DATA SCIENCE TASK 1 Description: This task involves understanding the basic data types in Python such as lists, dictionaries, and sets.

In [49]:
```
# 1. Working with a List
fruits = ["apple", "banana", "cherry"]

# Adding an element to the list
fruits.append("orange")

# Removing an element from the list
fruits.remove("banana")

# Modifying an element in the list
fruits[0] = "mango"

# Displaying the list
print("List:", fruits)


# 2. Working with a Dictionary
person = {"name": "John", "age": 30, "city": "New York"}

# Adding a new key-value pair
person["job"] = "Engineer"

# Removing a key-value pair
del person["city"]

# Modifying a value in the dictionary
person["age"] = 31

# Displaying the dictionary
print("Dictionary:", person)


# 3. Working with a Set
numbers = {1, 2, 3}

# Adding an element to the set
numbers.add(4)

# Removing an element from the set
numbers.remove(2)

# Checking for the presence of an element
print("Is 3 in the set?", 3 in numbers)

# Displaying the set
print("Set:", numbers)
```

```
List: ['mango', 'cherry', 'orange']
Dictionary: {'name': 'John', 'age': 31, 'job': 'Engineer'}
Is 3 in the set? True
Set: {1, 3, 4}
```

Explanation of Operations List Operations:

append: Adds an item at the end. remove: Removes a specified item. Indexing (fruits[0] = "mango"): Updates an element by position. Dictionary Operations:

Adding a key-value (person["job"] = "Engineer"). Removing a key-value (del person["city"]). Modifying a value (person["age"] = 31). Set Operations:

add: Adds an element if it's not present. remove: Deletes an item if it exists. in keyword to check for membership. This covers the fundamental operations for lists, dictionaries, and sets in Python.

In [ ]: