Lab 10 Report

Date: 4/13/20

Group: Wednesday Group 08

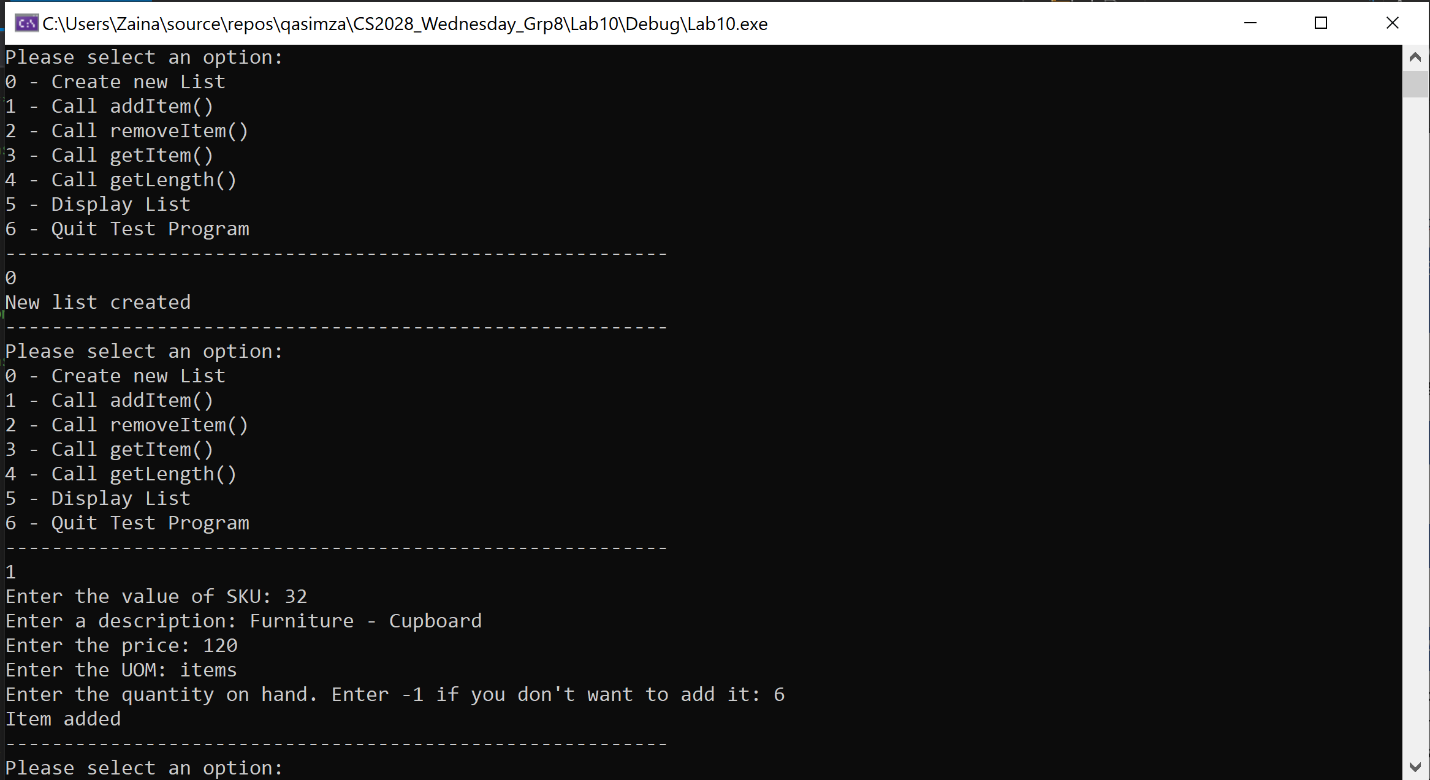
Group Members: Alan Joshua, Isaac Krisch, Zaina Qasim

