|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LEARNING PROFILE FOR ASSIGNMENT#\_1\_\_\_\_\_ AND QUESTION#\_10\_\_\_\_\_\_\_** | | | | | |
| *Name* | *:* | *Steven Morrissey* | *Due Date* | *:* |  |
| *Student ID* | *:* | *3300222* | *Submission Date* | *:* |  |

**1. Problem Statement:**

Modify the following program to the specifications given below: I. Add a new status – SingleParent – where the tax is computed as a SINGLE but with a further reduction of $5000 per child. II. Add a new tax condition – if the income is greater than $249,999 for SINGLE, then add a tax of 25% on income amount above $150,000; if the income is greater than $349,999 for MARRIED, then add a tax of 35% on income amount above $200,000. III. Unknown status – if the status doesn’t belong to SINGLE or MARRIED or SINGLE\_PARENT, then compute a 33% tax on the income.

**2. Description of the Code:**

Added a few new constants: SINGLE\_PARENT, RATE 4 5 6, SINGLE\_BRACKET 3 4, MARRIED\_BRACKET 3 4. Added new conditions for the new brackets, new condition for calculation of SIGNLE\_PARENT status, and new condition for UNKNOWN status.

**3. Errors and Warnings:**

Table 1: List of Errors and Warnings Encountered in the Program

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Errors / Warnings** | **Details** | **How I solved them** |
| 1 | none | Was easy enough to follow the existing code and avoid errors |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |

**4. Sample Input and Output:**

**Case 1: Given a user with status <status>, children <children> and income <income>, When the user inputs the data in the program, Then the expected tax <taxAmount> is displayed.**

|  |  |  |  |
| --- | --- | --- | --- |
| **status** | **children** | **income** | **taxAmount** |
| **SINGLE** | **0** | **20000** | **3000** |
| **SINGLE** | **0** | **30000** | **5611.50** |
| **SINGLE** | **0** | **200000** | **57654.50** |
| **SINGLE\_PARENT** | **1** | **20000** | **-2000** |
| **SINGLE\_PARENT** | **1** | **30000** | **611.50** |
| **SINGLE\_PARENT** | **3** | **30000** | **-9388.50** |
| **MARRIED** | **0** | **30000** | **4500** |
| **MARRIED** | **0** | **80000** | **17746** |
| **MARRIED** | **0** | **300000** | **86751** |

**5. Discussion:**

None, it was straight forward. No special libraries imported other than Scanner.