**Description**

Create a new program called “**A4-SalaryReport**”.

This program will read records from a data file named “**A4.dat**”; perform calculations and formatting based on the values of fields in the data records and write a formatted report output to a file named “**A4-SalaryReport.out**”.

The objective of this assignment is to use structure charts to assist in designing programs and use PERFORM statements and PERFORMED paragraphs. When planning program functionality according to the specification be careful in decomposing tasks so that functionality is implemented in the most appropriate paragraph.

This program is to print out a report of employees and salary increases.

**Input File**

Download the required data file (**A4.dat**) from DC Connect.

The following is intended to provide the column layout of the file:

EMPLOYEE NAME EDUCATION YEARS PRESENT

NUMBER CODE SERVICE SALARY

1-3 4 - 18 19 20-21 22-28

004 Archer Bill N 01 07260.05

185 Donneman Tom G 06 04230.09

**Note:** EDUCATION CODE will contain either:

* ‘G’ for employees who are graduates
* ‘N’ for non-graduates.

These are the only two values that will appear in the input file.

Validity check is NOT required on this field.

**Requirements**

1. Use a structure chart to help with the process of designing your program.
2. Break your solution down into at least 5 tasks (paragraphs) - one for each classification to process the requirements for that classification.
3. Within the main IF statement structure PERFORM those paragraphs as required. You may want to consider separate paragraphs for Graduates and Non-Graduates.
4. The program is to classify all employees as follows.
5. A graduate employed more than 15 years is an analyst

(ANALYST).

1. A graduate employed 7 to 15 years inclusive is a Senior Programmer

(SEN PROG).

1. A graduate employed less than 7 years but more than 2 is also a programmer

(PROG).

1. A graduate employed 2 years or less is unclassified

(leave blank, use Move Spaces).

1. A non-graduate employed more than 10 years is a programmer

(PROG).

1. A non-graduate employed 10 years or less but more than 4 years is a junior programmer

(JR PROG).

1. A non-graduate employed 4 years or less is unclassified.

(leave blank, use Move Spaces).

Classification names (e.g. ANALYST, SEN PROG, etc.) along with associated values **are to be set up as constants** in WORKING-STORAGE.

1. The program will calculate pay increases for the classifications (job positions) using the following percentages which are to be set up as constants in working storage:

* Analyst 12.8%
* Senior Prog 9.3%
* Programmer 6.7%
* Junior Prog 3.2%
* Unclassified 0%

1. The program will calculate and print out the average increase for each of the 4 classifications for the entire report:
2. Occupy 1 or 2 lines on the last page.
3. Only report the classification average if there were increases
4. Round to 2 decimal places.
5. Use Z and comma editing.
6. The output report is to have the main heading EMPLOYEE SALARY REPORT and suitable column headings. The column and line spacing are your choice. The attached sample shown is just a model - **you do not have to follow it exactly**.
7. For each employee, print the employee number, name, years, classification, (e.g. SEN PROG, etc.), present salary, % increase **with a % sign**,pay increase and new salary.
8. Print 10 lines on each page (divided by page breaks) and include a PAGE NUMBER as shown on the sample output.
9. For the employees on each page:
10. Count the employees that fall into each classification
11. At the bottom of each page, Print out the total counts for only the classifications that appear on the page based on the employees that are listed on the page
12. Print the pay increase amount with a floating $, a comma and a + sign on the right hand end. (i.e. $2,610.01+)
13. For UNCLASSIFIED, leave the % increase blank (spaces) if it is zero, and print the pay increase amount as $0.00+ if it is zero.

(Don’t print the % sign, if the % increase is blank)

1. Print the NEW SALARY with a fixed $, a comma and Z's.   
   (i.e. $ 27,251.17)
2. Print the PRESENT SALARY with Z's, and a comma, and no $.
3. You MUST create your OUTPUT DETAIL LINE in WORKING-STORAGE, NOT within the FD record layout.   
   The 01 records for the output file should be an elementary 01 with an X picture the same size as the record contains in the FD.You will be using FROM consistently in all WRITE statements.

**Submission Requirements**

**Turn in a zip or 7z archive containing the Visual Studio (VS) project and solution files, and structure chart to the drop box in your DC Connect Lab Section**

**Marking**

**25** marks for following the programming standards document

**2** marks for report heading stored in working-storage and output on first page only

**2** marks for each page heading stored in working-storage and output on each page  
**2** marks for 10 detail lines per page

**10** marks for column headings aligned over detail line columns

**10** marks for columns in detail line having correct output format and valid data

**6** marks for correct rounded calculations of calculated fields in detail line

(Increase %, Pay Increase, New Salary)

**8** marks for blank line before and after report heading, blank line before total line, blank line before summary totals, four page breaks with one after each page except the last page

**5** marks for 5 pages with page numbers from 1 to 5

**30** marks for 5 pages with 5 correct class counts on each page, and four correct summary totals of average increases on only the last page

