PA2 Loan Account Hierarchy Grading Rubric

Remember, the rubric should be used as a guide, but you should still practice good object-oriented programming. The rubric may not cover all scenarios in which we take off points for bad object-oriented practice.

Late policy: 4% per day for a maximum of 40% off

- LoanAccount Class
  a. Has the following properties: (-5)

    o principle - the original amount of the loan.
    o annualInterestRate - the annual interest rate for the loan. It is not static as each loan can have its' own interest rate.
    o months - the number of months in the term of the loan, i.e., the length of the loan.

  b. Has the following methods:
    o a constructor that takes the three properties as parameters. (-5)

    o calculateMonthlyPayment() - takes no parameters and calculates the monthly payment using the same formula as Assignment 1. (-10)
    o getters for the three property variables. (-5)
    o toString() - displays the information about the principle, annualInterestRate, and months as shown in the example output. (-10)

- CarLoan Class which is a subclass of LoanAccount (-5)
  a. Has the following properties: (-5)

    o vehicleVIN - the VIN number of the car, as a string.

  b. Has the following methods:
    o constructor that accepts the three parameters of the LoanAccount class and the vehicleVIN. (-5)
    o toString() - displays the information about the VIN number as shown in the example output. (-5)

- PrimaryMortgage Class which is a subclass of LoanAccount (-5)
  a. Has the following properties: (-5)

    o PMIMonthlyAmount - the amount of the Primary Mortgage Insurance which is required for all mortgages where the down payment is not at least 20% of the home value.
    o Address - the address of the real estate and is an object of the Address class.

  b. Has the following methods:
    o constructor that accepts the three parameters of the LoanAccount class, the PMIMonthlyAmount, and the Address object containing the address. (-5)
    o toString() - displays the information about the PMIMonthlyAmount and Address as shown in the example output. (up to -10)

- UnsecuredLoan Class which is a subclass of LoanAccount (-5)
  a. Has no additional properties.
  b. Has the following methods:

    - o constructor that accepts the three parameters of the LoanAccount class. (-5)
    - o toString() - displays the information that it is an Unsecured Loan as shown in the example output. (up to -10)

- Address Class
  a. Has the following properties: (-5)

    - o street - the house number and street part of the address.
    - o city - the city where it is located.
    - o state - the state.
    - o zipcode - and the zipcode.

  b. Has the following methods:

    - o constructor which accepts the values for the four properties as parameters. (-5)
    - o getters for each property. (-5)
    - o toString() - display the address information as shown in the example below. (up to -10)

- Main method
  a. Uses the code in the main method as given in the assignment. (-10)
  b. Displays the information using $ and % as shown in the output.
  c. Displays the data with 2 decimal places for all dollar amounts as shown