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SE 310 Visual Programming  
Assignment 1  
Due: Thursday February 14, 2019 11:59PM

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This is an individual assignment.

**Objectives:**

Basic C# syntax, processing data, creating objects, error checking, course grading.  
Points: 100

**Details:**

You are asked to write a C# console application that reads individual coursework items and calculates the course score (out of 100), the letter grade, and the point grade (out of 4.2) following the JUST grading system.

The program must read the grades of the exams, assignments, and quizzes. There are exactly 3 exams and 4 assignments. Also there are 6 quizzes in which the lowest quiz score is dropped. Each coursework grade will be out of 100. For each assignment score, you need to check if it has been submitted on-time or late. If an assignment is submitted late, there will be 10 points deduction.

The course evaluation is as follow:

Assessment	Weight
First exam	10%
Second exam	20%
Final exam	40%
Assignments	20%
Quizzes	10%

The letter grades and the letter points:

Grade out of 100	Grade letter	Grade Point
0 - 49	F	0.5
50 - 52	D-	1.5

53 - 56	D	1.75
57 - 59	D+	2
60 - 62	C-	2.25
63 - 66	C	2.5
67 - 69	C+	2.75
70 - 72	B-	3
73 - 76	B	3.25
77 - 79	B+	3.5
80 - 84	A-	3.75
85 - 94	A	4
95 - 100	A+	4.2

Here are additional requirements that you need to take in to consideration while coding your program:

- 1- Your program should not accept wrong grade, i.e., a grade that is greater than 100 or less than 0. Your program should discard the wrong grade and allows the user to enter another grade
- 2- if the grade of a late assignment is less than 10, then your program should consider the grade of that assignment 0 instead of a negative number
- 3- Each coursework should be an object of class **Coursework**
- 4- Each assignment should be an object of class **Assignment**
- 5- Each quiz should be an object of class **Quiz**
- 6- Each exam should be an object of class **Exam**. The class Exam should contain a property that shows the type of the exam (First, Second, or Final).
- 7- Your program should use the **Enumeration** type when possible. You should use it at least once to get full credit. For example, you can use it to determine the type of an exam (First, Second, or Final).
- 8- The course final grade should be an object of type **Grade**. The Grade class should have three properties:
  - a. TotalScore
  - b. Pointgrade
  - c. Lettergrade
- 9- The Coursework class should have the following methods with the exact signature:
 

```
class Coursework{
    public bool addAssignment( Assignment assignment)
```

```

        //this method return true if the assignment grade is correct, o.w., it returns false
        public bool addQuiz( Quiz quiz)
        public bool addExam( Exam exam)
        public bool calcGrade() // this method calculates the course grade if all
coursework items are inserted and returns true, o.w., it returns false
        public Grade getGrade() //returns the calculated grade
        public Quiz lowestQuiz() //returns the lowest Quiz

    }

```

- The Assignment class should have the following methods:

```

class Assignment {
    public bool score(int mark)
    public void lateSubmission(bool late)
}

```
- The Quiz class should have the following method

```

public bool score()

```
- The Exam class should have the following method

```

public bool score(int mark)
public bool examType(EXAMTYPE examType) where EXAMTYPE is an enum that has
three values (First, Second, and Final)

```
- The **Main** method should be only used for testing you program which means that the TA can comment your Main method and replace it with another Main method and your program should not be affected.
- It is your responsibility to follow the exact name of the class, method, and properties mentioned in this assignment
- Your project should be free of compilation errors

### Submission:

Submit your project as a **zip** file to the E-Learning system no later than Thursday February 14, 2019 11:59PM. No late submission will be accepted not like your program 😊

### Grading:

All code that you submit must run without warnings or errors. The assignment will be graded out of 100 points. **The code should be yours and you should be able to discuss it. If we detect similar codes (cheating), all students with similar codes will get zero without discussion.**

### Big advice:

*start early!*

***Enjoy coding and get full credit!***