

Unit Three Assignment One:

Write a Java project (application) with two classes. The driver class should generate an Input Dialog Box to read in a letter grade and a second Input Dialog Box to read in a numeric grade between 0 and 4, inclusive.

The driver class should then use a *Grade* class to convert the letter grade to a numeric grade and the numeric grade to a letter grade.

The *Grade* class should have four instance fields, two of type String for the letter grades (**origLetter** & **newLetter**) and two of type double for the numeric grades (**origNumeric** & **newNumeric**). It should have a parametric constructor which accepts a letter grade and a numeric grade as arguments. This constructor should assign the letter grade to the String **origLetter** and the numeric grade to the double **origNumeric**. This constructor should also call the mutator methods *setNewNumeric*, which converts **origLetter** to **newNumeric**, and *setNewLetter*, which converts **origNumeric** to **newLetter**. This class should also have two accessor methods *getNewLetter* and *getNewNumeric*.

RULES FOR CONVERTING:

Letter grades are A, B, C, D, F, possibly followed by a + or -. Their numeric values are 4, 3, 2, 1, and 0. There is no F+ or F-. A plus sign increases the numeric value by 0.3, a minus sign decreases it by 0.3. However, an A+ has a value of 4.0. For example, a letter grade of B- is equivalent to a numeric grade of 2.7.

A numeric grade of 2.8 (which might have been the average of several grades) is equivalent to a letter grade of B-. Break ties in favor of the better grade; for example, 2.85 should be a B.

4.0	=	A+
3.85 - 3.99	=	A
3.50 - 3.84	=	A-
3.15 - 3.49	=	B+
2.85 - 3.14	=	B
2.50 - 2.84	=	B-
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Finally, the driver class should generate one Message Dialog Box containing both of the converted grades.

This project should be executed 4 times and only the output GUI's should be pasted into a Word document.

Test Data: 1) A+ 1.15 2) C- 3.14 3) B+ 0.4 4) D 2.51

Output for the first set of data should look like this...

