**COBOL PROGRAMMING ASSIGNMENT – 2016**

## Lab #3

Unlike lab 1, this lab is not in parts, it is one complete lab. You might want to consider writing it in stages. Write the program to print the Invoice Number only to prove the data file is ok. Then add the Extended Price calculation, etc. and progressively more pieces of code.

You can download the required data file (lab3.dat) from DC Connect. Lab3.dat is Invoice data that has the following record format:

Invoice Per Unit Product

Number Qty Description Price Class

POSN 1 - 4 5-7 8 - 20 21-26 27

2047 105 Typewriter 800.00 B

1742 10 Handle 10.00 A

**PROGRAM SPECIFICATIONS**:

Sample output is at the end of this description. Throughout this lab you must use the appropriate arithmetic verbs (ADD, MULTIPLY, etc) – you are NOT permitted to use the COMPUTE verb.

1. Print out the following on the detail line data for each invoice, **double spaced.**

Invoice No., Extended Price (Quantity \* Per Unit Price), Discount Amount, Net Price, Product Class, Transportation % (print in percent form, i.e. 11.5) and Transportation Charge.

See my attached sample output. Note, only the Invoice Number and Product Class are from the input, all other fields are calculated.

OUTPUT NUMERIC EDITING for the detail line INVOICE DATA:-

use Z, 9 and , (comma). Leave 1 digit to the left of the decimal point (i.e. 0.09) for small values.

2. A discount of 11% is allowed only if the Extended Price is greater than the $200.00, otherwise no discount is allowed. If no discount is allowed, the DISCOUNT AMOUNT field is to be printed as 0.00.

3. The transportation charges are calculated as follows:

For Product Class A - it is 29% of the Extended Price.

For Product Class B - it is 14% of the Extended Price.

For all other classes, if the quantity is over 144, the transportation charge is 11.5% of the Extended Price, otherwise it's a flat $35.00. For the flat charge print the transportation % as 0.0. In all cases DO NOT add the transportation charge to the net price.

4. HEADINGS

a) Print your name & LAB 3 at the top as shown on the sample output. Use an 01 in Working-Storage for these headings.

b) Print the column headings shown on the attached.  **Leave 2 blank lines before and after the column heading lines.** Use an 01 in working-storage for this heading.

5. Accumulate and print (WITHOUT TITLES) under their respective columns, the totals of the extended prices, net prices and transportation charges. Use floating $, and , (comma) Editing. **Leave 2 blank lines between the last data line and this line.**  Use an 01 in working-storage for this total line.

6. Count and print out (after #5) the number of invoices with a discount. Print with the heading NUMBER OF ITEMS WITH DISCOUNT = \_\_\_. Use an 01 in working-storage for this total line.

7. Calculate the percent number of invoices that did not received a discount, correct to 1 place of decimal. Print the answer on a separate line (after #6) with the title PERCENT OF ITEMS WITHOUT A DISCOUNT = \_\_\_. Use an 01 in working-storage for this total line.

# Turn in to the drop box in your DC Connect Lab Section: - A zip or 7z archive containing the VS2015 project and solution files.

# DUE DATE: Monday February 1st 2016

Text References:

**Headings**: Murach Structured Cobol, Murach, Ch. 3. Sample code from simple Report Preparation program

**IF**: Mastering Cobol, Baroudi, Ch. 4 – The IF statement

**Arithmetic Verbs**: Mastering Cobol, Baroudi, Ch. 4 – Arithmetic Statements

**Totals**: Murach Structured Cobol, Murach, Ch. 3. Sample code from simple Report Preparation program

YOUR NAME, LAB 3

INV EXTENDED DISCOUNT NET PRICE CLASS TRANS TRANSPORTATION

NUM PRICE AMOUNT % CHARGE

2047 84,000.00 9,240.00 74,760.00 B 14.0 14,280.00

1742 100.00 0.00 100.00 A 29.0 27.00

2149 180,000.00 19,800.00 160,200.00 C 11.5 24,300.00

3761 25,000.00 2,750.00 22,250.00 D 0.0 35.00

2791 7.50 0.00 7.50 A 29.0 2.03

3000 200.00 0.00 200.00 F 0.0 25.00

3001 10,098.99 1,110.89 8,988.10 F 11.5 1,363.36

3002 8.91 0.00 8.91 F 0.0 25.00

\*\*\*\*\*\*\* more detail lines from here removed \*\*\*

0001 0.01 0.00 0.01 G 0.0 35.00

9999 9.99 0.00 9.99 A 29.0 2.70

$99,999,999.99 $9,999,999.99 $9,999,999.99

TOTAL ITEMS WITHOUT DISCOUNT = Z9

PERCENT OF ITEMS THAT RECEIVED A DISCOUNT= Z9.9