Program to find the union of two list

Logic of program:

1. Create a blank list
2. ask user to enter its size
3. using for loop we take input from use to create lists:
4. take the union of two lists

Create List 1

In [1]:

```
l1=[]
size1 = int(input("Enter num of element u want in list1 :"))
for i in range(size1):
    num1 = int(input("Enter element in list"))
    l1.append(num1)
print(l1)
```

```
Enter num of element u want in list1 :5
Enter element in list8
Enter element in list3
Enter element in list5
Enter element in list6
Enter element in list7
[8, 3, 5, 6, 7]
```

Create List 2

In [3]:

```
l2=[]
size1 = int(input("Enter num of element u want in list2 :"))
for i in range(size1):
    num2 = int(input("Enter element in list"))
    l2.append(num2)
print(l2)
```

```
Enter num of element u want in list2 :6
Enter element in list44
Enter element in list35
Enter element in list23
Enter element in list45
Enter element in list77
Enter element in list7
[44, 35, 23, 45, 77, 7]
```

Union of Concatenation of two lists

Method 1:Using + operator

In [4]:

```
f_list = l1 + l2
print("Union of list 1 : {} and list 2 : {} is {} ".format(l1,l2,f_list))
```

```
Union of list 1 : [8, 3, 5, 6, 7] and list 2 : [44, 35, 23, 45, 77, 7] is
[8, 3, 5, 6, 7, 44, 35, 23, 45, 77, 7]
```

Method 2: using iterable method

In [5]:

```
f_list = [*l1,*l2]
print("Union of list 1 : {} and list 2 : {} is {} ".format(l1,l2,f_list))
```

```
Union of list 1 : [8, 3, 5, 6, 7] and list 2 : [44, 35, 23, 45, 77, 7] is
[8, 3, 5, 6, 7, 44, 35, 23, 45, 77, 7]
```

Method3: Unique values

In [6]:

```
f_list=list(set(l1+l2))
print("Union of list 1 : {} and list 2 : {} is {} ".format(l1,l2,f_list))
```

```
Union of list 1 : [8, 3, 5, 6, 7] and list 2 : [44, 35, 23, 45, 77, 7] is
[3, 35, 5, 6, 7, 8, 44, 45, 77, 23]
```

Method 4: Using extend

In [7]:

```
l2.extend(l1)
print("Concatenated list of l1 and l2=",l2)
```

```
Concatenated list of l1 and l2= [44, 35, 23, 45, 77, 7, 8, 3, 5, 6, 7]
```

Method 5:using itertools.chain() method

In [8]:

```
import itertools
f_list3=list(itertools.chain(l1,l2))
print("Union of list 1 : {} and list 2 : {} is {} ".format(l1,l2,f_list3))
```

```
Union of list 1 : [8, 3, 5, 6, 7] and list 2 : [44, 35, 23, 45, 77, 7, 8, 3,
5, 6, 7] is [8, 3, 5, 6, 7, 44, 35, 23, 45, 77, 7, 8, 3, 5, 6, 7]
```

Method 6: Using append function

In [10]:

```
for j in l2:
    l1.append(j)
print("Concatenation of list1 and list2 =",l1)
```

```
Concatenation of list1 and list2 = [8, 3, 5, 6, 7, 44, 35, 23, 45, 77, 7, 8,
3, 5, 6, 7]
```

In [ ]:

```

```