**CSCI 360-1 Assignment 9 – Packed Decimal Plus Fall 2018**

**50 points**

This assignment adds functionality to your Assignment 8 program.

To start, copy your ASSIGN8 PDSE member and name it ASSIGN9 (Don't forget to change the END statement too!).

This program will be very much like your Assignment 8 program but the input data set is:

DSN=KC02322.CSCI360.DATAFA18(DATA9),DISP=SHR

Each record has the same format as before:

|  |  |  |
| --- | --- | --- |
| **Cols.** | **Field Name** | **Range** |
| 1-8 | Employee ID | 00000000 to 99999999 |
| 9-13 | Hourly Pay | $000.01 to $999.99 |
| 14-18 | Hours Worked | 000.01 to 999.99 |
| 19-23 | Deduction Amount | $000.01 to $999.99 |
| 24-28 | Bonus Amount | $000.01 to $999.99 |
| 29-53 | Employee Name | alphanumeric |

* Once again, remember that, when you work with packed decimal numbers, it is your responsibility to keep track of where the decimal point is implied in the packed decimal field. Decimal points are NEVER stored in numeric storage!

A good example of where this is especially important is the result of multiplication. If you will remember from your elementary school math, when you multiply two numbers with decimal places, the product has as many decimal places as the number of decimal places of the multiplier ***added to*** the number of decimal places of the number being multiplied. For example, if you multiply a number with four decimal places by one with two, the product will have six decimal places.

Hint: This becomes important when you multiply the Hourly Pay by the Hours Worked.

* All of the Deductions, Bonuses and Gross Pay Amounts should be accumulated and printed as shown in the example output.
* After printing the line with the employee count, total deductions, total bonuses, etc., double space an averages line as displayed in the example output. You will have to use the divide packed technique shown in class to round the averages to two decimal places.
* Add a packed decimal page counter variable that can hold up to 999 pages.
* Add a line counter variable that can hold a two-digit line count. You should use a register for your line counter variable as it will never be printed.
* Immediately AFTER you print a detail line with a single employee's pay, add 1 to the register line counter. Print only 15 employee detail lines per page.

Hint: DO NOT print the headers before the read loop begins. Instead, set the line counter variable to 99 before your loop begins. JUST BEFORE you print a detail line, check to see if it is time to print the headers at the top of a new page. If so, add 1 to your packed decimal page counter variable and edit it into the header, print the header, column header(s), hyphens line, set the line counter variable to 0 and THEN print the detail line.

* Make sure that your output looks as close to the example output as possible. The TA cannot take off points if yours matches the example.

Document your program completely and submit your single .txt file on Blackboard as before.