

The UML Document for the Weighted Grading Application

The weighted grading application receives assignments' percentages, earned grades, and total points as inputs. It outputs a weighted grade and a grade class.

The program consists of two classes, `ExtendWeightGrades` and `WeightGrades`. The class `ExtendWeightGrades` inherits and extends `WeightGrades` to receive the flexible length of inputs, while `WeightGrades` only receives one data point. Here are their detailed attributes:

`ExtendWeightGrades` has below attributes:

- `extendAssignmentPercentage`: an `ArrayList` with each `Double` element representing percentages of each assignment
- `extendEarnedPoints`: an `ArrayList` with each `Double` element representing earned points of each assignment
- `extendPointTotal`: an `ArrayList` with each `Double` element representing the total points of each assignment
- `extendTotalWeightedGrade`: a double number that is the weighted grade of all assignments
- `gradeClass`: a `String` representing the class of the weighted grade
- `totalAssignments`: an `int` number representing the number of assignments

`WeightGrades` has below attributes:

- `assignmentPercentage`: a double number which is the percentage of an assignment
- `earnedPoints`: a double number which is the earned point of an assignment
- `pointTotal`: a double number which is the total point of an assignment
- `totalWeightedGrade`: a double number that is the weighted grade of an assignment

Future works:

1. The current program is not user-friendly because it lacks a graphic interface making users without programming experiences hard to use. Therefore, it is reasonable to create a graphic interface.
2. The input and output data are in the computer's memory instead of hard disks. It may suffer from data loss if the program is temporally stopped. It is better to use files or databases to store data.

