

== GradeEntry ==

Context: a student record system at U of T

A grade entry must keep track of three things:

- a course identifier, such as "CSC148". This is the course in which the grade was earned.
- a course weight: 1.0 credits for a half-course, 2.0 credits for a full course
- a course grade, which has no meaningful value unless we know whether letter grades or numeric grades are used

A grade entry must also be able to generate how many points it is worth, based on its grade. The details of how points are generated are left out unless we know whether letter or numeric grades are used.

Design and implement class GradeEntry

== LetterGradeEntry ==

① Subclass

Context: a course grade entry with letter grades

A letter grade entry is a grade entry for which the grade is a character. The value of the grade is one of {A, B, C, D, F}, with a possible suffix from {+, -}. A

LetterGradeEntry generates points, based on its grade, according to the following table:

value      grade-point

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A+          4.0

A            4.0

A-          3.7

B+          3.3

B            3.0

B-          2.7

C+          2.3

C            2.0

C-          1.7

D+          1.3

D            1.0

D-          0.7

F            0.0

Action

Design and implement class LetterGradeEntry

== NumericGradeEntry ==

② Subclass

Context: a course grade with an integer value

A numeric grade entry is a grade entry for which the grade is an integer between 0

and 100 (inclusive). A numeric grade entry generates grade points based on its grade, according to the following table:

value	points
----- <i>Action</i>	
90-100	4.0
85-89	4.0
80-84	3.7
77-79 →	3.3
73-76	3.0
70-72	2.7
67-69	2.3
63-66	2.0
60-62	1.7
57-59	1.3
53-56	1.0
50-52	0.7
0-49	0.0

Design and implement class NumericGradeEntry.