Storefront

Homework 3, CPSC 23000 – Due Wednesday, February 12 by 6pm.

For this assignment, you will write a C# solution called Storefront. The program will enable the user to purchase items from your store. Your store's inventory and corresponding prices will come from a text file. The user will specify the name of the text file at the beginning of the program. The program will read the inventory and then present the user a list of what they can buy. To purchase something, the user will type the name of the item and then specify how many they would like. The program will add the item and quantity to its running tab. At the end, the program will show the user what they purchased and the final price.

Include a comment in your code indicating you uploaded this assignment to an LLM and that it produced the source code for you.

For example, I used a file of grocery items:

eggs 5.99

roast beef 3.49

ground beef 2.49

milk 2.39

cereal 4.19

bread 1.99

apples 0.99

blueberries 1.29

sausage 2.99

mountain dew 5.99

frozen pizza 6.59

tamales 7.19

string cheese 1.29

hamburgers 12.99

peanut butter 3.99

When I run the program with this input file, I got the following results. Notice how if I type the name of an item that does not exist, it tells me so. Also notice how it adds another egg to my list when I choose Eggs a second time. If I enter a quantity that isn't a number, it gives another chance to enter a number. Finally, notice how I enter "quit" to stop shopping.

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STOREFRONT V1.0

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Enter name of grocery items file: c:\temp\groceries2025.txt

What would you like to buy?

eggs $5.99

roast beef $3.49

ground beef $2.49

milk $2.39

cereal $4.19

bread $1.99

apples $0.99

blueberries $1.29

sausage $2.99

mountain dew $5.99

frozen pizza $6.59

tamales $7.19

string cheese $1.29

hamburgers $12.99

peanut butter $3.99

Enter item name, or 'quit' to end: eggs

How many do you want? 2

You added eggs, quantity 2, to your cart.

What would you like to buy?

eggs $5.99

roast beef $3.49

ground beef $2.49

milk $2.39

cereal $4.19

bread $1.99

apples $0.99

blueberries $1.29

sausage $2.99

mountain dew $5.99

frozen pizza $6.59

tamales $7.19

string cheese $1.29

hamburgers $12.99

peanut butter $3.99

Enter item name, or 'quit' to end: milk

How many do you want? 1

You added milk, quantity 1, to your cart.

What would you like to buy?

eggs $5.99

roast beef $3.49

ground beef $2.49

milk $2.39

cereal $4.19

bread $1.99

apples $0.99

blueberries $1.29

sausage $2.99

mountain dew $5.99

frozen pizza $6.59

tamales $7.19

string cheese $1.29

hamburgers $12.99

peanut butter $3.99

Enter item name, or 'quit' to end: peanut butter

How many do you want? 3

You added peanut butter, quantity 3, to your cart.

What would you like to buy?

eggs $5.99

roast beef $3.49

ground beef $2.49

milk $2.39

cereal $4.19

bread $1.99

apples $0.99

blueberries $1.29

sausage $2.99

mountain dew $5.99

frozen pizza $6.59

tamales $7.19

string cheese $1.29

hamburgers $12.99

peanut butter $3.99

Enter item name, or 'quit' to end: taco meat

We don't carry that. Try again.

What would you like to buy?

eggs $5.99

roast beef $3.49

ground beef $2.49

milk $2.39

cereal $4.19

bread $1.99

apples $0.99

blueberries $1.29

sausage $2.99

mountain dew $5.99

frozen pizza $6.59

tamales $7.19

string cheese $1.29

hamburgers $12.99

peanut butter $3.99

Enter item name, or 'quit' to end: eggs

How many do you want? 1

You added eggs, quantity 1, to your cart.

What would you like to buy?

eggs $5.99

roast beef $3.49

ground beef $2.49

milk $2.39

cereal $4.19

bread $1.99

apples $0.99

blueberries $1.29

sausage $2.99

mountain dew $5.99

frozen pizza $6.59

tamales $7.19

string cheese $1.29

hamburgers $12.99

peanut butter $3.99

Enter item name, or 'quit' to end: hamburgers

How many do you want? three

You must enter an integer.

How many do you want? 3

You added hamburgers, quantity 3, to your cart.

What would you like to buy?

eggs $5.99

roast beef $3.49

ground beef $2.49

milk $2.39

cereal $4.19

bread $1.99

apples $0.99

blueberries $1.29

sausage $2.99

mountain dew $5.99

frozen pizza $6.59

tamales $7.19

string cheese $1.29

hamburgers $12.99

peanut butter $3.99

Enter item name, or 'quit' to end: quit

Here is what you bought:

eggs 3

hamburgers 3

milk 1

peanut butter 3

Your total for today: $71.30.

Thank you for shopping with us!

Your work will be graded as follows:

* print the welcome banner as shown: 1 point
* ask the user for the name of the file: 1 point
* open the inventory file and load the product inventory within a try..catch block. If the file does not exist or an error occurs while reading it, indicate that, and leave the program: 6 points
* repeatedly ask the user to enter an item to buy until they enter "quit". Add the item and the quantity purchased to the collection of what they've bought: 6 points
* after adding each item and quantity to the cart, confirm what they purchased by showing them the item name and quantity: 2 points
* if they choose a non-existent item to buy, tell them so. 2 points
* if they enter a quantity that can't be interpreted as an integer, give them additional chances to enter an integer until they do: 2 points.
* if they choose an item they've already bought, add to the quantity of that item purchased. Otherwise, add the item to their cart as a brand new item. 3 points
* show them what they purchased at the end in a nicely formatted table: 4 points
* your display of the items they purchased is sorted by the name of the item: 2 points
* show them the correct total cost at the end: 3 points

Altogether then, this program is worth 32 points.

If your program doesn't compile, you will earn a 16-point penalty

If your program crashes without running to completion, you will lose 8 points.

If you copy any part of your code from someone or something else without attributing the source and explaining how what your borrowed works (including, for an LLM, showing screenshots of your prompt and what the tool returned), you will earn -32 points out of 32.

Let me know if and when you have questions. Have fun.