

Mobile Application Programming: iOS

CS4530 Spring 2019
Project 0 - Shopping List
Due: 11:59PM Monday Jan 14th

Abstract

Create a simple console application written in Swift that prompts the user for shopping list items, then prints the list in alphabetical order.

Components

- Prompt asking the user for items, indicating the format to enter them, and how to finish the list
- Input lines that allow the user to enter items and quantities
- A printed list of the items, in alphabetical order, including the quantity of items

Considerations

- The user should enter both the item and quantity on a single line. Use a punctuation character to let the user separate the item name from the quantity (.-/? etc). If no quantity is given, assume the user meant to add one of that item.
- The entry line will need to be parsed into its item and quantity components, and whitespace before and after the components discarded. See the **split** and **trimmingCharacters** functions defined on **String** to do this. Be careful to handle the optionals these functions return. Those students familiar with functional languages will also find **map** and **reduce** helpful, though regular loops work fine as well.
- If an item is typed two or more times, its quantity should be added to the quantity of that item already entered. Don't worry too much about coalescing similar names (e.g. apple and Apple can be different items).
- The list should be sorted alphabetically when printed. The **sorted** function on **Array** should help with this. You will be asked to provide a comparator to do so. The easiest way to supply this is to simply type **<** for the parameter. If you choose to use a **Dictionary** to store your list,

be aware that the function returns an array of tuples of (key, value). This is because **Dictionary** is not an ordered collection and so cannot be used to store sorted items.

Extra Credit

None on this assignment

Handin

You should hand in a zip file containing your project source code to Canvas for the CS4530 class.

```

MattBook:~ Matt$ ./ZeldaShopping
Enter Shopping List Items (item alone,
item: quantity, or blank to finish)
• sheikah slate
• pants
• shirt
• tree branch
• apple
• torch
• axe
• boko club: 5
• boko bow: 3
• arrow: 10
• apple: 50
• bomb arrow: 5
• spirit orb: 4
• glider
• moblin club: 3
• hinox guts
•

Shopping List
1. apple: 51
2. arrow: 10
3. axe: 1
4. boko bow: 3
5. boko club: 5
6. bomb arrow: 5
7. glider: 1
8. hinox guts: 1
9. moblin club: 3
10. pants: 1
11. sheikah slate: 1
12. shirt: 1
13. spirit orb: 4
14. torch: 1
15. tree branch: 1
MattBook:~ Matt$ █

```

```

Matt — -bash — 38x38
[MattBook:~ Matt$ ./Shopping
Enter Shopping List Items (item alone,
item: quantity, or blank to finish)
. 🍎
. 🍔
. 🍕
. 🍌
. 🍓
. 🍓
. 🍓
. 🍩
. 🍪
.
Shopping List
1. 🍌 : 1
2. 🍎 : 1
3. 🍔 : 1
4. 🍕 : 1
5. 🍩 : 1
6. 🍪 : 1
7. 🍓 : 3
MattBook:~ Matt$ █

```