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Midterm Lab Task 3 - Python List Collections

Problem 1. Using List Collection type. Create a program that will allow the user to perform the following functions: (add, update, search, delete, display, and sort) items in a list: Note: You are free to decide what data you will be storing in the list and name the list based on the type of data you wish to store.

[MENU OPTIONS]
1 – Add Items
2 – Search for an Item
3 – Remove an Item
4 – View all items (Sorted either A-Z | Z -A)
0 – Exit program
Pick one [0 to quit]: ___

Requirements:
1. The user can add items in the list until the user presses x to stop
2. The user should be able to perform search if an item exists – Display if found or not found and count the number of instance in the list.
3. The user should also be given the option to remove an item in the list – Display the Message “Item found and deleted” once deletion is performed – else display “item not found-deletion unsuccessful”
4. The user may also opt to view items in the list and display items sorted in Ascending order
5. The user may opt to exit the program by typing 0

Note: you are free to design the interface of the program, base on the Menu options shown.

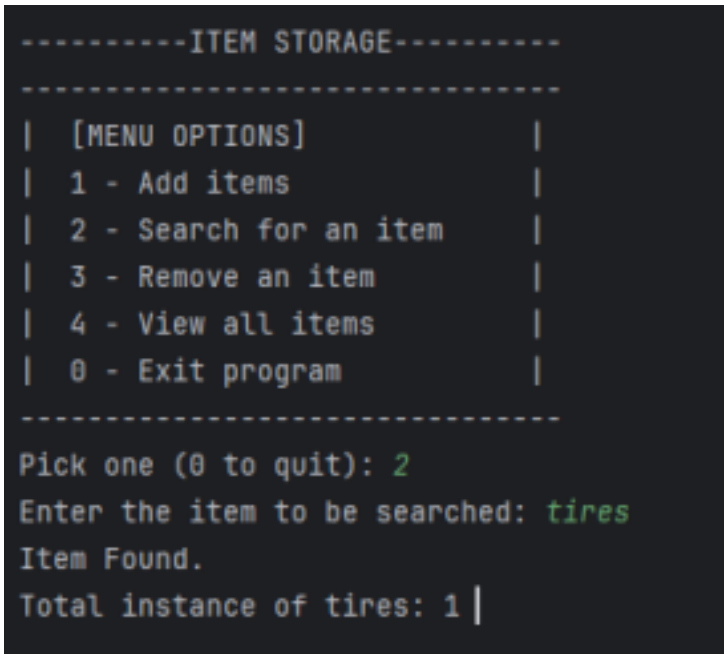
Source Code:

```
items = []

def add(items):
 while True:
 item = input("Enter the item to be stored (x to quit): ")
 if item.lower() == "x":
 break
 items.append(item)
def search(items):
 item = input("Enter the item to be searched:
")  count = items.count(item)
 if item in items:
```

```
 print("Item Found.")
 print(f"Total instance of {item}: {count} ")
else:
 print("Item Not Found.")
 return items


def remove(items):
 item = input("Enter the item to be removed: ")

 if item in items:
 items.remove(item)
 print("Item Found and Deleted")
 else:
 print("Item Not Found - Deletion Unsuccessful")
return items


def view(items):
 choice = input("Sorted from 1.(A-Z) or 2.(Z-A):
")  if choice == "1":
 print("---YOUR ITEMS---")
 items.sort()
 for item in items:
 print(f" - {item}")
 elif choice == "2":
 print("---YOUR ITEMS---")
 items.sort(reverse=True)
 for item in items:
 print(f" - {item}")
 else:
 print("Invalid Input. Default Sorting Applied (A-Z)")
print("---YOUR ITEMS---")
 items.sort()
 for item in items:
 print(f" - {item}")
 return items
def main():
 while True:
 print("\n----------ITEM STORAGE----------")
print("-------------------------------")  print("|
[MENU OPTIONS] |")  print("| 1 - Add
items |")  print("| 2 - Search for an item |")
print("| 3 - Remove an item |")  print("| 4 -
View all items |")  print("| 0 - Exit program
|")  print("-------------------------------")  choice
```

```
= input("Pick one (0 to quit): ")

 if choice == "1":
 add(items)
 elif choice == "2":
 search(items)
 elif choice == "3":
 remove(items)
 elif choice == "4":
 view(items)
 elif choice == "0":
 print("Bye.")
 break
 else:
 print("Invalid Input! Please Try Again.")


main()
```

Sample Outputs:



```
----------ITEM STORAGE----------
--------------------------------
|  [MENU OPTIONS]              |
|  1 - Add items               |
|  2 - Search for an item      |
|  3 - Remove an item          |
|  4 - View all items          |
|  0 - Exit program            |
--------------------------------
Pick one (0 to quit): 1
Enter the item to be stored (x to quit): bike
Enter the item to be stored (x to quit): coat
Enter the item to be stored (x to quit): shoes
Enter the item to be stored (x to quit): tires
Enter the item to be stored (x to quit): zipper
Enter the item to be stored (x to quit): antidote
Enter the item to be stored (x to quit): x

----------ITEM STORAGE----------
--------------------------------
|  [MENU OPTIONS]              |
|  1 - Add items               |
|  2 - Search for an item      |
|  3 - Remove an item          |
|  4 - View all items          |
|  0 - Exit program            |
--------------------------------
```

```
----------ITEM STORAGE----------
--------------------------------
|  [MENU OPTIONS]              |
|  1 - Add items               |
|  2 - Search for an item      |
|  3 - Remove an item          |
|  4 - View all items          |
|  0 - Exit program            |
--------------------------------
Pick one (0 to quit): 4
Sorted from 1.(A-Z) or 2.(Z-A): 1
---YOUR ITEMS---
 - antidote
 - bike
 - coat
 - shoes
 - tires
 - zipper
```

```
----------ITEM STORAGE----------
--------------------------------
|  [MENU OPTIONS]              |
|  1 - Add items               |
|  2 - Search for an item      |
|  3 - Remove an item          |
|  4 - View all items          |
|  0 - Exit program            |
--------------------------------
Pick one (0 to quit): 3
Enter the item to be removed: coat
Item Found and Deleted
```

Sample Code:

```
----------ITEM STORAGE----------
--------------------------------
|  [MENU OPTIONS]              |
|  1 - Add items               |
|  2 - Search for an item      |
|  3 - Remove an item          |
|  4 - View all items          |
|  0 - Exit program            |
--------------------------------
Pick one (0 to quit): 0
Bye.

Process finished with exit code 0
```

```
----------ITEM STORAGE----------
--------------------------------
|  [MENU OPTIONS]              |
|  1 - Add items               |
|  2 - Search for an item      |
|  3 - Remove an item          |
|  4 - View all items          |
|  0 - Exit program            |
--------------------------------
Pick one (0 to quit): 4
Sorted from 1.(A-Z) or 2.(Z-A): 2
---YOUR ITEMS---
 - zipper
 - tires
 - shoes
 - bike
 - antidote
```