[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}
```

[11]:
```
a.difference(b)
```

[11]:
```
{1, 3, 4, 6}
```

[12]:
```
b.difference(a)
```

[12]:
```
{0, 8, 9}
```

[13]:
```
a.symmetric_difference(b)
```

[13]:
```
{0, 1, 3, 4, 6, 8, 9}
```

[13]:
```
{0, 1, 3, 4, 6, 8, 9}
```

[14]:
```
b.symmetric_difference(a)
```

[14]:
```
{0, 1, 3, 4, 6, 8, 9}
```

[15]:
```
print(a , b)
```

```
{1, 2, 3, 4, 5, 6, 7} {0, 2, 5, 7, 8, 9}
```

[16]:
```
c=a.copy()
```

[17]:
```
print(a, b, c)
```

```
{1, 2, 3, 4, 5, 6, 7} {0, 2, 5, 7, 8, 9} {1, 2, 3, 4, 5, 6, 7}
```

[18]:
```
a=[1, 2, 3, 4, 5, 6, 7, 8]
a.pop()
```

[18]:
```
8
```

[21]:
```
print(a)
```

[22]:
```
a.append(8)
```

[23]:
```
print(a)
```

```
[1, 2, 3, 4, 5, 6, 7, 8]
```

[24]:
```
a[0]=0
```

[25]:
```
print(a)
```

```
[0, 2, 3, 4, 5, 6, 7, 8]
```

[26]:
```
a.insert(0,1)
```

[27]:
```
print(a)
```

```
[1, 0, 2, 3, 4, 5, 6, 7, 8]
```

[28]:
```
a.pop(1)
```

[28]:
```
0
```

[29]:
```
print(a)
```

```
[1, 2, 3, 4, 5, 6, 7, 8]
```

[30]:
```
a.insert(8,9)
```

[31]:
```
print(a)
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9]
```

[35]:
```
print(a[1:9:2])
```

```
[2, 4, 6, 8]
```

[36]:
```
c=a.copy
```

[37]:
```
print(c)
```

```
<built-in method copy of list object at 0x000002822D2BFEC0>
```

[ ]:

```
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.")
            else:
                print(f"Element '{element}' not found.")

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

```
        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:  20
Element '20' 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: ['20']

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

```
[60]: a=[1, 2, 3, 4, 5, 6, 7]
      a[:]
```

```
[60]: [1, 2, 3, 4, 5, 6, 7]
```

```
[61]: a[1:5]
```

```
[61]: [2, 3, 4, 5]
```

```
[62]: a[1:-5]
```

```
[62]: [2]
```

```
[63]: a[-5:1]
```

```
[63]: []
```

```
[64]: a[-1:5:-1]
```

```
[64]: [7]
```

```
[65]: a[-1:-5]
```

```
[65]: []
```

```
[ ]:
```