Assignment 4: Reading and Programming Project due 10/2

Reading Assignment

Read Sections 3.1 and 3.4, completing self-test exercises. Handout 5 on Static Methods.

Programming Assignment

This assignment consists of project CreditRating which requires the use of conditionals and a definition of your own static method.

This project is based on a problem suggested for the use in the course by one of a former CS230 students, Justin King.

Programming Project

CreditRating: due 11:00 p.m. on 10/2, Thursday worth 12 points

This programming project should rate a company’s credit on a scale from A to C, and print out a message regarding the credit option that the company qualifies for.

The user should be prompted to input the following information:

1. How old is the company (in years)?
2. How much money does the company owe? (debt)
3. What is the value of the company’s stockholders’ equity?
4. How many credit inquiries has the company had in the past 12 months?
5. Did the company ever declare bankruptcy (yes/no)?
6. Has the company ever had assets seized or repossessed?

For simplicity purposes, credit utilization will be determined according to the following formula: \[ \text{credit utilization} = \frac{\text{debt}}{\text{shareholders equity}} - 1. \]

Here are the credit criteria that should be followed:

To qualify for A or B credit, the company must have had no bankruptcies, no repossessions and less than 5 credit inquiries within the last 12 months. Furthermore, to qualify for A credit, it should have less than
$5000 owed, and credit utilization under 0.3; to qualify for B credit, the debt should be no more than $10000, and credit utilization should be no higher than 0.5.

To qualify for C credit, the company should be at least 2 years old, have had no bankruptcies and no repossessions, less than 10 credit inquiries in the last 12 months, and owe less than $50000.

Your program should determine the credit rating for a given company, and print out an appropriate message regarding the credit option:

- in case a company qualified for the A Credit rating,
  The credit rating for this company is A. The company qualifies for the best rates available.

- in case a company qualified for the B Credit rating,
  The credit rating for this company is B. The company qualifies for credit.

- in case a company qualified for the C Credit rating,
  The credit rating for this company is C. The company qualifies for credit.

- in case a company did not qualify for ratings A, B or C, the program should print
  Unfortunately, we cannot lease to the company at this time.

To receive full credit for this assignment, your program must define and use at least one static method. The maximum credit without a static method is 9 points (out of possible 12).

Good luck!