In [2]:
```
''' 1. Find Common Elements:

Given two lists:

list1 = [1, 2, 3, 4]

list2 = [3, 4, 5, 6]

Find the common elements using a set.'''

list1 = [1, 2, 3, 4]
list2 = [3, 4, 5, 6]

set1 = set(list1)
set2 = set(list2)

common_elements = set1 & set2

print(common_elements)
```

```
{3, 4}
```

In [3]:
```
# 2.Unique Characters in a String:

 # Write a program to find all unique characters in the string "programming" using a set.

string = "programming"

unique_characters = set(string)

print(unique_characters)
```

```
{'r', 'm', 'p', 'o', 'a', 'n', 'g', 'i'}
```

In [5]:
```
# 3.Union of Sets:

# Find the union of the sets:

# set1 = {1, 2, 3}

# set2 = {3, 4, 5}

set1 = {1, 2, 3}
set2 = {3, 4, 5}

union_result = set1 | set2

print("Union of Sets :")
print(union_result)
```

```
Union of Sets :
{1, 2, 3, 4, 5}
```

In [6]:
```
# 4. Intersection of Sets:

# Find the intersection of the sets:

# A = {'a', 'b', 'c'}

# B = {'b', 'c', 'd'}

A = {'a', 'b', 'c'}
B = {'b', 'c', 'd'}

intersection_result = A & B

print(intersection_result)
```

```
{'c', 'b'}
```

In [7]:
```
# 5. Difference of Sets:

# Find the difference of the sets:

# X = {1, 2, 3, 4}

# Y = {3, 4, 5, 6}

X = {1, 2, 3, 4}
Y = {3, 4, 5, 6}

difference_result = X - Y
```

```
print(difference_result)
```

```
{1, 2}
```

In [ ]: