Course and Project classes

Part 1:

In this exercise you are asked to program three simple classes which keep track of the grading of a sample student. The classes are called `AbsoluteGradedCourse`, `GradedCourse`, and `Project`.

A `AbsoluteGradedCourse` encapsulates a course name, marks and the grade of the student for our sample student. Follow the following grading scheme.

Percentage	Letter grade	Description
90 – 100	A +	Exceptional
80 – 89	A	Excellent
70 – 79	B	Good
60 – 69	C	Satisfactory
50 – 59	D	Barely acceptable
0 – 49	F	Unacceptable

A `GradedCourse` encapsulates a course name and the grade of the student. For grading we use the Danish 7-step, numerical grades 12, 10, 7, 4, 2, 0 and -3. The grade 2 is the lowest passing grade.

Make the getter and setter functions of both `AbsoluteGradedCourse` and `GradedCourse`.

In both `AbsoluteGradedCourse` and `GradedCourse` you should write a method called `Passed`. The method is supposed to return whether our sample student passes the course.

The class `Project` aggregates two Absolute Graded courses and two graded courses. You can assume that a project is passed if at least three out of the four courses are passed. Write a method `Passed` in class `Project` which implements this passing policy.

Make a project with four courses, and try out your solution.

Part 2:

Now Revise and reorganize your solution (or the model solution) such that `AbsoluteGradedCourse` and `GradedCourse` have a common abstract superclass called `Course`. Be sure to implement the method `Passed` as an abstract method in class `Course`.