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 Grade Getter to use the standard grading scale so that I don't have to spend time inputting a custom grading scale; I want grade input to be as simple as possible

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 (e.g. if I specify that my grade will be rounded by .5% Grade Getter will round my 89.5% (B+) to a 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:

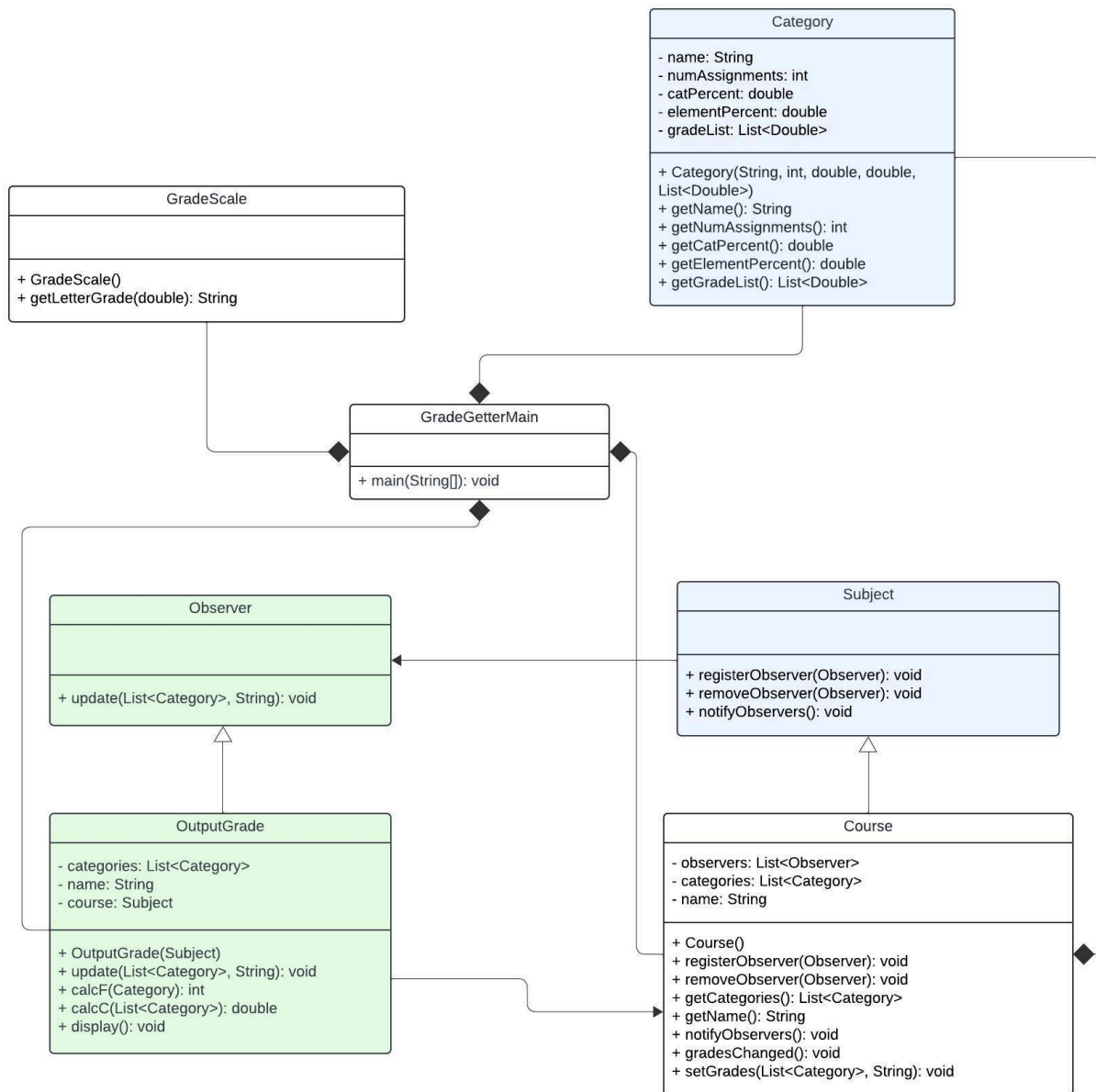GIVEN I want to know what grade I will get in my class if I get certain grades on my future assignments

WHEN I am a Grade Getter user

THEN I will be able to see what my grade will be if I get certain grades on my future assignments

