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| --- | --- |
|  | ***Paycheck System*** |

*A company operates in three US states – Hawaii, Nevada & Mississippi, and will soon expand its operations to Canada. The employees are paid at per hour rate for regular hours worked in a week. Any hours over 40 hours are paid at the overtime rate of one and half times that. From the worker’s gross pay, 6% is withheld for Social Security tax, 14% is withheld for federal income tax. Some % is withheld for state income tax that varies per state, and $10 per week is withheld for union dues. If the employee has three or more dependents, then an additional $35 is withheld to cover the extra cost of health insurance beyond what the employer pays.*

**STATE TAXES FOR THIS YEAR -**

• *Mississippi-MS : 5%*

• *Hawaii-HI : 11%*

• *Nevada-NV : Tax free*

**YOUR MISSION**

Write a program that will read in the input file (in format given below) and then feed the output to a JSON based REST API that generates the paystub including worker’s gross pay, each withholding amount, and the net take-home pay for the week

***Input file format***

*Employee Name, number of hours worked, Pay rate, State code, Number of dependents*

**SAMPLE INPUT**

*John Doe,50,12.34,NV,3 Jane Doe,60,15.89,HI,4*

**SOME THOUGHTS TO KEEP IN MIND**

• Paycheck System is a highly sensitive application. Company might have to face legal challenges in case of any incorrectness.

• Your application needs to be production ready, you may want to consider the concurrency.

• It need not be a web based or UI based solution. The actual pay checks could be printed to flat files for now.

• We are looking for your OOAD & programming skills.

• You can use external libraries - Maven & JUnit.

• Time limit - 2 days from the date of receipt.

• Include a basic design document that explains the assumptions, and design considerations & a class diagram.

One you have completed the challenge, please send the files as a tarball or zip. Do not include any executables; only source code is required.

# Sample Input

## Input.txt

John Doe,50,12.34,NV,3

Jane Doe,60,15.89,HI,4

Jane Doe,45,17.89,MS,2

Kelly,30,17.89,MS,1

# Rest output

[

{

"STATE CODE": "NV",

"Employee Name": "John Doe",

"Union Dues": "$10.00",

"Weekly Salary": "$493.60",

"Social Security Tax": "$40.72",

"Net Salary": "$497.96",

"Gross Salary": "$678.70",

"Federal Tax": "$95.02",

"State Tax": "$0.00",

"Dependent Cover Deduction": "$35.00",

"Total Deductions": "$180.74",

"Overtime Pay": "$185.10"

},

{

"STATE CODE": "HI",

"Employee Name": "Jane Doe",

"Union Dues": "$10.00",

"Weekly Salary": "$635.60",

"Social Security Tax": "$66.74",

"Net Salary": "$722.49",

"Gross Salary": "$1,112.30",

"Federal Tax": "$155.72",

"State Tax": "$122.35",

"Dependent Cover Deduction": "$35.00",

"Total Deductions": "$389.81",

"Overtime Pay": "$476.70"

},

{

"STATE CODE": "MS",

"Employee Name": "Jane Doe",

"Union Dues": "$10.00",

"Weekly Salary": "$715.60",

"Social Security Tax": "$50.99",

"Net Salary": "$627.33",

"Gross Salary": "$849.78",

"Federal Tax": "$118.97",

"State Tax": "$42.49",

"Dependent Cover Deduction": "$0.00",

"Total Deductions": "$222.44",

"Overtime Pay": "$134.18"

},

{

"STATE CODE": "MS",

"Employee Name": "Kelly",

"Union Dues": "$10.00",

"Weekly Salary": "$536.70",

"Social Security Tax": "$32.20",

"Net Salary": "$392.53",

"Gross Salary": "$536.70",

"Federal Tax": "$75.14",

"State Tax": "$26.84",

"Dependent Cover Deduction": "$0.00",

"Total Deductions": "$144.18",

"Overtime Pay": "$0.00"

}

]