to get a user-specified grade

Related requirements: US 4-1

Goal in Context: A user is able to see the total percentage they need to achieve on the rest of the assignments in a class to achieve a user-specified grade in that class

Preconditions:

- 1) User has opened Grade Getter
- 2) User has inputted their grading scale and grades for a class
- 3) User has pressed “see current grade” button and the system has calculated the user’s current grade in a class

Successful End Condition: User is able to see the total percentage they need to achieve on the rest of the assignments in a class to achieve a user-specified grade in that class

Failed End Condition: User is unable to see the total percentage they need to achieve on the rest of the assignments in a class to achieve a user-specified grade in that class

Primary Actors: User: person who wants to see the total percentage they need to achieve on the rest of the assignments in a class to achieve a user-specified grade in that class

Secondary Actors: none

Trigger: User has pressed the “what do I need to get on my future assignments to get an <letter grade> in the class?” button

Main Flow of Events

- 1) User presses “what do I need to get on my future assignments to get an <letter grade> in the class?” button
- 2) System prompts the user to enter the letter grade they want to achieve in the class
- 3) User presses the “calculate” button
- 4) System outputs the total percentage the user needs to achieve on the rest of their assignment to achieve this letter grade

Extensions

- 4.1) System fails to output the total percentage the user needs to achieve on the rest of their assignment to achieve this letter grade
- 2.2) System provides message to user that it failed to output the total percentage the user needs to achieve on the rest of their assignment to achieve this letter grade

Use case UC 4-2:

Use Case name: Output grade student will receive if they get user-specified grades on future assignments

Related requirements: US 4-2

Goal in Context: A user is able to see the grade they will receive in a class if they get user-specified grades on future assignments

Preconditions:

- 1) User has opened Grade Getter
- 2) User has inputted their grading scale and grades for a class
- 3) User has pressed “see current grade” button and the system has calculated the user’s current grade in a class

Successful End Condition: User is able to see the grade they will receive in a class if they get user-specified grades on future assignments

Failed End Condition: User is unable to see the grade they will receive in a class if they get user-specified grades on future assignments

Primary Actors: User: person who wants to see the grade they will receive in a class if they get user-specified grades on future assignments

Secondary Actors: none

Trigger: User has pressed the “what grade will I get if I get <letter grade> on this assignment and <letter grade> on this assignment” button

Main Flow of Events

- 1) User presses “what grade will I get if I get <letter grade> on this assignment and <letter grade> on this assignment” button
- 2) System prompts the user to enter the category of the assignments and the grade on the assignments they want to test
- 3) User presses the “calculate” button
- 4) System outputs the letter grade the user will get in the class if they get the grades they give on these assignments

Extensions

- 4.1) System fails to output the letter grade the user will get in the class if they get the grades they give on these assignments
- 4.2) System provides message to user that it failed to output the letter grade the user will get in the class if they get the grades they give on these assignments

Class Diagram

