

Write an Assembler program to calculate payroll for a business. Each employee has an hourly pay rate, a number of hours worked in the pay period, a deduction amount for any lunches eaten in the company cafeteria during the pay period, and, if earned, a bonus amount. Of course, each employee has a name and employee identification number.

A .txt document named 360 Assign 5 Starter Program Fa20.txt is provided for you to begin this assignment. Copy it into IDz and save as a new member of your ASSIGNS PDSE named ASSIGN5 to begin this assignment. Be sure to enter your KC-ID in the upper left hand corner and put your first initial, a period, and your last name in between the tick marks in the first line, the JOB card.

Input

The first input record has two integers, the first representing the current federal tax withholding percentage and the second the current state tax withholding percentage. Read that record and get the percentages into registers to use in arithmetic in the body of the read loop.

Each of the rest of the input record contains, from left to right across the 80-byte record, the following data about a single employee: employee name, employee id number, hourly pay rate, number of hours worked in the pay period, deduction amount, and bonus amount, with the three dollar amounts rounded to the whole dollar. Remember to use MVC to move character data (even though it is numeric, you may consider the employee id number character data – people do not do arithmetic with ID numbers...usually).

Calculations

Your program must calculate each employee's gross pay amount using the following formula:

$$\text{gross pay amount} = \text{hourly pay rate} * \text{number of hours worked} - \text{deduction amount} + \text{bonus amount}$$

And then calculate each employee's net pay amount using the following formula:

$$\begin{aligned} \text{net pay amount} = & \text{gross pay amount} - \\ & (\text{gross pay amount} * \text{current federal withholding percentage} / 100) - \\ & (\text{gross pay amount} * \text{current state withholding percentage} / 100) \end{aligned}$$

Your program also must count the number of employees processed and keep a running total of each of the gross pay amount, federal withholding amount, state withholding amount and net pay amount.

Note: When doing division, disregard the remainder and use only the quotient of the division. Working with decimal points will be included in a future assignment.

Be VERY smart about your register usage. For example, after you get the gross pay calculated and added to the total gross pay amount register, you can reuse the registers that were used to hold hourly pay rate, number of hours worked, deduction amount and bonus amount (of course, you also need to have XDECO'd those values into the print line and have added the deduction and bonus amount registers to their total registers too).

(continued)

Output

For each record, print out (using XPRNT) the employee's id number, employee name, hourly pay rate, number of hours worked, gross pay amount, federal withholding amount, state withholding amount and, finally, net pay amount, that you calculated across one output line, double spaced.

At the end of the report, and on separate lines and on the left, just under the employee's ID, print out the number of employees processed, total gross pay, total federal withholding amount, total state withholding amount and total net pay amount. Be sure that you double space all of the output lines.

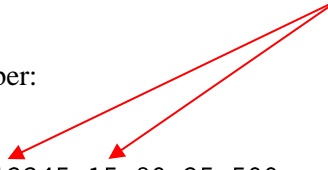
For guidance, see the exact output document named:

360 Assign 5 Exact Output Fa20.txt

Important Notes

Here is the data in the PDSE member:

Note that employee ID begins in column 26 and the first numeric value for calculating pay begins in column 32 of each input record.



16	4						
WOLFGANG AMADEUS MOZART	12345	15	80	25	500		
RICHARD STRAUSS	23456	19	80	00	010		
AMY BEACH	22132	10	80	31	200		
DAME ETHEL SMYTHE	65465	22	80	15	900		
PETER ILYICH TCHAIKOVSKY	44560	23	28	34	070		
ANTON BRUCKNER	99870	22	80	21	000		
LUDWIG VAN BEETHOVEN	13345	15	80	25	500		
JOHANNES BRAHMS	24456	19	80	00	010		
BELA BARTOK	22532	10	80	31	200		
MAX RAGER	11465	22	80	15	900		
SAMUEL BARBER	13360	23	28	34	070		
GIUSEPPE VERDI	99873	22	80	21	000		
JOHANN SEBASTIAN BACH	12342	15	80	25	500		
JOSEPH HAYDN	23452	19	80	00	010		
GEORG FRIEDRICH HANDEL	22131	10	80	31	200		
EDWARD ELGAR	65411	22	80	15	900		
NIKOLAI RIMSKY-KORSAKOV	44378	23	28	34	070		
CLAUDE DEBUSSY	99855	22	80	21	000		
ANTONIN DVORAK	13346	15	80	25	500		
THOMAS TALLIS	24457	19	80	00	010		
RALPH VAUGHAN WILLIAMS	22538	10	80	31	200		
RICHARD WAGNER	11477	22	80	15	900		
FREDERIC CHOPIN	17777	23	28	34	070		
JOAN TOWER	99211	22	80	21	000		

(Note that you can use a label followed by a plus sign and an integer value in any instruction that requires a D(X,B) or D(B) type address to represent a displacement from the address of the label. For example: BUFFER+25 refers to the 26th byte of the BUFFER and BUFFER+31 refers to the 32nd byte of the BUFFER.)

You may use registers 2 through 12, inclusive.

Other

Fully document your program as instructed in the **CSCI 360 Coding and Documentation Guidelines** soon to be found in Blackboard's Course Documents.

Be sure you are using the structured read loop as taught to you in class.

Be sure that your ENTIRE output is included in the .txt file BEFORE you submit it for grading. If any or all of it is missing, you will earn a 0 on the assignment.

Submit the .txt output from Marist on Blackboard as before.