# Objectives/Concepts explored and their Importance in Computer Science

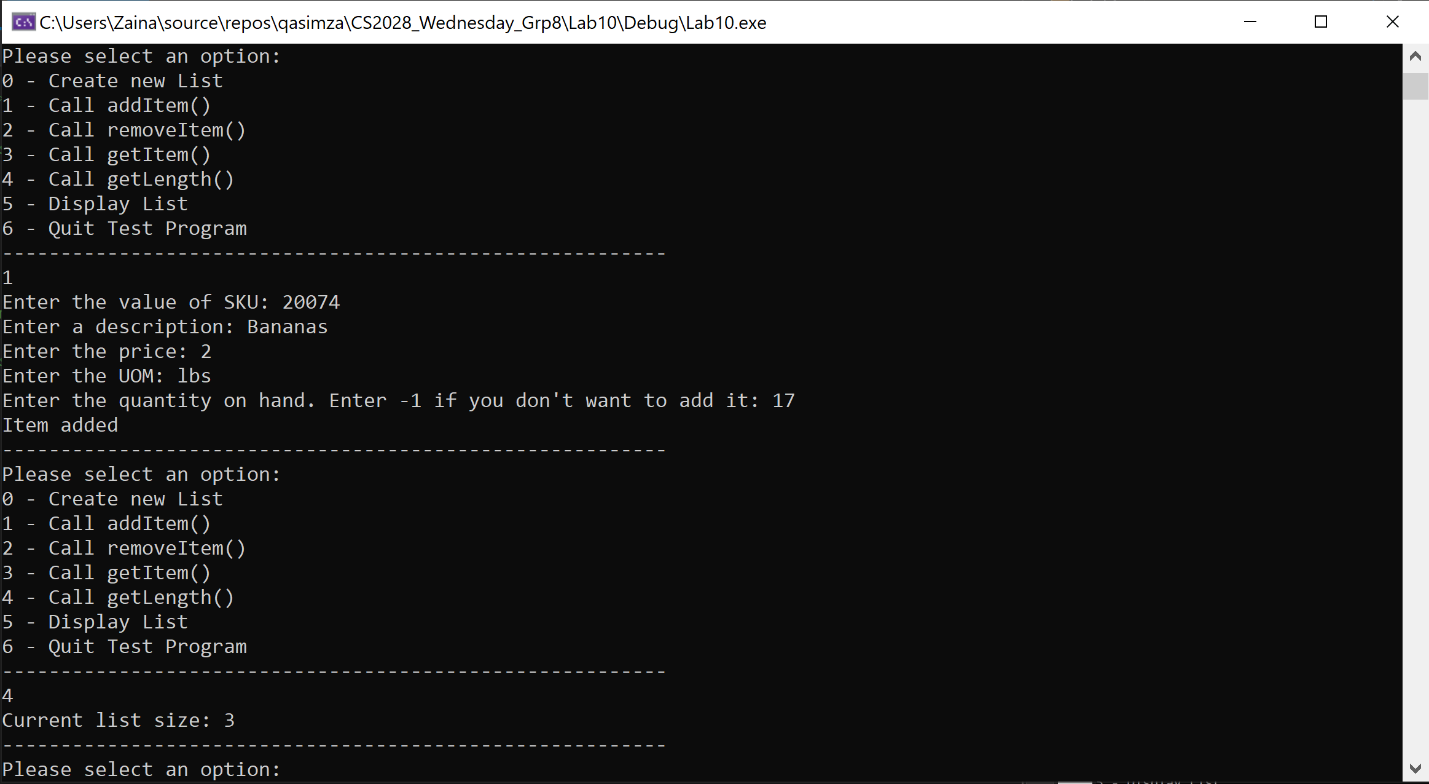
The objective of this lab was to explore hashing and create Hash Tables. The topic explored is important in Computer Science because it is a data structure that is widely used in the industry for mapping and maintaining data sets.

