COMP 1409 Lab 4-a (2 points)

In-class lab

A bank needs a program to help it calculate the charges of a commercial checking account. Design a class called **BankCharges**. Include appropriate Javadoc comments for each class element.

Declare these symbolic constants at the top of your class

```
public static final double FIRST_CHEQUES_CHARGE = 0.10;
public static final double SECOND_CHEQUES_CHARGE = 0.08;
public static final double THIRD_CHEQUES_CHARGE = 0.06;
public static final double FOURTH_CHEQUES_CHARGE = 0.04;
public static final int BANK_CHARGE = 10;
public static final int BANK_LOW_BALANCE_CHARGE = 15;
```

Here are the relevant attributes of a BankCharges object. These must be the **only** fields of your class.

- clientName
- endingBalance
- numberOfCheques

Provide a default constructor, one which initializes all instance variables to the default value, except that the String variable should be an empty string (“”) instead of null.

The second constructor takes parameters to initialize the instance variables. The constructor validates the passed parameter making sure that endingBalance and numberOfCheques get positive values otherwise they will be initialized to 0.

Provide an accessor (get) and a mutator (set) method for each instance variable. The mutators must validate the numeric parameters and use them only if they are not negative.

Provide a method called **calculateBankServiceFees()**. This method will **return** the service fees of the bank calculated as follows:
The bank charges $ 10 a month for each chequing account plus the following fees:
$ 0.10 for each cheque if less than 20 cheques were written
$ 0.08 for each cheque if 20 through 39 cheques were written
$ 0.06 for each cheque if 40 through 59 cheques were written
$ 0.04 for each cheque if 60 or more cheques were written

The bank also charges $15 if the account balance falls below $400 (before any cheque fees are applied).The bank service fees should be deducted from the ending balance before returning the service fees.

Demonstrate your completed project to your instructor or TA before leaving the lab and be sure we have checked it off. A suggested solution will be given during the next class and labs that have not been checked off will not receive any points.