

CS 101 - Shopping

Fall 2021

Algorithm Deadline: **Saturday** December 11,2021

Code Deadline: **Saturday** December 11,2021

All work submitted must be your own.

Deliverables: You must use functions and classes to modularize your work. You should use exception handling where necessary as well.

50 points off for programs that crash on expected input.

Store and Cart:

In this assignment you will use classes and inheritance to create an application where user will input name and location of store and will start his/her grocery shopping by adding them to the cart.

Classes

You will have to implement two classes with methods and attributes to finish up this program. The methods given here have to be implemented, however, you can add extra methods or attributes as needed.

Store

The Store class will include the following:

- Constructor
- Two instances attribute (name and location).
- One setter method: to set the name and the location.
- Display method: to output all information from Store class (the name and the location of the store).

Cart Class

The Cart class will include the following:

- Constructor
- Four instance attributes:
 - o Product name
 - o Quantity of product
 - o Cart as a dictionary that will hold as a key the Product name and the value will be the Quantity of product.
 - o Receipt
- Add_item method: to add product to the cart and it will also update the receipt of orders in the cart.
- Remove_item method : To remove/update product in the cart. (user can remove product from cart, user can reduce in the number of product quantity). Also you will need to update the receipt of orders in the cart.
- Add necessary setters.
- Override Display method to output store name with the location and all the products in

user cart with the final receipt as well.

We will assume that the store only sells the following:

Milk: \$2.50
Bread: \$1.98
Egg: \$0.70
Flour: \$1.18
Oil: \$4.00
Cheese: \$2.68

Requirements:

- 1- Create an instance of Cart class.
- 2- Ask the user for the store name and location.
- 3- Display the products available in your store.
- 4- Ask the user to choose the products and the quantity.
- 5- Below is a sample of the output

```
Good morning! Which store you want to use today?
>>> MyStore
Which location you want to use?
>>> 1234 SW Market Street
Products as follow:
Milk: $2.50
Bread: $1.98
Egg: $0.70
Flour: $1.18
Oil: $4.00
Cheese: $2.68
Enter name of your product
>>> Milk
Enter quantity
>>> 1
User placed order from :MyStore at address: 1234 SW Market Street
Order in cart is :
Milk with quantity : 1
Total receipt is $ 2.5
```

- 6- Need to ask the user if he/she wants to remove an item from cart.
- In case user chose to remove an item:
 - o Need to check if item in cart, also need to check the quantity and need to update the receipt and display it to the user.
 - o Sample output:

```
Do you want to remove an item(Yes/No)
>>> Yes
```

```
Enter name of your product
>>> Milk
Enter quantity
>>> 1
User placed order from :MyStore at address: 1234 SW Market
Street
Order in cart is : 0
Total receipt is $ 0
Do you want to add another product (yes/no)
```

- 7- Ask user if he/she wants to add another product

```
Do you want to add another product (yes/no)
>>> Yes
Enter name of your product
>>> Egg
Enter quantity
>>> 2
User placed order from :MyStore at address: 1234 SW Market Street
Order in cart is :
Egg with quantity : 2
Total receipt is $ 1.4
Do you want to remove an item(Yes/No)
>>> No
Do you want to add another product (yes/no)
>>> No
```

- 8- Make sure to validate user inputs.
9- Feel free to add any other method/functions.