Write a C++ program which calculates grade point averages according to the rules given below.

Your program should:
1. validate input data whenever possible. For example, your program should not accept invalid data like an E grade or credit hours less than 0 or greater than 6. But… if your program expects a char, the user will enter a char. If your program expects an int, the user will enter an int. Just make sure the char or int are within the expectable range. Data validation should be done for all input *before* proceeding to get other input (i.e. validate the grade before getting number of hours).
2. display the GPA to 2 decimal places, even if it's a whole number (4.00).
3. allow case insensitive input ("A" or "a" is acceptable).
4. allow any number of courses to be entered (except negative values).

Your program should be formatted *exactly* like the example below. The input is shown in bold.

_____

```
Number of courses? 3

For course 1:
Grade? A
Hours? 4

For course 2:
Grade? C
Hours? 2

For course 3:
Grade? B
Hours? 3

GPA is 3.22
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GPA = Total Quality Points / Total Credit Hours

Quality Points = Grade Multiplier * Course Credit Hours

Grade Multipliers: A = 4, B = 3, C = 2, D = 1, F = 0

Turn in a print out of your documented program.

Submit your program on-line to Easel before class on the due date. http://cs.harding.edu/easel/