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BSCS-C204

Midterm Lab Task 3 - Python List Collections

Problem 1. Using List Collection type.

SOURCE CODE

```
1 def display_menu():
2     print("\n[ SCHOOL SUPPLIES ]")
3     print("1 - Add Items")
4     print("2 - Search for an Item")
5     print("3 - Remove an Item")
6     print("4 - View all items (Sorted either A-Z | Z-A)")
7     print("0 - Exit program")
8
9 def add_items(item_list):
10     while True:
11         item = input("Enter item to add (or 'x' to stop): ")
12         if item.lower() == 'x':
13             break
14         item_list.append(item)
15         print("Items successfully added!")
16
17 def search_item(item_list):
18     item = input("Enter item to search: ")
19     count = item_list.count(item)
20     if count > 0:
21         print(f"'{item}' found! It appears {count} time(s) in the list.")
22     else:
23         print(f"'{item}' not found in the list.")
24
```

```
25 def remove_item(item_list):
26     item = input("Enter item to remove: ")
27     if item in item_list:
28         item_list.remove(item)
29         print(f"Item '{item}' found and deleted.")
30     else:
31         print(f"Item '{item}' not found - deletion unsuccessful.")
32
33 def view_items(item_list):
34     if not item_list:
35         print("The list is empty.")
36         return
37     choice = input("View sorted list (A-Z or Z-A)? Enter 'A' or 'Z': ").upper()
38     if choice == 'A':
39         sorted_list = sorted(item_list)
40     elif choice == 'Z':
41         sorted_list = sorted(item_list, reverse=True)
42     else:
43         print("Invalid choice. Showing unsorted list.")
44         sorted_list = item_list
45     print("Items in the list:")
46     for item in sorted_list:
47         print("-", item)
```

```
48
49 def main():
50     items = []
51     while True:
52         display_menu()
53         choice = input("Pick one [0 to quit]: ")
54
55         if choice == '1':
56             add_items(items)
57         elif choice == '2':
58             search_item(items)
59         elif choice == '3':
60             remove_item(items)
61         elif choice == '4':
62             view_items(items)
63         elif choice == '0':
64             print("Exiting program. Goodbye!")
65             break
66         else:
67             print("Invalid choice. Please try again.")
68
69 main()
```

SAMPLE OUTPUT

```
[ SCHOOL SUPPLIES ]
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]: 1
Enter item to add (or 'x' to stop): Pencil
Enter item to add (or 'x' to stop): Pad Paper
Enter item to add (or 'x' to stop): Ball pen
Enter item to add (or 'x' to stop): Eraser
Enter item to add (or 'x' to stop): Glue
Enter item to add (or 'x' to stop): Ruler
Enter item to add (or 'x' to stop): Sharpener
Enter item to add (or 'x' to stop): x
Items successfully added!
```

```
[ SCHOOL SUPPLIES ]
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]: 2
Enter item to search: Pencil
'Pencil' found! It appears 1 time(s) in the list.
```

```
[ SCHOOL SUPPLIES ]
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]: 3
Enter item to remove: Pencil
Item 'Pencil' found and deleted.

[ SCHOOL SUPPLIES ]
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]: 4
View sorted list (A-Z or Z-A)? Enter 'A' or 'Z': A
Items in the list:
- Ball pen
- Eraser
- Glue
- Pad Paper
- Ruler
- Sharpener
```

```
[ SCHOOL SUPPLIES ]
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]: 2
Enter item to search: Pencil
'Pencil' not found in the list.

[ SCHOOL SUPPLIES ]
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]: 0
Exiting program. Goodbye!
```