# Task 3: Screenshots (TESTING HASH TABLE)

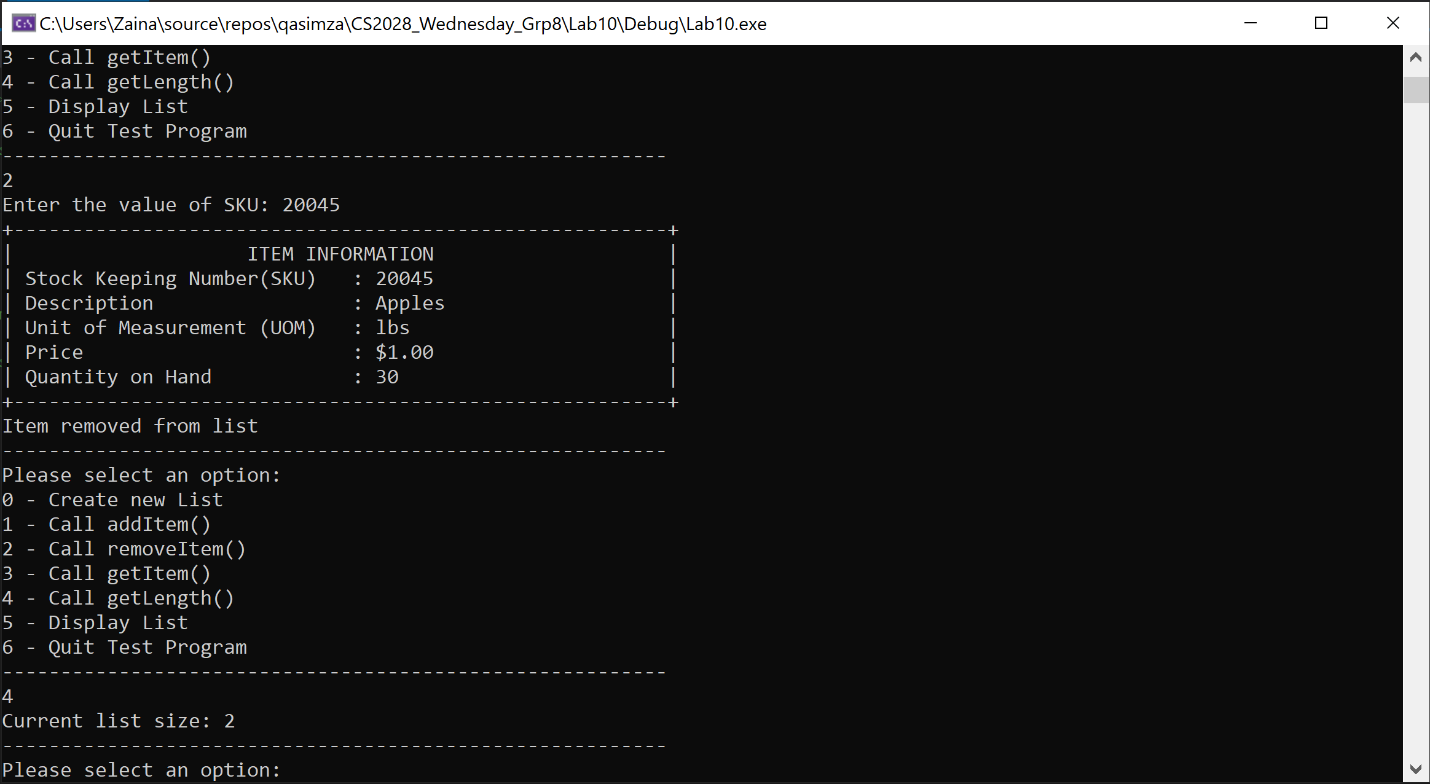
## ScreenSHOT 1: Creating a new List and adding an Item



