COBOL PROGRAMMING ASSIGNMENT – 2016

**LAB 4**

This lab uses one large nested IF statement. We are NOT using PERFORMed paragraphs within the nested IF/ELSE. It is a requirement to use regular COBOL statements within the IF/ELSE.

1. In order to reduce some of the keying effort, part of the lab has been prepared for you. You should have a look at this file, but it your choice whether to use it all, part of it, or ignore it altogether and write your own code. Download the starter program and the data file from the DC Connect Dropbox.

2. You must use PERFORM for the printing of the headings and totals.

3. For this lab you are permitted to use COMPUTE as appropriate.

INPUT DATA FILE LAYOUT

NO. NAME SALES COMM. MIN. MAX.

RATE COMM. COMM.

1-2 3-10 11-14 15-16 17-19 20-23

10 Jim 4000 10 300 h600

17 Beth 5000 20 500 1000

21 Tom 6000 20 500 1325

30 Sally 207 20 50 100

31 Gerry 7999 5 600 700

39 Cindy 3751 19 400 600

a) The program is to process the data, calculate the salesperson earned and paid commission and for each salesperson print out:

Salesperson's No.

Salesperson's Name

Sales

Minimum Commission

Maximum Commission

Commission Rate **with a % sign** (i.e. 10%).

This is accomplished by printing % as a literal.

Earned Commission

Paid Commission

The calculations are to be made as accurately as possible such that the salesman's final earned commission is calculated to the nearest dollar. **All printed values are to the nearest dollar (so use ROUNDED wisely).**

b) The program is to print your name etc., a report title (SALES COMMISSION REPORT), column headings and the underlining, see next page, for the headings and the line spacing.

c) Use one nested IF/ELSE sentence for the following commission calculations. Use of **PERFORMED paragraphs is not permitted in this part of the program**.

Calculate the EARNED Commission as follows:

If the Sales is <= 5000, Earned = Sales \* Rate

If the Sales is > 5000, Earned = Sales \* Rate + a bonus of 12.5% of the amount over $5000.

Here are a couple of sample calculations:

JIM gets 10% of his $4000 in sales = earned of $400

TOM gets 20% of his $6000 in sales = $1200 + 12.5% of (6000 – 5000) =

1200 + 125 = $1325

Calculate the PAID commission as follows:

* If the sales are **more** than $5000 then PAID = EARNED unless Earned is > MAX. If Earned is > Max then PAID = MAX. Note that they CAN earn less than their minimum and **no check** is to be made on it. Count and print out with a title (see next page), the number of salespersons in the sales over $5000 category who earn more than their maximum. Check *Gerry*.
* If Sales <= 5000 then PAID = EARNED unless Earned is < MIN. If Earned is < Min then PAID = MIN. They can earn more than their maximum and **no check** is made on it. Count and print out with a title (see next page), the number of salespersons in the no bonus category who earn less than their minimum. Check *Sally*.

d) The program is to accumulate and print out the total commission earned and paid to all salespersons.

In order to understand the logic of this program, I suggest you manually calculate the answers shown below. When you do get output I suggest that you check your calculations for salesman PHIL.

OUTPUT FOR SAMPLE DATA (from page 1)

SALES COMMISSION REPORT

NO. NAME SALES MIN MAX RATE EARNED PAID

--- ---- ----- --- --- ---- ------ ----

10 Jim 4,000 300 600 10% 400 $\*\*400

17 Beth 5,000 500 1,000 20% 1,000 $1,000

21 Tom 6,000 500 1,325 20% 1,325 $1,325

30 Sally 207 50 100 20% 41 $\*\*\*50

31 Gerry 7,999 600 700 5% 775 $\*\*700

39 Cindy 3,751 400 600 19% 713 $\*\*713

TOTALS $4,254 $4,188

NUMBER WITH BONUS MORE THAN MAX 1 *(this is Gerry)*

NUMBER WITH NO BONUS LESS THAN MIN 1 *(this is Sally)*

Note that the comments above regarding Gerry and Sally are just for clarity; all your program has to be able to do is write out the number in each category.

EDITING as follows:

i) Use Z and , for all except paid.

ii) Use $ , and \* (asterisk) for paid.

iii) Use a floating $ sign and , for the totals.

Turn in: A 7z or Zip archive of your VS2015 Project