Python Programming - 2101CS405

Lab - 6

Tuples, dictionary, set

List Important Set Methods from PPT

In [ ]:

A

01) WAP to sort python dictionary by key or value.

In [3]:

```
Original dictionary: {3: 'x', 5: 'a', 1: 'z', 4: 'b', 2: 'y'}
Sorted dictionary by key: {1: 'z', 2: 'y', 3: 'x', 4: 'b', 5: 'a'}
Sorted dictionary by value: {5: 'a', 4: 'b', 3: 'x', 2: 'y', 1: 'z'}
```

02) WAP to merge two dictionaries given by user.

In [5]:

```
Original dictionaries:
{'a': 1, 'b': 2, 'c': 3}
{'d': 4, 'e': 5, 'f': 6}
Merged dictionary:
{'a': 1, 'b': 2, 'c': 3, 'd': 4, 'e': 5, 'f': 6}
```

03) WAP to find tuples that have all elements divisible by K from a list of tuples.

In [9]:

```
List of Tuple :  [(1, 2, 3), (4, 5, 6), (7, 8, 9), (3, 6), (9, 12)]
Enter K :  3
[(3, 6), (9, 12)]
```

04) WAP to find Tuples with positive elements in List of tuples.

In [12]:

```
List of Tuple :  [(1, 2, 3), (4, 5, 6), (7, 8, 9), (0, -1, -2), (-4, -5, -6), (4, -
5, 6)]
Tuples with positive elements in list of tuples:
[(1, 2, 3), (4, 5, 6), (7, 8, 9)]
```
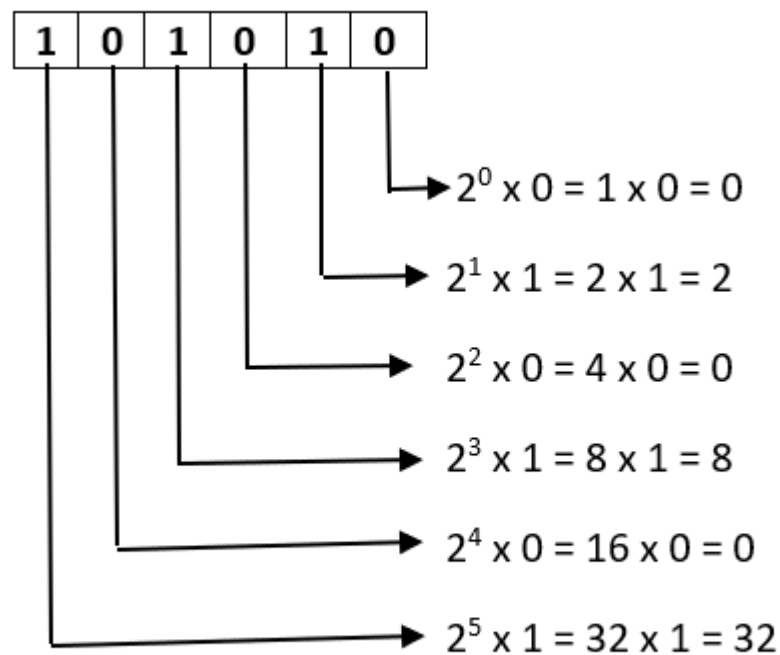
05) WAP which perform union of two sets.

In [13]:

```
Set 1 :  {1, 2, 3, 4, 5}
Set 2 :  {3, 4, 5, 6, 7}
Union :  {1, 2, 3, 4, 5, 6, 7}
```

B

01) WAP to convert binary tuple into integer.

$$2^0 \times 0 = 1 \times 0 = 0$$
$$2^1 \times 1 = 2 \times 1 = 2$$
$$2^2 \times 0 = 4 \times 0 = 0$$
$$2^3 \times 1 = 8 \times 1 = 8$$
$$2^4 \times 0 = 16 \times 0 = 0$$
$$2^5 \times 1 = 32 \times 1 = 32$$

Resultant decimal number= 0+2+0+8+0+32 = **42**

In [15]:

```
Original tuple: (1, 0, 1, 0, 1)
Integer: 21
```

02) WAP to count frequency in list by dictionary.

In [16]:

```
Original list :  [1, 2, 3, 4, 5, 1, 2, 3, 4, 5]
Dictionary :  {1: 2, 2: 2, 3: 2, 4: 2, 5: 2}
```

03) WAP to remove all the duplicate words from the list using dictionary.

In [24]:

```
List with duplicate elements: ['red', 'orange', 'yellow', 'green', 'blue', 'violet',
'red', 'orange', 'yellow', 'green', 'blue', 'violet']
List without duplicate elements: ['red', 'orange', 'yellow', 'green', 'blue', 'viole
t']
Dictionary with unique elements: {'red': 2, 'orange': 2, 'yellow': 2, 'green': 2, 'b
lue': 2, 'violet': 2}
```