19.04.2021

Experiment 3

Q1) Turkish Electricity Distribution Corporation charges according to the following rate schedule:

9 cents per kilowatt-hour (kWh) for the first 300 kWh
8 cents per kWh for the next 300 kWh (up to 600 kWh)
6 cents per kWh for the next 400 kWh (up to 1000 kWh)
5 cents per kWh for all electricity used over 1000 kWh

Write a function to compute the total charge for each customer. Write a main function to call the charge calculation and has an output as shown below:

```
Please enter customerNo: 1

Please enter Kilowatt-Hours Used (KHU): 987.25

The customerNo: 1 -- Kilowatt-Hours Used: 987.250 -- The total charge : 7423.500

Please enter customerNo: 2

Please enter Kilowatt-Hours Used (KHU): 654.88

The customerNo: 2 -- Kilowatt-Hours Used: 654.880 -- The total charge : 5429.280

Please enter customerNo: 0
```

Your program should accept new customers and wait for each new customer information until the customer number is entered as 0.

Use the following function prototype:
`float computeTotalCharge(float KHU)`

Q1) When you are resting on the weekend you start to solve a puzzle that have lots of numbers in it. The puzzle asks you to find the numbers that have square roots that are integers. But you are bored and you want to cheat by writing a program that finds the answers.
Your program should get inputs from user until a "0" or maximum amount of numbers is entered. All of the inputs and result should be held **in an array**. After having all of the numbers, it should calculate the answers (numbers that are square of an integer) and print them to the screen. User can enter maximum of 20 numbers.

```
Welcome to square number puzzle solver        Welcome to square number puzzle solver
Please enter the next number: 424             Please enter the next number: 268
Please enter the next number: 949             Please enter the next number: 890
Please enter the next number: 1521            Please enter the next number: 148
Please enter the next number: 299             Please enter the next number: 486
Please enter the next number: 1296            Please enter the next number: 24
Please enter the next number: 758             Please enter the next number: 464
Please enter the next number: 738             Please enter the next number: 998
Please enter the next number: 900             Please enter the next number: 135
Please enter the next number: 380             Please enter the next number: 728
Please enter the next number: 531             Please enter the next number: 148
Please enter the next number: 196             Please enter the next number: 260
Please enter the next number: 848             Please enter the next number: 923
Please enter the next number: 54              Please enter the next number: 284
Please enter the next number: 1764            Please enter the next number: 243
Please enter the next number: 22              Please enter the next number: 844
Please enter the next number: 0               Please enter the next number: 0

Here are the answers: 1521 1296 900 196 1764  No answers found.
```