Program Requirements Document

CIS 022 Wednesday, January 31, 2024

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| **Application/ Program name:** | TomNJerryLawnServiceBiller |
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| **Purpose or problem definition:** |
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| This program will prompt the user to enter the area of the lawn to be mowed, it will then prompt the user to enter the number of times that fertilizer will be applied to the lawn, and finally, it will prompt the user to enter the number of trees that will be planted.  The program will then calculate the bill for the services being rendered based on the information previously entered by the user.  Once the program has completed the calculation, it will then display the sum of the bill to the user in dollars, and then the program will exit. |

| **Program Procedures:** |
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| 1. Display prompt - Ask the user to enter the area of the lawn to be mowed in square yards. 2. Display prompt - Ask the user to enter the number of times that fertilizer will be applied to the lawn. 3. Display prompt - Ask the user to enter the number of trees to be planted. 4. Calculates the cost for lawn mowing service. 5. Calculates the cost for applying fertilizer. 6. Calculates the cost for planting trees. 7. Calculates bill total as a sum from the previous three calculations. 8. Display prompt - Tell the user the amount of the total bill. 9. Exit the program. |

| **Algorithm/Processing/Conditions:** |
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| **Inputs:** |
| 1. Number of square yards of the lawn to be mowed. 2. Number of applications of fertilizer. 3. Number of trees to be planted. |
| **Processes:** |
| 1. Calculate the cost for lawn mowing (cost of mowing is $35.00 per sq. yard) by dividing $35.00 by 5000 to get the cost per square yard, then multiply the result by the amount of square yards previously inputted by the user in the first prompt.  Add the result to a variable. 2. Calculate the cost for applying fertilizer (cost of applying fertilizer is $30 per application) by multiplying $30.00 by the number of applications previously inputted by the user in the second prompt. Add result to a variable. 3. Calculate the cost for planting trees ($50 per tree planted) by multiplying $50.00 by the number of trees previously entered by the user in the third prompt.  Add result to a variable. 4. Create a new variable containing the value equaling the sum of the variables from process steps 1-3. |
| **Outputs:** |
| 1. Display the value from the variable described in processes step number 4 as the bill total to the user. |
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| **Notes & Restriction:** |
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| It is assumed that the user will order all three services (value of input entered cannot be 0 for any of the user prompts).  It is assumed that the user will only enter numerical values for every prompt and not letters or any other character, with the exception of a decimal point if needed.  Lawn mowing costs $35.00 per 5000 square yards of lawn.  Applying fertilizer costs $30.00 per application.  Planting trees costs $50.00 per tree. |

| **Comments:** |
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| There is no error handling in this program.  If the user enters anything other than numerical values for any of the prompts, the program will unexpectedly exit (crash). |