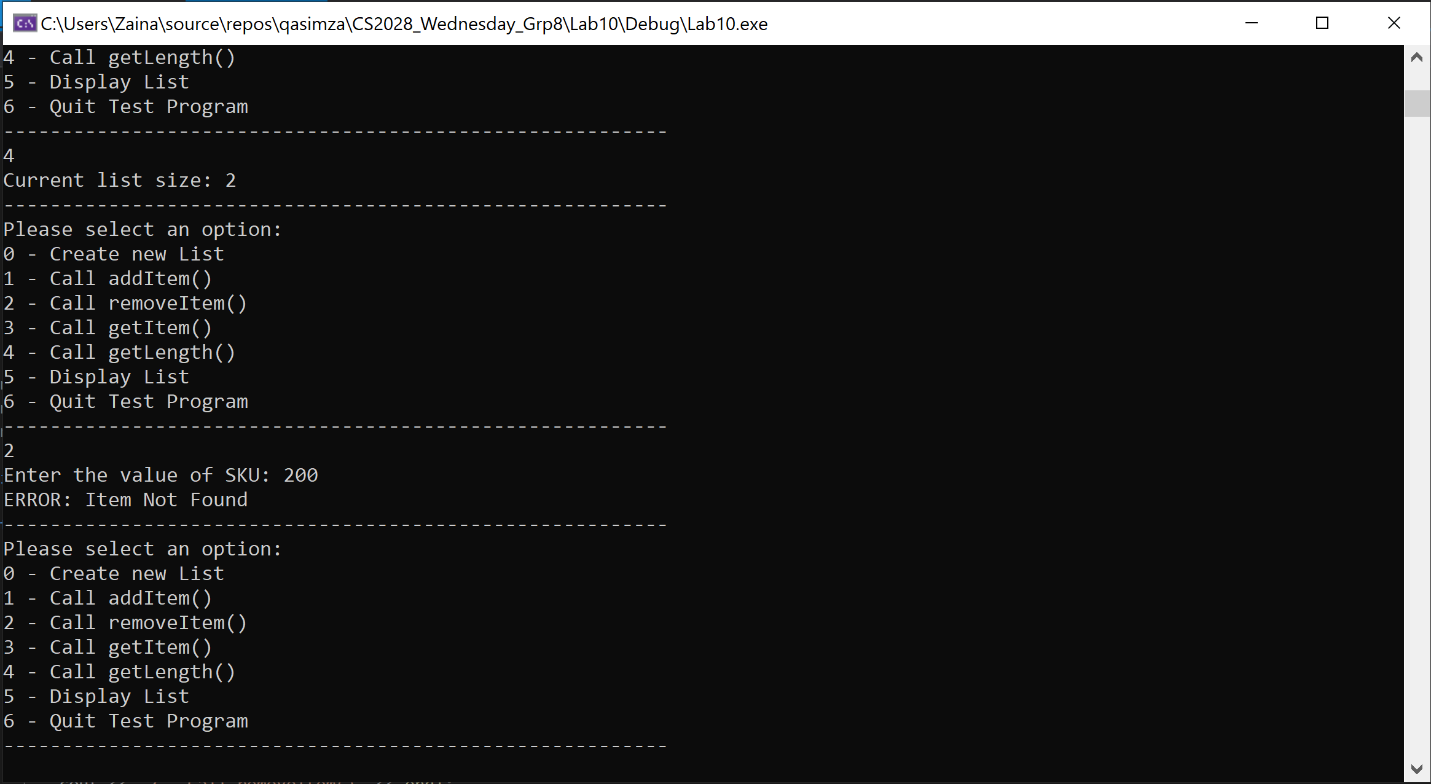
## ScreenSHOT 2: GET LENGTH AFTER ADDING THREE ITEMS



