Name: Manaois, Ivan Bryan R. Midterm Lab Task 3 - Python List Collections BSCS C204

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.

main.py

```python
def display_menu():
    print("\n[ MENU OPTIONS ]")
    print("1 - Add items")
    print("2 - Search for an Item")
    print("3 - Remove an Item")
    print("4 - View all items (sorted A-Z | Z-A)")
    print("0 - Exit program")

def main():
    items = []

    while True:
        display_menu()
        choice = input("Pick one [0 to quit]: ").strip()

        if choice == "1":
            while True:
                item = input("Enter item to add (press 'x' to stop): ").strip()
                if item.lower() == 'x':
                    break
                items.append(item)
            print("Items added successfully!")

        elif choice == "2":
            search_item = input("Enter item to search: ").strip()
            count = items.count(search_item)
            if count > 0:
                print(f"Item '{search_item}' found. Total occurrences: {count}")
            else:
                print(f"Item '{search_item}' not found.")

        elif choice == "3":
            remove_item = input("Enter item to remove: ").strip()
            if remove_item in items:
                items.remove(remove_item)
                print(f"Item '{remove_item}' found and deleted.")
            else:
                print("Item not found - deletion unsuccessful.")

        elif choice == "4":
            if items:
                sort_order = input("Sort A-Z or Z-A? (Enter A or Z): ").strip().upper()
                if sort_order == "Z":
                    sorted_items = sorted(items, reverse=True)
                else:
                    sorted_items = sorted(items)

                print("\nItems in the list:")
                for i, item in enumerate(sorted_items, start=1):
                    print(f"{i}. {item}")
            else:
                print("The list is empty.")

        elif choice == "0":
            print("Exiting program... Goodbye!")
            break

        else:
            print("Invalid option. Please pick again.")

if __name__ == "__main__":
    main()
```

```
[ MENU OPTIONS ]
1 - Add Items
2 - Search for an Item
3 - Remove an Item
4 - View all items (Sorted A-Z | Z-A)
0 - Exit program
Pick one [0 to quit]: 1
Enter item to add (press 'x' to stop): Apple
Enter item to add (press 'x' to stop): x
Items added successfully!

[ MENU OPTIONS ]
1 - Add Items
2 - Search for an Item
3 - Remove an Item
4 - View all items (Sorted A-Z | Z-A)
0 - Exit program
Pick one [0 to quit]: 2
Enter item to search: Apple
Item 'Apple' found. Total occurrences: 1

[ MENU OPTIONS ]
1 - Add Items
2 - Search for an Item
3 - Remove an Item
4 - View all items (Sorted A-Z | Z-A)
0 - Exit program
Pick one [0 to quit]: 3
Enter item to remove: Apple
Item 'Apple' found and deleted.

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

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