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| **SalesTax Program**  The Michigan Legislature is trying to find a way to fund road repair. One of the options that was proposed (and rejected by the voters) was to raise the sales tax by one percent. One would assume that it is still possible that such as increase could still occur, if other funding sources are not found. Create a Java class named ***SalesTax*** that helps you figure out how the possible one percent increase in the Michigan sales tax will affect you. The program will read in your current yearly total income, and also read in the percent of that income you think is spent on items that get hit by the Michigan sales tax (just the sales tax - ignore federal income taxes, state income taxes, money spent on non-taxable purchases like food, etc.). Your program will then show you how much of your income is spent on taxable items, how much tax you currently pay on those expenditures (at 6%), how much you would pay at 7%, and finally the program will show the difference between the 6% and the 7% payments.  Your program should accept any reasonable values for income (zero to a couple of million), and any reasonable value for "percent of income (0 to 100 percent). You don't need to do any error checking of the values -- just assume that the user will type in reasonable values.  You don't have format the monetary values so that they look as nicely formatted as what is shown in the sample output, since that output was generated with *printf*, which is not covered until the next chapter (feel free to read ahead if you wish, but that is not required). For example, my program might show exactly two digits after the decimal point, and a comma every third digit before the decimal point, as might be shown in the first line of calculated output as:              Taxable income: $7,805.31  In that line the monetary value is shown as "7,805.31", whereas the simple *print* and *println* methods we've used so far might print "7805.3125". This doesn't look as good as the "7,805.31" I generated with *printf*, but the "**7805.3125" output you get with *print* and *println* is perfectly acceptable**.  **Make sure you look at the rubric associated with this assignment. To see the rubric in D2L, click *Assessments*, click *DropBox*, then click *Program2*.**  Prompt for income  Enter income  Prompt for percent of income.  Enter percent of income  Calculate and print sales tax information.  Here is another sample run of the program:  Another full sample run of the program. | |
| Start Date Oct 1st 2020 |  |
|  | |
| Due Date |  |
| **Oct 22nd 2020 11:59 PM** | |

[[https://oaklandcc.desire2learn.com/d2l/img/0/Shared.Main.actHide.png?v=10.7.4.7830-83](javascript://)Hide Rubrics](javascript://)

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Rubric Name: Program2

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|  | |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | | **Style** | **Level 2 = Met or exceeded expectations** | **1 = Below expectations** | **0 = Did not complete** | | **Used the required class name of SalesTax, spelled correctly (same upper and lowercase letters, no extra symbols or numbers).** | 4 points | 2 points | 0 points | | **Don't leave large numbers of blank lines in your Java code (you can use a single blank line to separate one part of the program from another, but don't use multiple blank lines).** | 4 points | 2 points | 0 points | | **Variable names start with a lowercase letter.** | 4 points | 2 points | 0 points | | **Use "public static final" for constant values. These names should be all uppercase with underscores between the words.** | 4 points | 2 points | 0 points | | **Use meaningful names for variables, classes and methods. Avoid names like x and y.** | 4 points | 2 points | 0 points | | **Put a javadoc, /\*\* to \*/, comment at the start of every class. The main class (the class that has the main method) should include a short description of the class followed by the author's name, the current date, and the name of the course.** | 4 points | 2 points | 0 points | | **Indentation** | 4 points | 2 points | 0 points | | **Inline comments should line up with the code just below the inline comment** | 2 points | 1 point | 0 points | | **Compiles** | **Level 2 = Met or exceeded expectations** | **1 = Below expectations** | **0 = Did not complete** | | **Program compiles without any errors reported.** | 30 points | 15 points | 0 points | | **Running the program** | **Level 2 = Met or exceeded expectations** | **1 = Below expectations** | **0 = Did not complete** | | **The program prints the greeting "Proposed Sales Tax Increase Program", followed by a single blank line.** | 4 points | 2 points | 0 points | | **The program prompts the user with the line "What is your current income:" and reads the value into a variable.** | 8 points | 4 points | 0 points | | **The program prompts the user with the line "What percent of your income is taxable (0 to 100):" and reads the value into a variable.** | 8 points | 4 points | 0 points | | **The program calculates and prints the "Taxable income" line, with the general format shown the program requirements page.** | 8 points | 4 points | 0 points | | **The program calculates and prints the "At current 6% tax" line, with the general format shown the program requirements page.** | 4 points | 2 points | 0 points | | **The program calculates and prints the "At current 7% tax" line, with the general format shown the program requirements page.** | 4 points | 2 points | 0 points | | **The program calculates and prints the "Difference" line, with the general format shown the program requirements page.** | 4 points | 2 points | 0 points | | **Overall Score** | **Level 2 80 or more** | **Level 1 60 or more** | **Level 0 0 or more** | |