|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LEARNING PROFILE FOR ASSIGNMENT#\_1\_\_\_\_\_ AND QUESTION#\_2\_\_\_\_\_\_\_** | | | | | |
| *Name* | *:* | *Steven Morrissey* | *Due Date* | *:* |  |
| *Student ID* | *:* | *3300222* | *Submission Date* | *:* |  |

**1. Problem Statement:**

Space Inc. will give a quarterly and annual bonus to its employees only if the savings of the quarter and/or the year are greater than or equal to quarterly minimum (monthly commitment x 3) and/or the annual minimum (monthly commitment x 12) amount, respectively. The quarterly bonus is 3% of eligible quarterly savings, and the annual bonus is 5% of annual savings if eligible. If the annual savings exceeds the committed amount by at least 25%, Space Inc. matches the additional savings (25% or above) as part of the annual bonus. I. An employee has committed to save $2000 per month. Her quarterly savings are as follows: Q1 – $5000, Q2 – $7000, Q3 – $4000, and Q4 – $8000. II. Another employee has committed to save $3000 per month. His quarterly savings are as follows: Q1 – $6000, Q2 – $9000, Q3 – $10000, and Q4 – $17000. Write a program to compute the total bonus amount earned by these two employees in the year.

**2. Description of the Code:**

Strategy was to create a list of all quarterlies, then iterate through to have less repeating code. Finally calculate annual bonus and add it to the running total to be returned at the end of the method.

**3. Errors and Warnings:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Errors / Warnings** | **Details** | **How I solved them** |
| 1 | E1 | Forgot the ‘>’ before the ‘=’ in one of the if statements | Found at compile time and place the ‘>’ in the logic |
| 2 | E2 | Used number formatter in the return statement of the method – NumberFormatExcetion. | Moved the formatter to the main method where it can return a String and I don’t have to parse a double |

**4. Sample Input and Output:**

**Case 1: create new object and call computeBonus(2000, 5000, 7000, 4000, 8000), expecting 1,650 as the printed out value of total bonus**

**Case 2: create new object and call computeBonus(2000, 6000, 9000, 10000, 17000), expecting 3,180 as the printed out value of total bonus**

**5. Discussion:**

None, it was straight forward.