PROGRAMMING EXERCISE 01-2

This exercise is designed for practicing with writing computational expressions and formatting output.

Write a C++ program that will compute and print an invoice for a user. The invoice will show the name of the customer, the price of the purchase, the sales tax computed and the total bill.

The user of the program should be prompted for the product name, the purchase amount, and the sales tax rate. See the sample execution below for the formats of the expected input and outputs.

PLANNING

1) What input value(s) does the user need to provide?
2) What would you name the variables to store the input and result values?
3) What data types should these values be?
4) How will you perform the computations?
5) How will you format the results?

USEFUL HINTS

In the sample below, the user is providing the sales tax as a percentage rate. You will need to convert it to the proper mathematical value to use in the computation.

You will need #include <iomanip> for the formatting operations for output streams.

SAMPLES

Below I have provided two different sample executions of the program. You should check your results with other values as well. *User input is highlighted in yellow.* IMPORTANT NOTE. The program is printing the $ sign for the user prompt. The user is NOT typing in the $ sign with their number.

```
Enter a product description: Jelly Beans
Enter the product list price: $3.99
How many units to purchase? 2
What is the sales tax rate? 9.9

---------------------- INVOICE ------------------------
Product: Jelly Beans
Price $   3.99                      Units purchased:   2
Purchase Amount $     7.98
Sales tax       $     0.79
Total Invoice   $     8.77
----------------------- END ---------------------------
```

```
Enter a product description: Board Game
Enter the product list price: $10
How many units to purchase? 1
What is the sales tax rate? 8.5

---------------------- INVOICE ------------------------
Product: Board Game
Price $  10.00                    Units purchased:   1
Purchase Amount $    10.00
Sales tax       $     0.85
Total Invoice   $    10.85
----------------------- END ---------------------------
```

GRADING NOTES

The following must be present for you to get full credit for the assignment:

- The program has a block comment in the beginning that includes:
  - Your name
  - The date
  - The course
  - A description of the problem being solved.
- Variables have meaningful names and are declared prior to the computations
- Constants are used where appropriate
- The program compiles and executes correctly as described in the assignment. The correct results are output and the report is formatted as asked for.