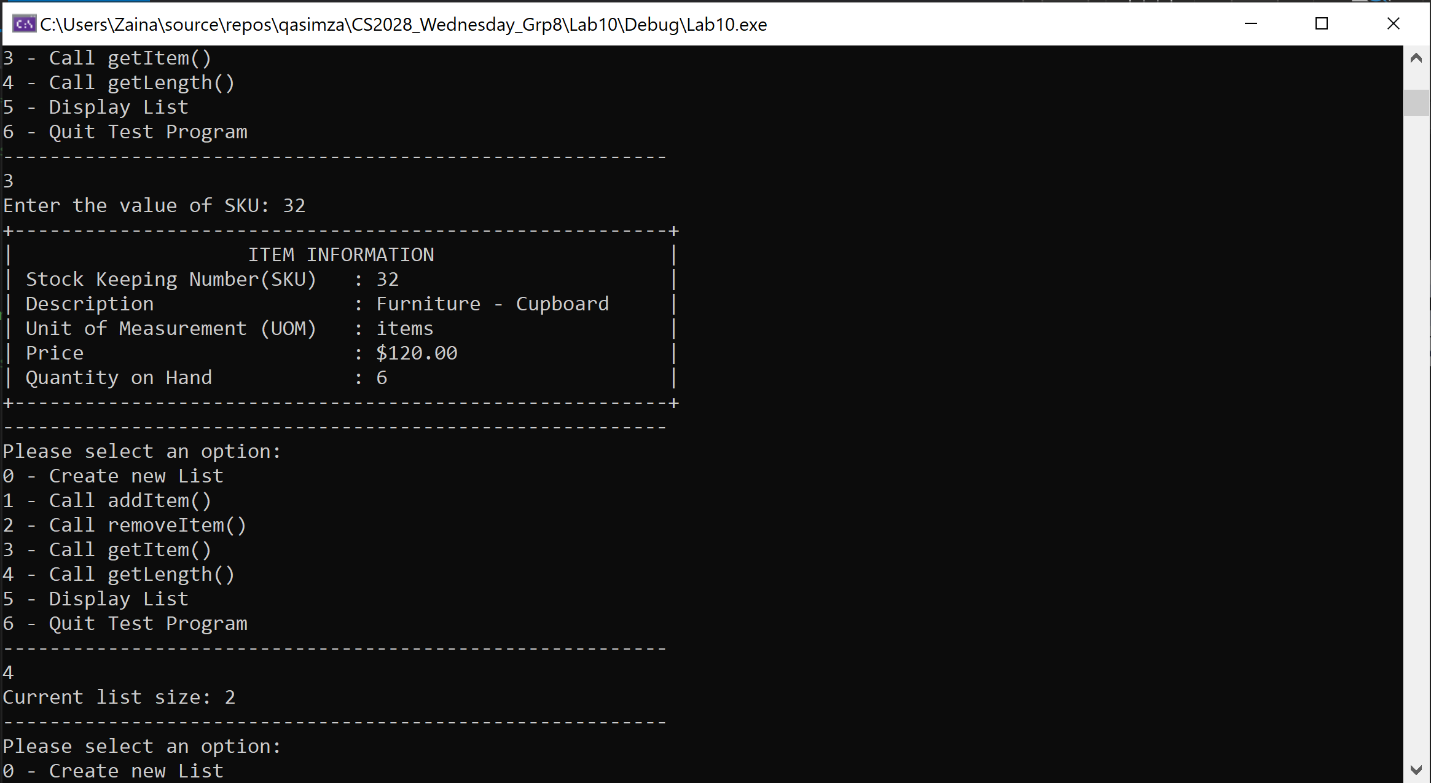
## ScreenSHOT 3: Removing an item (WHICH EXISTS)



