# Lab 4.04 - Shopping List

## Part 1

The goal of this lab is to practice using and accessing items from lists of lists.

You have a few errands to run and have created a few shopping list to help you remember what to buy. You stored your notes in a nested list, shopping\_cart. This program will allow the user to ask for a specific item by it’s index or update what items are in the cart. The user can request to view list to see the items in a specific shopping list.

### Shopping Cart

shopping\_cart = [  
['tooth paste', 'q-tips', 'milk'],  
['milk', 'candy', 'apples'],  
['planner', 'pencils', 'q-tips']  
]

### User Inputs

update

* The program asks which shopping list the user wants to update, which position it should update, and the new value to update.

view item

* The program asks which shopping list the item is on and which position i occupies, then prints the items name.

view list

* The program asks which shopping list the user wants and prints all of the items associated with that shopping list.

### Functions

update\_list

* Takes in an integer representing the index of the shopping list, an integer representing the index of the item to update, and a string representing the new value for that item. Does not alter the length of the list.

print\_item

* Takes an int representing the index of the shopping list followed by an int representing the index of the item to print.

print\_list

* Takes an int representing the index of the shopping list to print.
* Feel free to add more functions as you see fit

### Example

>>>What would you like to do? view list  
Which shopping list would you like to see? 1  
tooth paste, q-tips, gum

## Part 2

In this part of the lab you will go through your shopping list program and perform a few different calculations.

1. Create a function, all\_in\_one, that will put all the shopping lists into a single list using a for loop.
2. Create a function, count\_q\_tips, which will go through all items of the list and keep a count of how many times 'q-tips' occurs.
3. In order to make the shopping lists more calcium rich, write a function, drink\_more\_milk, that adds 'milk' to each of the lists (unless it’s already there).
4. You can’t have milk without cookies. Write a function if\_you\_give\_a\_moose\_a\_cookie, that will go through every element of shopping\_cart and update 'milk' to be 'milk and cookies'.

## Bonus

Write a function to reverse the order of the lists and items in shopping\_cart.

The list should look like the following when printed:

shopping\_cart = [  
['q-tips', 'pencils', 'planner'],  
['apples', 'candy', 'milk'],  
['milk', 'q-tips', 'tooth paste']  
]

### Tip

* Last item can be gotten by my\_list[-1]
* Second to last element: my\_list[-2]
* Third to last element: my\_list[-3]