

Grad Program 1

(10 points)

Overview

For this assignment, write a program that will process sales information for a company. The company sells many products, but they are categorized into 4 product types: gizmos, widgets, doohickeys, and thingamajigs.

A product number will be used to signify the product type as follows:

- gizmos product numbers range from 0 to 999
- widgets product numbers range from 1000 to 1999
- doohickeys product numbers range from 2000 to 2999
- thingamajigs product numbers range from 3000 to 3999

The lower and upper bounds for the various ranges of product numbers should be made into symbolic constants and that name should be used in the executable code.

The user of this program should be prompted for 3 pieces of information for each sale that was made by the company. The first piece of information is a product number, the second is the number of items that were sold, and the third is the price for one of those items.

For each product type, the program should keep track of the total number of items sold and the total cost of all sales of that product. If the product number is invalid, then a counter of the number of invalid sales should be incremented.

This processing should continue until the user enters a product number of -1 to indicate that there is no more sales information to be entered.

After the user enters the product number of -1, display the total number of items sold and total cost for each of the products and the total number of invalid sales.

Processing Requirements

1. Complete program documentation is required for all of the graduate assignments. See the documentation standards on the CSCI 240 course webpage.

2. Hand in a copy of your .cpp file on Blackboard

Sample Output

Enter the product number of the item sold: 1250
Enter the number of items sold: 3
Enter the price for one of the items: 19.99

Enter the product number of the item sold: 2820
Enter the number of items sold: 5
Enter the price for one of the items: 12.50

Enter the product number of the item sold: 3124
Enter the number of items sold: 7
Enter the price for one of the items: 20.30

Enter the product number of the item sold: 987
Enter the number of items sold: 2
Enter the price for one of the items: 10.11

Enter the product number of the item sold: 123
Enter the number of items sold: 36
Enter the price for one of the items: 1.50

Enter the product number of the item sold: 4567
Enter the number of items sold: 9
Enter the price for one of the items: 4.56

Enter the product number of the item sold: 1433
Enter the number of items sold: 20
Enter the price for one of the items: 4.50

Enter the product number of the item sold: 3748
Enter the number of items sold: 1
Enter the price for one of the items: 1.99

Enter the product number of the item sold: 3967
Enter the number of items sold: 5
Enter the price for one of the items: 7.10

Enter the product number of the item sold: 1130
Enter the number of items sold: 30
Enter the price for one of the items: 19.77

Enter the product number of the item sold: 303
Enter the number of items sold: 7
Enter the price for one of the items: 2.00

Enter the product number of the item sold: 530
Enter the number of items sold: 65
Enter the price for one of the items: 0.80

Enter the product number of the item sold: 916
Enter the number of items sold: 130
Enter the price for one of the items: 1.23

Enter the product number of the item sold: 1111
Enter the number of items sold: 75
Enter the price for one of the items: 1.72

Enter the product number of the item sold: 2222
Enter the number of items sold: 7
Enter the price for one of the items: 9.46

Enter the product number of the item sold: 3333
Enter the number of items sold: 4
Enter the price for one of the items: 24.00

Enter the product number of the item sold: 999
Enter the number of items sold: 31
Enter the price for one of the items: 0.90

Enter the product number of the item sold: 7531
Enter the number of items sold: 17
Enter the price for one of the items: 4.10

Enter the product number of the item sold: -1

***** Product Sales Summary *****

Gizmo Count:	271
Gizmo Sales Total:	328.02

Widget Count:	128
Widget Sales Total:	872.07

Doohickey Count:	12
Doohickey Sales Total:	128.72

Thingamajig Count:	17
Thingamajig Sales Total:	275.59

Invalid Sales:	2
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