EE231002 Introduction to Programming

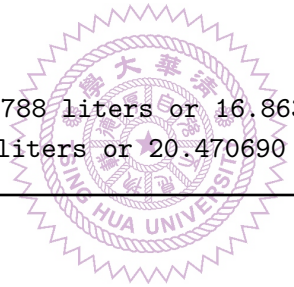
Lab01. Purchasing petroleum.

Due: Sep. 21, 2020

In Taiwan, petroleum is purchased in liters. And, on September 14 the petroleum price is 23.5 NTD/liter. On the other hand, in the United States the petroleum is purchased in gallons, and on the same day the price is 2.525 USD/gallon. Also, On this day the exchange rate is 1 USD for 29.02 NTD. It is also known that 1 gallon is equal to 3.785 liters.

Using these informations, please write a `C` program that asks for a certain amount of NTD (an integer), and then calculates how many liters and gallons of petroleum one can buy in Taiwan and in the US. Examples of program execution is shown below.

```
$ ./a.out
Input NT amount: 1000
Petroleum bought in Taiwan: 42.553192 liters or 11.242587 gallons.
Petroleum bought in US: 51.654369 liters or 13.647125 gallons.
$ ./a.out
Input NT amount: 1500
Petroleum bought in Taiwan: 63.829788 liters or 16.863880 gallons.
Petroleum bought in US: 77.481560 liters or 20.470690 gallons.
```



Notes.

1. Create a directory **`lab01`** and use it as the working directory.
2. Name your program source file as **`lab01.c`**.
3. The first few lines of your program should be comments as the following.

   ```
   // EE231002 Lab01 Purchasing Petroleum
   // ID, Name
   // Date:
   ```

4. After finishing editing your source file, you can execute the following command to compile the program,

   ```
   $ gcc lab01.c
   ```

   If no compilation errors, the executable file, **`a.out`**, should be generated, and you can execute it by typing

   ```
   $ ./a.out
   ```

5. Typical inputs and outputs of the program execution have been shown above. But you should try a few more test cases to make sure your program function correctly.

   5.1. Since the smallest denomination of Taiwan dollars is 1 NT, the input amount must be an integer.

   5.2. In `printf` statements, please use `%f` for floating number output.

6. After you finish verifying your program, you can submit your source code by

   ```
   $ ~ee2310/bin/submit lab01 lab01.c
   ```

   If you see a "submitted successfully" message, then you are done. In case you want to check which file and at what time you submitted your labs, you can type in the following command:

   ```
   $ ~ee2310/bin/subrec lab01
   ```

   It will show the last few submission records.