Mainframe Development I

MAFD4202

Final Test

# Practical Exercise - Part #1 - 20 Marks

For this problem, you are to complete the program started in T2-02-P1.CBL from DC Connect.

The program is to edit the input data file and produce an error report based on the processing instructions #1.

The input data file #1 in DC Connect contains the following data:

Inventory Product Type Class Unit Price

Code Name

101 Pen A 2 1.00

1S3 Book C 4 20.00

217 Paper C 2 7.00

310 Ink X 9 55.61

315 Eraser A 4 0.25

472 Mouse B 1 8.99

64A Laptop L 7 900.00

The output for input data file #1 is shown below:

NAME ERRORS

Book INV CODE INVALID

Ink TYPE INVALID CLASS INVALID

Mouse CLASS INVALID

Laptop INV CODE INVALID TYPE INVALID CLASS INVALID

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## PROCESSING INSTRUCTIONS #1

The Employee Number, Shift and Job Class fields are to be tested for validity   
and a report produced showing the errors **only**.   
Records with no errors do not appear on the report.

1. (5.5 marks) Inventory Code should be numeric, if it is not then output the message “Inv Code Invalid”.
2. (5.5 marks) Type should be either A or B or C, if it is not then output the message “Type Invalid”.
3. (5.5 marks) Class should be either 2 or 4, if it is not then output the message “Class Invalid”.
4. (3.5 marks) Note carefully how the error messages are output.   
   Three fields are provided in the detail line for error message output.   
   You will need to use some sort of logic to determine where to place the messages in the output.
   1. When there is one error message, **regardless of which message**,   
      it should appear in the first error message field.
   2. When two messages are output, they should appear in the first two fields.
   3. When three messages are output, they should appear in the three fields.

### Practical Exercise - Part #2 - 20 MARKS

For this question, you are to complete the program started in T2-02-P2.CBL from DC Connect.

The program is to edit the input data file and produce a report based on the processing instructions #2.

The input data file #2 in DC Connect contains the following data:

NAME CURRENT RATING

COMMISSION

Ben 44,000 A

Sue 42,000 B

Walter 70,000 C

Roy 55,000 B

Liz 50,000 A

Phil 47,000 D

Libby 67,000 B

The output for input data file #2 is shown on the last page of the test.

## PROCESSING INSTRUCTIONS #2

Calculate the annual increase amount **in whole dollars** according to the following rules:

1. (5 marks) Increases are calculated in two parts.
   1. **Everyone** gets a **10%** increase.
   2. **After** that calculation,   
      use the **Rating** field to determine if the salesperson is getting a second increase as well.   
      Rating code = **A (average)** and **D (poor)** get **no second increase**Rating code = **B (on track)** get an additional **15.5%.**  
      Rating code = **C (exceeded)** get an additional **31.5%.**
2. (3 marks) You **MUST** create **two paragraphs** in your program, **one each for Rating Code B and C.**   
   You MAY optionally choose to create a paragraph for A and D.   
   Perform these as required.
3. (2 marks) New commission should be calculated using the increase described above AND the current commission. **Note** **carefully** how this calculation works.   
   Sue currently has commission of $42,000.   
   Her 10% increase adds $4,200 for a total of $46,200.   
   Her on track rating B (15.5%) adds an additional $7,161   
   for a total raise of 11,361 and a new total salary of $53,361.   
   The extra raise amount is calculated on the result of (current commission \* first increase 10%),   
   and not the just the current commission.
4. (1 mark) The amount 80,000 is used throughout this problem.   
   You should make it a constant in working-storage. Percentage Increases should also be constants.
5. (3 marks) **No salesperson is permitted to have commission over $80,000**.   
   When you calculate the new commission for WALTER, the new amount is $85,720.   
   Change his commission to $80,000. Place the comment “COMMISSION ADJUSTED” on the detail line.   
   His CALCULATED increase amount is $35,720, but his ACTUAL increase amount is 0.   
   This also applies to LIBBY, but the actual is the amount that will keep the new amount <= $80,000.
6. (2 marks) You are to accumulate two output totals,   
   one for the calculated increase amount and one for the actual increase amount.   
   This relates to #4 above – for LIBBY her calculated increase amount is $18,124,   
   but her actual raise amount is $13,000. WALTER got no actual raise at all.
7. You must use the detail output line DETAIL-OUTPUT as defined in Working-Storage.
8. (4 marks) Attached is a marked-up version of the output showing the fields to be output and where they come from. The comments and arrows are just there for clarity and are **not** to appear on your output.

name old calculated actual new

comm incr incr comm

Ben 44,000 4,400 4,400 48,400

Sue 42,000 11,361 11,361 53,361

Walter 80,000 35,720 0 80,000 COMMISSION ADJUSTED

Roy 55,000 14,878 14,878 69,878

Liz 50,000 5,000 5,000 55,000

Phil 47,000 4,700 4,700 51,700

Libby 67,000 18,124 13,000 80,000 COMMISSION ADJUSTED

total calculated increase amount = $94,183

total actual increase amount = $53,339