4-1. As a user, I want to be 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
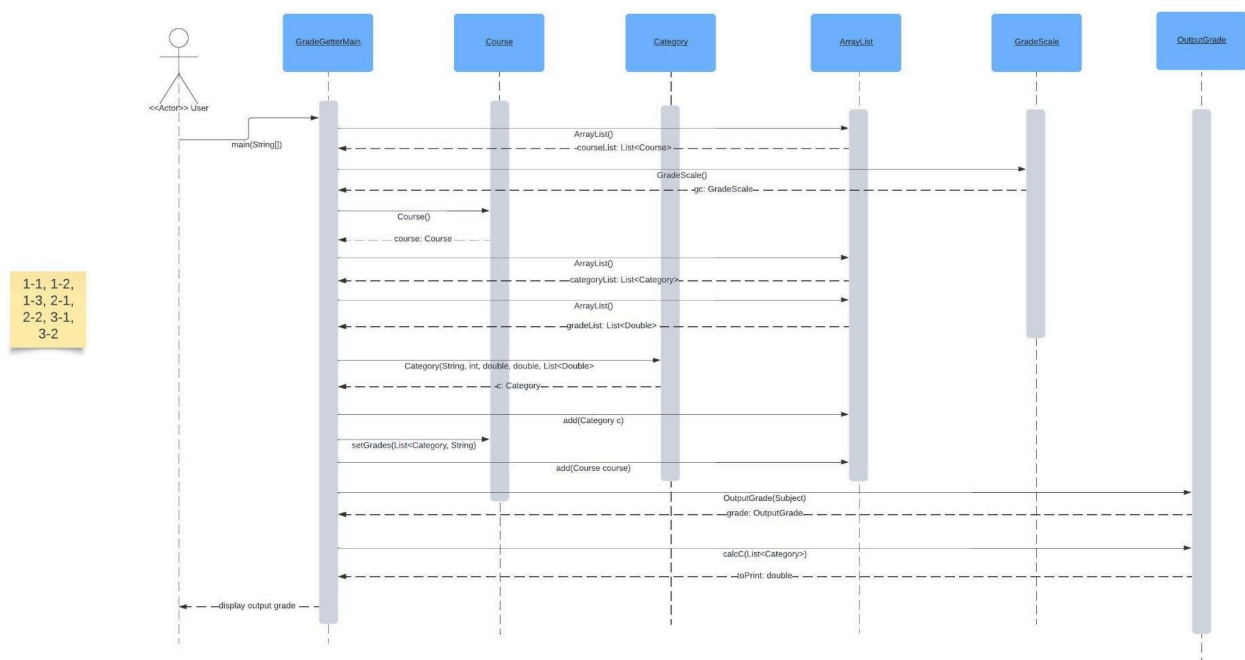
Class Diagram

Category

- name: String
- numAssignments: int
- catPercent: double
- elementPercent: double
- gradeList: List<Double>

+ Category(String, int, double, double, List<Double>)
+ getName(): String
+ getNumAssignments(): int
+ getCatPercent(): double
+ getElementPercent(): double
+ getGradeList(): List<Double>

GradeScale

+ GradeScale()
+ getLetterGrade(double): String

GradeGetterMain

+ main(String[]): void

Observer

+ update(List<Category>, String): void

OutputGrade

- categories: List<Category>
- name: String
- course: Subject

+ OutputGrade(Subject)
+ update(List<Category>, String): void
+ calcF(Category): int
+ calcC(List<Category>): double
+ display(): void

Subject

+ registerObserver(Observer): void
+ removeObserver(Observer): void
+ notifyObservers(): void

Course

- observers: List<Observer>
- categories: List<Category>
- name: String

+ Course()
+ registerObserver(Observer): void
+ removeObserver(Observer): void
+ getCategories(): List<Category>
+ getName(): String
+ notifyObservers(): void
+ gradesChanged(): void
+ setGrades(List<Category>, String): void

Sequence Diagrams

Note: I feel that my use cases aren't conducive to 1-1 use case to sequence diagram correlation. Many of them are very similar or are simply parts of other use cases, so I decided to create 2 sequence diagrams rather than 8. I created a separate sequence diagram for use case 4-1 while the rest of the use cases are included in a single sequence diagram.

Use Cases 1-1, 1-2, 1-3, 2-1, 2-2, 3-1, 3-2: Grade and grade scale input, grade output, and calculating and saving multiple grades

Use Case 4-1:

Output final class grade user will receive if they get user-specified grades on future assignments