# Objective

In this assignment you will be practicing for loops, class constant, 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
* 1 gallon is equal to 128 ounces
* **Extra feature converting gallon to pounds (20 points)**

# 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
* Declare another class constant to hold the amount 128. Since 1 gallon is 128 ounces.

# 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. Also, the displayed description should be surrounded by % or any other characters of your choice (see the sample output). You are required to use a for loop to print the %. Codes like System.out.println(“ %%%%%%%%%%%%%%%%%%%%%”) will not be accepted.
2. **Method #2**: This method converts the gallon to litters and creates a table. See the sample output. **(Extra feature of converting gallons to pounds should be implanted in this method).**  In this method do the following:
   1. display the column headers “Gallon” and “Litter”, “Ounces”, “pounds” outside the for loop (look at the sample output
   2. Create a for loop looping through numbers 100 to 1, decrementing the counter by 3. Loop control variable represents the number of the gallons. inside this loop do the following for 99 – 12 going down by 3
      1. declare a variable of type double (Choose a proper name) to hold the litter amount
      2. calculate the litter amount and store it in the variable that you just declared (Class constant must be used here). 1 gallon is 3.78 litter
      3. declare another variable to hold the number of ounces. Covert the gallon to ounces and store it in this variable. 1 gallon is 128 ounces.
      4. display the content of the loop control variable (gallon) and display the litter amount, and ounce amount that was calculated. Type casting must be used to get rid of the decimal points.
3. **Main method:** in this method do the following
   1. call the method #1
   2. call the method #2

# Type Casting

Type casting can be used to get rid of the decimal points in a double value. for example, if x = 12.3456678, System.out.println ((int)x) will display 12. Obviously, this is not a good way to round our numbers but we will learn the better way in the future.

Sample output is in the next page

Sample output: (your output must have an extra column for pounds). Scroll down to see the output.

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