## SCREENSHOT 5: REMOVING AN ITEM (WHICH DOES NOT EXISt)

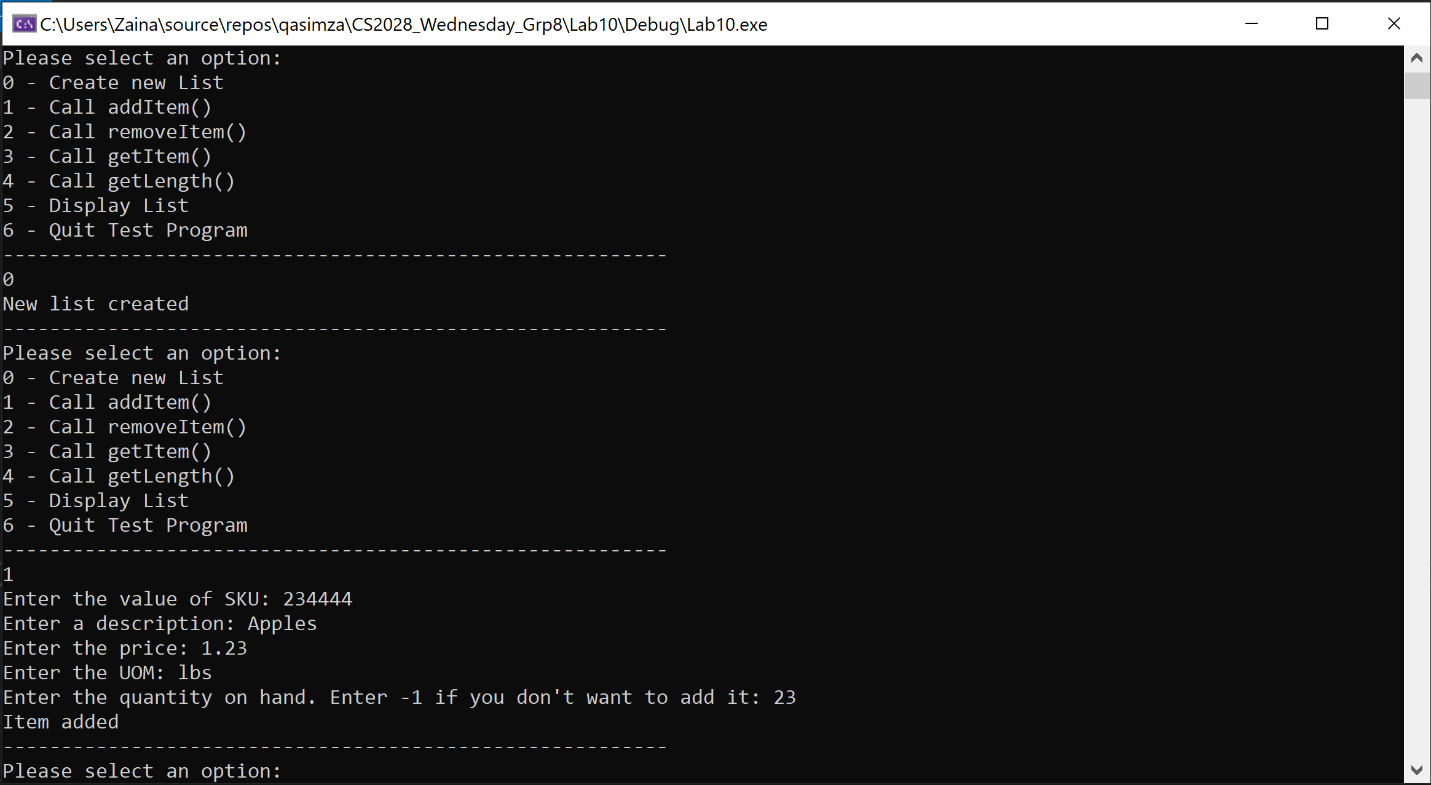


## ScreenSHOT 6: GET item

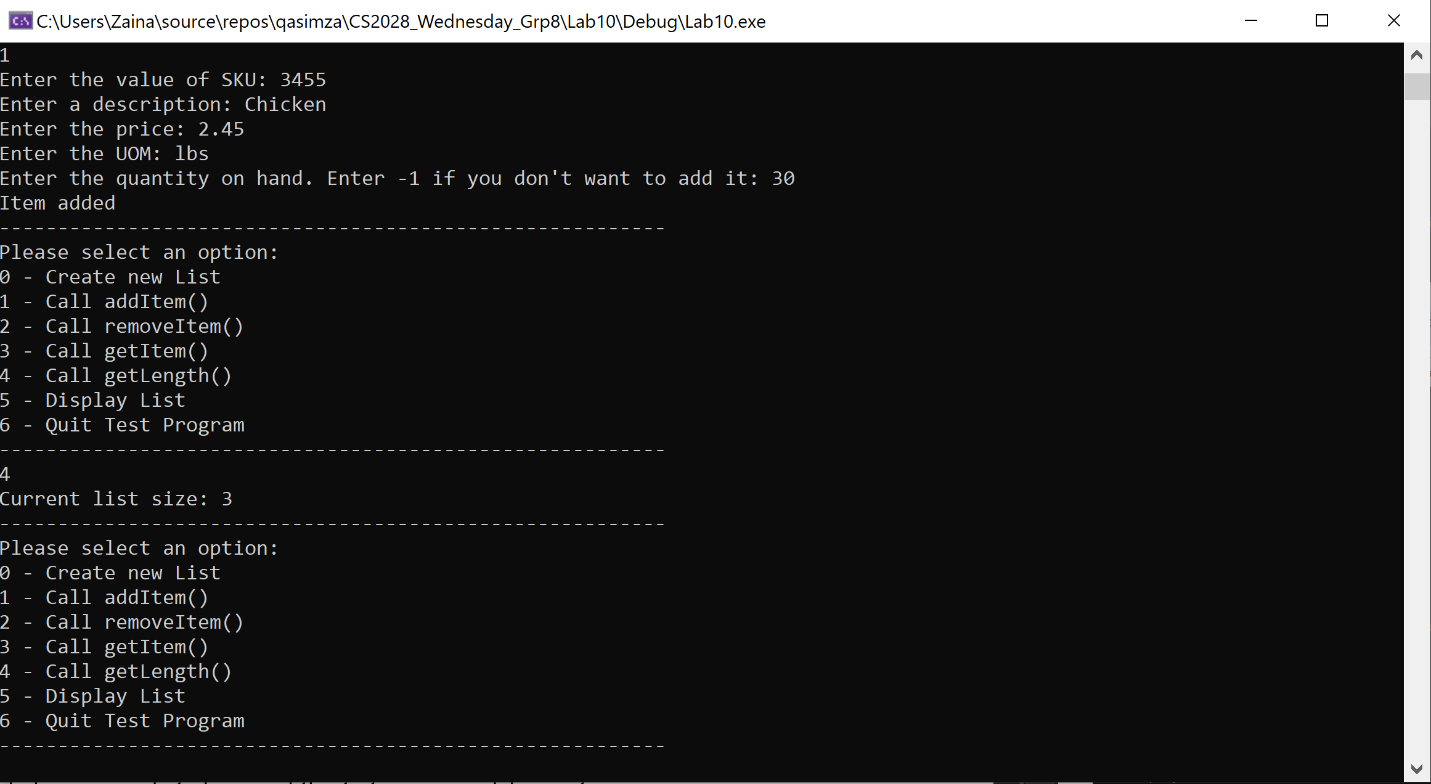


