# Objective

In this assignment you will be practicing for loops, class constant, and variable’s scope.

# Problem

Create an application to convert the gallon to litter.

* One gallon is equal to 3.78 litter
* As an example, 3 gallons = 3 \* 3.78 litter

# Requirements

* In this assignment you are required to created names for the java class and all the methods. Make sure to follow the naming rules and conventions.
* Your program must satisfy all the criteria provided in the rubrics including the indentation, block comments, comments throughout the code, and proper naming.
* Your program must include methods
* The output of your program must be correct and must match the provided output
* you can modify the provided shell but make sure that you are not changing the assignment and its functionalities. You can implement the code based on your logic.
* Must decompose the problem into different methods.
* Work submitted with just the main method will receive very little partial credit or no credit at all
* The name of the methods must be created by you. Names such as method1 or method 2 is not accepted

# Required class constant variable

* Declare a class constant to hold the value for 3.78. What should be the name for the class constant? What is the naming convention for a class constant?
  + The name of a class constant should be all capitalized. If there are more than one words in the selected name, sperate the words using an underscore. for example, TAX\_RATE is a valid class constant name.
  + This class constant must be used in your code instead of 3.78

# Required methods (Choose proper names for each method)

1. **Method #1:**  This method displays a description of the app on the screen. Make sure to provide a clear description. In this method create a box(refer to the output) and place the description of the program in the box. Make sure to use for loop in this method since we need to display one character many times. For example, To display \*\*\*\*\*\*\*\* we need a for loop. Solutions without a for loop will lose points.
2. **Method #2**: This method converts the gallon to litters and creates a table. See the sample output. In this method do the following:
   1. display the column headers “Gallon” and “Litter” outside the for loop (look at the sample output
   2. create a for loop looping through numbers 1-9. Loop control variable represents the number of the gallons. Inside this loop do the following for ( 1 to 100)
      1. Declare a variable of type double (Choose a proper name)
      2. Calculate the litter amount and store it in the variable that you just declared (Class constant must be used here)
      3. Display the content of the loop control variable (gallon) and display the litter amount that was calculate
      4. Increment the loop control variable by 4. (Refer to the output)
3. **Main method:** in this method do the following
   1. call the method #1
   2. call the method #2

Sample output:

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

& This program converts gallons to litters &

& 1 Gallon is about 3.7 liters &

& &

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

Gallon Litter

1 3.7

5 18.5

9 33.300000000000004

13 48.1

17 62.900000000000006

21 77.7

25 92.5

29 107.30000000000001

33 122.10000000000001

37 136.9

41 151.70000000000002

45 166.5

49 181.3

53 196.10000000000002

57 210.9

61 225.70000000000002

65 240.5

69 255.3

73 270.1

77 284.90000000000003

81 299.7

85 314.5

89 329.3

93 344.1

97 358.90000000000003