

```
[2]: a=[1, 2, 3, 4, 5]
      print(a)
      {1, 2, 3, 4, 5}

[3]: a=[1, 2, 3, 4, 5, 6]
      b=[0, 2, 8, 9, 7, 5]

[4]: a.union(b)

[4]: {0, 1, 2, 3, 4, 5, 6, 7, 8, 9}

[5]: a.intersection(b)

[5]: {2, 5}

[6]: a.add(7)

[7]: print(a)
      {1, 2, 3, 4, 5, 6, 7}

[8]: a.difference(b)

[8]: {1, 3, 4, 6}

[9]: b.difference(a)

[9]: {0, 8, 9}

[10]: a.symmetric_difference(b)

[10]: {0, 1, 3, 4, 6, 8, 9}
```

```
[12]: print(a, b)  
[1, 2, 3, 4, 5, 6, 7] {0, 2, 5, 7, 8, 9}
```

```
[13]: c=a.copy()
```

```
[14]: print(a, b, c)  
[1, 2, 3, 4, 5, 6, 7] {0, 2, 5, 7, 8, 9} {1, 2, 3, 4, 5, 6, 7}
```

```
[24]: a=[1, 2, 3, 4, 5, 6, 7, 8]  
a.pop()
```

```
[24]: 8
```

```
[25]: print(a)  
[1, 2, 3, 4, 5, 6, 7]
```

```
[28]: a.append(8)
```

```
[29]: print(a)  
[1, 2, 3, 4, 5, 6, 7, 8]
```

```
[30]: a[0]=0
```

```
[33]: print(a)  
[0, 2, 3, 4, 5, 6, 7, 8]
```

```
[34]: a.insert(0, 1)
```

```
[35]: print(a)  
[1, 0, 2, 3, 4, 5, 6, 7, 8]
```

```
[1]: def list_operations():
    my_list = []
    while True:
        print("\nList Operations: ")
        print("1. Insert an element")
        print("2. Delete an element")
        print("3. Find an element")
        print("4. Display list")
        print("5. Exit")
        choice = int(input("Enter your choice: "))

        if choice == 1:
            element = input("Enter element to insert: ")
            my_list.append(element)
            print(f"Element '{element}' inserted")

        elif choice == 2:
            element = input("Enter element to delete: ")
            if element in my_list:
                my_list.remove(element)
                print(f"Element '{element}' deleted")
            else:
                print(f"Element '{element}' not found")

        elif choice == 3:
            element = input("Enter element to find: ")
            if element in my_list:
                print(f"Element '{element}' found at index {my_list.index(element)}")
            else:
                print(f"Element '{element}' not found")

        elif choice == 4:
            print("Current List: ", my_list)
```

```
    elif choice == 5:  
        print("Exiting program.....")  
        break  
  
    else:  
        print("Invalid choice, please try again.")  
  
list_operations()
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 1  
Enter element to insert: 200  
Element '200' inserted
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 2  
Enter element to delete: 200  
Element '200' deleted
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 1  
Enter element to insert: 100 488  
Element '100 488' inserted
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 4  
Current List: ['100 488']
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 3  
Enter element to find: 100  
Element '100' not found
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 5  
Exiting program.....
```

```
[1]: def list_operations():
    my_list = []
    while True:
        print("\nList Operations:")
        print("1. Insert an element")
        print("2. Delete an element")
        print("3. Find an element")
        print("4. Display list")
        print("5. Exit")
        choice = int(input("Enter your choice: "))
        match choice:
            case 1:
                element = input("Enter element to insert: ")
                my_list.append(element)
                print(f"Element '{element}' inserted.")
            case 2:
                element = input("Enter element to delete: ")
                if element in my_list:
                    my_list.remove(element)
                    print(f"Element '{element}' deleted.")
                else:
                    print(f"Element '{element}' not found.")
            case 3:
                element = input("Enter element to find: ")
                if element in my_list:
                    print(f"Element '{element}' found.")
                else:
                    print(f"Element '{element}' not found.")
            case 4:
                print(f"Current list: {my_list}")
            case 5:
                break
            case _:
                print("Invalid choice, please try again.")
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 1  
Enter element to insert: 148  
Element '148' inserted.
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 1  
Enter element to insert: 690  
Element '690' inserted.
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 2  
Enter element to delete: 148  
Element '148' deleted.
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 1  
Enter element to insert: 500 900  
Element '500 900' inserted.
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 4  
Current list: ['690', '500 900']
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 3  
Enter element to find: 690  
Element '690' found.
```

```
List Operations:  
1. Insert an element  
2. Delete an element  
3. Find an element  
4. Display list  
5. Exit  
Enter your choice: 5
```