# Task 4: Screenshots (Testing Chained Hash Table)

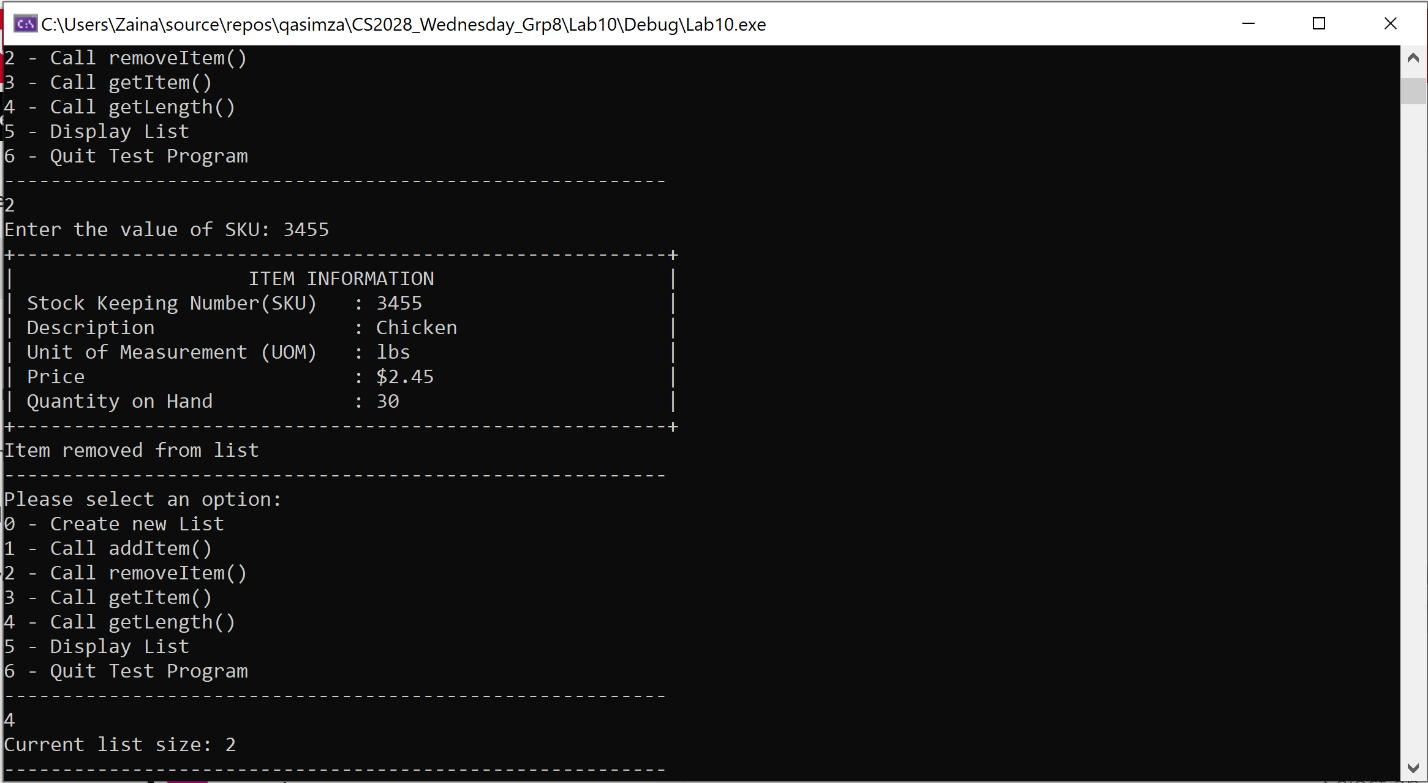
## ScreenSHOT 1: Creating a new List and adding an Item



