

Shopping Calculator Program Requirement

Required Input

The program should accept user input for grocery items.

- ☐ Item name (string)
- ☐ Item quantity (integer)
- ☐ Item price (float)

Item quantity and price should be numerical i.e., integer or float. If a user inputs a non-numerical value for either of them, the program will print an error message and ask for input again. The program should run until the user presses the “Enter” Key on an item name request.

Each item properties can be stored in a list after input and calculations.

Discounted Items

Create a list of items that should be discounted:

- ☐ Candy
- ☐ Eggs
- ☐ Flour
- ☐ Hummus
- ☐ Ice cream
- ☐ Chicken soup
- ☐ Diapers

If the user inputs more than one of the same of a particular item on this list a 5% discount should be applied for each item after the first one up to a maximum of 20%

- ☐ 1 item of candy costs 1.29. This is a discounted item, but the user is purchasing only 1. They are not eligible for a discount.
- ☐ 2 items of candy cost 1.29, but since this is a discounted item a 5% discount is applied. Each item of candy now costs 1.2255, for a total cost of 2.451. The amount should appear as ‘\$2.45’ on the receipt.
- ☐ 3 items of candy cost 1.29, but now a 10% discount is applied. Each item of candy now costs 1.161, for a total cost of 3.483. This will appear as ‘\$3.48’ on the receipt.

Formatting currency

Currency should always be formatted to two decimal points with f-strings.

Receipt

After all items have been entered by the user, an itemised list should be displayed. Each line item should have its name, quantity, price (discounted or otherwise) and total amount in

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dollars. There should be a total of all items purchased and the amount saved on discounted items.

Things to consider.

- ☐ Add provisions for program to be able to quit gracefully before any item is inputted.
- ☐ Program should be able to accept items not in the discount list.
- ☐ Input validation of quantity and price should accept only integers and float up to two decimal points respectively. An error message should be displayed if validation fails.
- ☐ How can we validate item names?