

TASK:1

Write a Python program to create a list, a dictionary, and a set. Perform basic operations like adding, removing, and modifying elements.

LIST :

```
In [1]: # Creating a List
my_list = [3,6,9,18,21,24,27]
print("Original List:", my_list)

Original List: [3, 6, 9, 18, 21, 24, 27]

In [2]: # Adding an element to the List
my_list.append(6)
print("List after adding an element:", my_list)

List after adding an element: [3, 6, 9, 18, 21, 24, 27, 6]

In [3]: # Removing an element from the List
my_list.remove(3)
print("List after removing an element:", my_list)

List after removing an element: [6, 9, 18, 21, 24, 27, 6]

In [4]: # Modifying an element in the List
my_list[2] = 10
print("Constructed List of an element:", my_list)

Constructed List of an element: [6, 9, 10, 21, 24, 27, 6]
```

DICTIONARY:

```
In [4]: # Modifying an element in the List
my_list[2] = 10
print("Constructed List of an element:", my_list)

Constructed List of an element: [6, 9, 10, 21, 24, 27, 6]

In [5]: # Creating a dictionary
my_dict = {'g': 7, 'y': 25, 'a': 1}
print("\nOriginal Dictionary:", my_dict)

Original Dictionary: {'g': 7, 'y': 25, 'a': 1}

In [6]: # Adding an element to the dictionary
my_dict['n'] = 4
print("Dictionary after adding an element:", my_dict)

Dictionary after adding an element: {'g': 7, 'y': 25, 'a': 1, 'n': 4}

In [7]: # Removing an element from the dictionary
del my_dict['g']
print("Dictionary after removing an element:", my_dict)

Dictionary after removing an element: {'y': 25, 'a': 1, 'n': 4}

In [8]: # Modifying an element in the dictionary
my_dict['a'] = 10
print("Constructed Dictionary of an element:", my_dict)

Constructed Dictionary of an element: {'y': 25, 'a': 10, 'n': 4}
```

SET:

```
In [9]: # Creating a set  
my_set = {2,4,6,8,10,12,14,16,18,20}  
print("\nOriginal Set:", my_set)
```

Original Set: {2, 4, 6, 8, 10, 12, 14, 16, 18, 20}

```
In [10]: # Adding an element to the set  
my_set.add(7)  
print("Set after adding an element:", my_set)
```

Set after adding an element: {2, 4, 6, 7, 8, 10, 12, 14, 16, 18, 20}

```
In [11]: # Removing an element from the set  
my_set.remove(4)  
print("Set after removing an element:", my_set)
```

Set after removing an element: {2, 6, 7, 8, 10, 12, 14, 16, 18, 20}

```
In [12]: # Sets do not support indexing, so we cannot modify an element directly  
# However, we can remove and add an element to achieve a similar result  
my_set.remove(6)  
my_set.add(101)  
print("Constructed set of an element:", my_set)
```

Constructed set of an element: {2, 101, 7, 8, 10, 12, 14, 16, 18, 20}