## ScreenSHOT 2: GET LENGTH AFTER ADDING THREE ITEMS



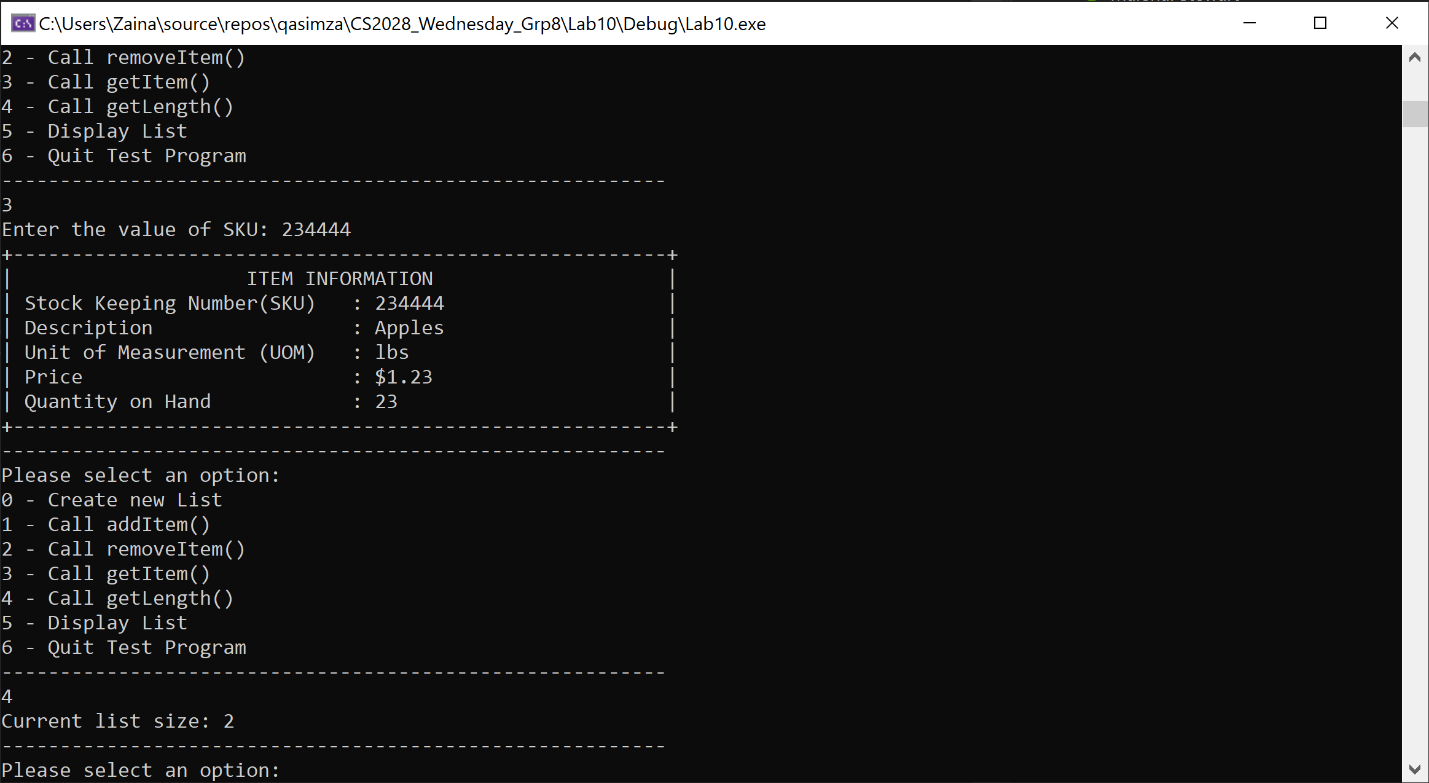
## ScreenSHOT 3: Removing an item (WHICH EXISTS)



## SCREENSHOT 5: REMOVING AN ITEM (WHICH DOES NOT EXISt)



## ScreenSHOT 6: GET item



# Task 5: Table (Results of trials)

Create a test program that adds 50 randomly generated students (follow appropriate SKU Number rules) to both hash tables then calls GetItem on the same student. Record the total number of times the Hash Table needed to complete the 50 operations. Repeat this measurement with an array size of 150, 200 and 250. Include a table of the results from the 4 trials for the 2 different classes in your lab report.

# User Instructions

Display List (HashTable.display() and ChainedHashTable.display()) is for internal testing ONLY.

Priority testing take upto 2:30 minutes. Please let the program run.

# Discussion: Modifications made for Task 2 and Task 3

# Discussion: Results for Task 5 and ideas for further investigation

# Contributions

All members contributed an equal amount.