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Due Date: Jul 3, 2023

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Design Document: ShoppingCart

The program project2 generates a virtual shopping cart for the user to add, remove, and modify items. Items are identified by their name and price, but not quantity. The user will begin by adding items to his or her cart. The contents and total price will be displayed. The user will be provided the option to modify his or her order. The updated contents and total price will be displayed when the user is done modifying his or her order.

The program’s name is **project2.cpp**. It is located at the following directory on **centOS**:

**/home/STCLOUDSTATE/mm8755tt/PROJECTS/PROJECT\_2**

To compile and link it, simply enter:

**g++ -o s\_cart project2.cpp**

To run the program, enter **s\_cart**, then follow the prompts to add items to the shopping cart. The items will be added in the format: *name unitPrice quantity*. The program assumes that the user will only try to add a maximum of six items. If the user goes over this limit, the items after item six will not be added.

The beginning of the program will look like this with example user input.

**prompt> s\_cart**

**Enter the item you selected as the following order:**

**name unitPrice quantity**

**(Name can not contain any space. Otherwise errors happen!)**

**-->T-shirt 19.99 2**

After the first selection, the user will be asked whether he or she would like to add another item simply with **y** or **n** as such. If **y**, he or she will provide another item. If **n**, the user will receive a display of his or her cart along with the total price:

**Want to continue y/n-->y**

**-->Sweater 39.99 2**

**Want to continue y/n-->n**

**Here is your order:**

**------------------------------------------------------------------------**

**Name Unit\_Price Quantity**

**T-shirt $19.99 2**

**Sweater $39.99 2**

**The total charge is $119.96**

**------------------------------------------------------------------------**

The user will be provided the option to modify his or her cart. When prompted, a **y** or **n** will allow the user to choose. If the user chooses **y**, the options to add, remove, or modify quantity will be presented with selection being numerical values **1** for add, **2** for remove, and **3** for modify quantity.

**Want to modify your order? y/n-->y**

**What do you want? Enter 1: add 2: remove 3: change quantity\n-->1**

If the user chooses to add an item to the cart, they will be prompted in a similar way as the start of the program.

**Enter the item you selected as the following order:**

**name unitPrice quantity**

**-->iphone\_case 25.50 3**

**The item has been added.**

The user will be prompted again asking whether he or she wants to modify the order.

**Want to modify your order? y/n-->y**

**What do you want? Enter 1: add 2: remove 3: change quantity\n-->2**

If the user chooses to remove an item, they will receive the following prompt. Note, that if the item does not exist or he user does not input the name and price properly, the user will be prompted with a message stating that the item is not in the cart. The user will once again be prompted to choose whether he or she wants to modify the cart.

**Enter the item to remove as the following order:**

**name unitPrice quantity**

**-->Sweater 29.99 2**

**No such item in your shopping cart!**

**Want to modify your order? y/n-->y**

**What do you want? Enter 1: add 2: remove 3: change quantity\n-->2**

**Enter the item to remove as the following order:**

**name unitPrice quantity**

**-->Sweater 39.99 2**

**The item has been remove.**

The user will be prompted again asking whether he or she wants to modify the order.

**Want to modify your order? y/n-->y**

**What do you want? Enter 1: add 2: remove 3: change quantity\n-->3**

If the user chooses to modify the quantity of an item, they will receive the following prompt. If the item is not in the cart, the user cannot modify the quantity of the item and will be returned to modify order selection. If the user tries to modify an item by a value of less than zero, they will be prompted to input a new value until a valid value is made.

**Enter the item to change as the following order:**

**name unitPrice quantity**

**-->T-shirt 19.99 2**

**Enter a new quantity --> -1**

**-1 is not a valid input.**

**Enter a new quantity --> 1**

**The quantity has been modified.**

If the user is done and chooses **n**,the updated contents and total price will be displayed and the program will terminate.

**Want to modify your order? y/n-->n**

**Here is your updated order:**

**------------------------------------------------------------------------**

**You have ordered the following items:**

**Name Unit\_Price Quantity**

**iphone\_case $25.50 3**

**T-shirt $19.99 1**

**The total charge is $96.49**

**Thanks for shopping in XXX SHOPPING CENTER.**

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