

## COMP 1409 Lab 5-a ( 2 points )

### In-class lab

A local company is a retail seller of personal computers. The sales staff works strictly on commission. At the end of the month each sales person's commission is calculated. Create a class called CommissionSales to calculate the commission for the sales staff.

Declare these symbolic constants at the top of your class:

```
public static final double RATE_A = 0.05
public static final double RATE_B = 0.10
public static final double RATE_C = 0.12
public static final double RATE_D = 0.14
public static final double RATE_E = 0.16
```

Here are the relevant attributes:

```
salesPersonName
salesAmountInCAD
salesCommissionRate
```

Provide two constructors. Both constructors call mutator methods to initialize the instance variables. The default constructor passes an empty string to the set method for the salesPersonName field and the default value to the salesAmountInCAD set method. See below for details about the mutators.

The second constructor accepts parameters to initialize instance variables (salesPersonName, salesAmountInCAD) by passing the parameters to the corresponding set method. See below for details about the mutators.

The mutator method of salesAmountInCAD validates the passed parameter and uses it only if it's positive. If negative the instance variable is not changed. The mutator for salesPersonName validates the passed parameter and ensures it is not null. If null, the instance variable is set to an empty string ("").

Provide a mutator method called calculateCommissionRate() that is **called from both constructors**. This method will assign the appropriate rate to the instance variable salesCommissionRate according to the sales person's sales. The rate is determined according to the following table:

Sales	Percentage	rate
Less than 10000	5%	A
10000 to 14999	10%	B
15000 to 17999	12%	C
18000 to 21999	14%	D
22000 or more	16%	E

Provide a method called `calculatePay()` which calculates **and returns** the sales person's pay based on the amount of sales at the commission rate, for example a sales person with \$16000 in sales earns 12% commission of his or her sales which is \$1920.

Provide standard accessor methods for all fields.

Provide a method called `displayDetails()` . This method displays sales person's name, rate and pay on the screen.

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.