**2** marks for complete VS project submission in zip or 7z file  
**2** marks for correct program name

**2** marks for correct output file name

**4** marks for structure chart

**Total 110 marks**

**Sample Output Report**  
**(be sure to check your calculations, since this data may not match data provided exactly)**

Gregory Oakes, Assignment 4 20210411 1951043

EMPLOYEE SALARY REPORT PAGE 1

EMP EMP PRESENT INCREASE PAY NEW

NUM NAME YEARS POSITION SALARY % INCREASE SALARY

030 ALLDREN RUTH 21 ANALYST 20,200.00 12.8% $2,585.60+ $ 22,785.60

004 ACHER WILLIAM 1 7,260.05 $0.00+ $ 7,260.05

730 REEDE OWEN 9 SEN PROG 5,550.10 9.3% $516.16+ $ 6,066.26

409 ICK MICK 25 ANALYST 99,999.99 12.8% $12,800.00+ $ 112,799.99

111 CARTOLER VIOLET 2 9,980.07 $0.00+ $ 9,980.07

590 NEIL CLARENCE 7 JR PROG 650.09 3.2% $20.80+ $ 670.89

105 BOYLE RALPH 8 JR PROG 80,440.14 3.2% $2,574.08+ $ 83,014.22

801 SCHEIBER HARRY 1 10,000.00 $0.00+ $ 10,000.00

487 KING MILDRED 18 PROG 9,199.63 6.7% $616.38+ $ 9,816.01

956 WANGLEY THEO 1 9,999.91 $0.00+ $ 9,999.91

EMPLOYEE CLASS: Analyst Sen Prog Prog Jr Prog Unclassified

# ON THIS PAGE: 2 1 1 2 4

EMPLOYEE SALARY REPORT PAGE 2

EMP EMP PRESENT INCREASE PAY NEW

NUM NAME YEARS POSITION SALARY % INCREASE SALARY

317 HANBEE ALETA 3 PROG 50,000.03 6.7% $3,350.00+ $ 53,350.03

318 HANEY CAROL 9 SEN PROG 50,000.14 9.3% $4,650.01+ $ 54,650.15

027 ALHOUER ELAINE 1 25,730.02 $0.00+ $ 25,730.02

100 BATES TONY 8 JR PROG 10,660.20 3.2% $341.13+ $ 11,001.33

102 BELLSLEY ART 8 SEN PROG 30,000.09 9.3% $2,790.01+ $ 32,790.10

282 ESTABAN JUAN 19 ANALYST 40,550.00 12.8% $5,190.40+ $ 45,740.40

322 HARLETON JEAN 7 JR PROG 8,990.12 3.2% $287.68+ $ 9,277.80

310 GORMALLY MARIE 3 30,220.06 $0.00+ $ 30,220.06

921 ULL GEORGE 18 PROG 22,988.51 6.7% $1,540.23+ $ 24,528.74

179 DAMSON ERIC 3 PROG 25,020.18 6.7% $1,676.35+ $ 26,696.53

EMPLOYEE CLASS: Analyst Sen Prog Prog Jr Prog Unclassified

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EMPLOYEE SALARY REPORT PAGE 3

EMP EMP PRESENT INCREASE PAY NEW

NUM NAME YEARS POSITION SALARY % INCREASE SALARY

185 DONNEMAN THOMAS 6 PROG 4,230.09 6.7% $283.42+ $ 4,513.51

568 LYNNF GERALD 9 JR PROG 44,870.13 3.2% $1,435.84+ $ 46,305.97

999 BAKER RON 3 PROG 30,000.14 6.7% $2,010.01+ $ 32,010.15

215 EDSON WILBUR 6 JR PROG 70,500.08 3.2% $2,256.00+ $ 72,756.08

607 ODELLE NICK 10 JR PROG 25,070.18 3.2% $802.25+ $ 25,872.43

171 COSTA NAN 15 PROG 3,560.05 6.7% $238.52+ $ 3,798.57

122 CENNA DICK 3 57,770.04 $0.00+ $ 57,770.04

181 DELBERT EDWARD 12 SEN PROG 6,590.13 9.3% $612.88+ $ 7,203.01

311 GROLER GRACE 23 PROG 6,430.20 6.7% $430.82+ $ 6,861.02

825 TILLMAN DON 12 PROG 4,440.19 6.7% $297.49+ $ 4,737.68

EMPLOYEE CLASS: Analyst Sen Prog Prog Jr Prog Unclassified

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EMPLOYEE SALARY REPORT PAGE 4

EMP EMP PRESENT INCREASE PAY NEW

NUM NAME YEARS POSITION SALARY % INCREASE SALARY

325 HATFIELD MARK 1 11,220.02 $0.00+ $ 11,220.02

214 EDMONSON RICK 2 10,000.00 $0.00+ $ 10,000.00

332 HELD ANNA 2 40,000.02 $0.00+ $ 40,000.02

689 OWNEY REED 4 31,746.03 $0.00+ $ 31,746.03

834 TRAWLEY HARRIS 5 JR PROG 73,260.05 3.2% $2,344.32+ $ 75,604.37

802 SHEA MICHAEL 6 PROG 20,330.08 6.7% $1,362.12+ $ 21,692.20

505 LAMBERT JERRY 1 40,010.04 $0.00+ $ 40,010.04

806 STOCKTON NORMAN 6 PROG 25,070.07 6.7% $1,679.69+ $ 26,749.76

207 EBERHARDT RON 5 PROG 40,070.09 6.7% $2,684.70+ $ 42,754.79

315 HALE ALAN 12 PROG 40,000.16 6.7% $2,680.01+ $ 42,680.17

EMPLOYEE CLASS: Analyst Sen Prog Prog Jr Prog Unclassified

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EMPLOYEE SALARY REPORT PAGE 5

EMP EMP PRESENT INCREASE PAY NEW

NUM NAME YEARS POSITION SALARY % INCREASE SALARY

739 RIDEL ROBERT 5 JR PROG 1,940.08 3.2% $62.08+ $ 2,002.16

308 GLEASON JAMES 1 50,000.03 $0.00+ $ 50,000.03

909 UDSON DORIS 1 44,990.03 $0.00+ $ 44,990.03

292 EVERLEY DONNA 3 PROG 20,000.17 6.7% $1,340.01+ $ 21,340.18

EMPLOYEE CLASS: Analyst Sen Prog Prog Jr Prog Unclassified

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AVERAGE INCREASES: ANALYST= 6,858.67 SEN PROG= 2,142.27

PROG= 1,442.13 JR PROG= 1,124.91