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| Student Name: |  |
| Total Points (20 pts) |  |
| **Due: February 3, 2025 11:59 PM** | |

**Project: Computing Tax**

Object Oriented Programming and Data Structures

CSET 1200 – 001

Problem Description:

The United States federal personal income tax is calculated based on filing status and taxable income. There are four filing statuses: single filers, married filing jointly, married filing separately, and head of household. The tax rates vary every year. Table 3.2 shows the rates for 2009. If you are, say, single with a taxable income of $10,000, the first $8,350 is taxed at 10% and the other $1,650 is taxed at 15%. So, your tax is $1,082.5.

Table 1

U.S. Federal Personal Tax Rates

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| --- | --- | --- | --- | --- |
| **Marginal Tax Rate** | **Single** | **Married Filing Jointly or Qualified Widow(er)** | **Married Filing Separately** | **Head of Household** |
| **10%** | $0 – $8,350 | $0 – $16,700 | $0 – $8,350 | $0 – $11,950 |
| **15%** | $8,351– $33,950 | $16,701 – $67,900 | $8,351 – $33,950 | $11,951 – $45,500 |
| **25%** | $33,951 – $82,250 | $67,901 – $137,050 | $33,951 – $68,525 | $45,501 – $117,450 |
| **28%** | $82,251 – $171,550 | $137,051 – $208,850 | $68,525 – $104,425 | $117,451 – $190,200 |
| **33%** | $171,551 – $372,950 | $208,851 – $372,950 | $104,426 – $186,475 | $190,201 - $372,950 |
| **35%** | $372,951+ | $372,951+ | $186,476+ | $372,951+ |

You are to write a program to compute personal income tax. Your program should prompt the user to enter the filing status and taxable income and compute the tax. Enter 0 for single filers, 1 for married filing jointly, 2 for married filing separately, and 3 for head of household.

Here are sample runs of the program:

Sample 1:

Enter the filing status: 0

Enter the taxable income: 100000

Tax is 21720.0

Sample 2:

Enter the filing status: 1

Enter the taxable income: 300339

Tax is 76932.87

Sample 3:

Enter the filing status: 2

Enter the taxable income: 123500

Tax is 29665.5

Sample 4:

Enter the filing status: 3

Enter the taxable income: 4545402

Tax is 1565250.7

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| Analysis: |
| *(Describe the problem including input and output in your own words.)* |
| Design: |
| *(Describe the major steps for solving the problem.)* |
| Coding: (Copy and Paste Source Code here. Format your code using Courier New 10pts) |
| *[Copy and Paste Your program here]* |