Job Daniel Dizon

Project 1

23 April 2023

    For the first program, "InterestCalculator", I made a class that has a constructor that assigns the parameters of the class to the private members: rate and amount. There are three public member functions: "setRate", "getRate", and "printInterest". The "setRate" function validates only positive integers which get passed through the "getRate" function. Finally, the last member function, "printInterest", does the calculations and outputs the interest rate from the user. The functions all have a return value of "void". The class specifier "protected" is used in order for the derived class can access the "rate" and "amount variables. Evidently, I created an object "interest" that prints the interest.

    For the "LoanCalculator" program, I derived the class from the base class as instructed. The class constructor uses the same parameters as the base class but has one original parameter. In the constructor, I implemented an "if" statement to validate the integers of the variables. Furthermore, I initialized variables "numMonths", "balance", and "monthlyRate" to 0 to order to be usable in the public member function "MonthlyPayment".In the function, I implemented a loop, and

inside the loop has the calculations for monthly payment, interest, total interest, principal amount, and the balance. Finally, I created an object "loan" and implemented the parameters from the user input.