Darshan UNIVERSITY

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Lab - 6 ¶

Tuples, dictionary, set

In [3]:
```
# cretae custom dictionary
my_dict = {}
n = 2
for i in range(n):
    a = input("Enter Key : ")
    my_dict[a] = input("Enter Value : ")
print(my_dict)
```

```
Enter Key : 3
Enter Value : 5
Enter Key : 2
Enter Value : 10
{'3': '5', '2': '10'}
```

In [1]:
```
# looping through dictionary
my_dict = {3: 'x', 5: 'a', 1: 'z', 4: 'b', 2: 'y'}
for i in my_dict:
    print("Key : ", i , " Value : ", my_dict[i] )
```

```
Key :  3  Value :  x
Key :  5  Value :  a
Key :  1  Value :  z
Key :  4  Value :  b
Key :  2  Value :  y
```

In [9]:
```
# finding a value in dictionary
my_dict = {3: 'x', 5: 'a', 1: 'z', 4: 'b', 2: 'y'}

def find_val(find_val):
    global my_dict
    for i in my_dict:
        if(my_dict[i] == find_val):
            print("Found val at key : ", i)
            break
    else:
        print("Val Not Found")

find_val('b')
find_val('f')
```

```
Found val at key :  4
Val Not Found
```

In [10]:
```
# check if a key is there or not in a dictionary
my_dict = {3: 'x', 5: 'a', 1: 'z', 4: 'b', 2: 'y'}

def find_key(find_key):
    global my_dict
    if find_key in my_dict:
        print("Key Exists")
    else:
        print("No key found")

find_key(2)
find_key('2')
```

```
Key Exists
No key found
```

A

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

In [14]:
```
my_dict={3:'a',5:'b',2:'d',1:'c'}
# sort by key
key=list(my_dict.keys())
key.sort()
sortDic={i:my_dict[i] for i in key}

# sort by val
val=list(my_dict.values())
val.sort()

newDict={}
for i in val:
    for j in my_dict:
        if i==my_dict[j]:
            newDict[j]=i

print("sort by key : ")
print(sortDic)
print("sort by value : ")
print(newDict)
```

```
sort by key :
{1: 'c', 2: 'd', 3: 'a', 5: 'b'}
sort by value :
{3: 'a', 5: 'b', 1: 'c', 2: 'd'}
```

02) WAP to merge two dictionaries given by user.

In [18]:
```
dict1={1:'a',3:'z',2:'c',4:'p'}
dict2={5:'o',7:'w',6:'x',8:'y'}
dict1.update(dict2)
print(dict1)
```

```
{1: 'a', 3: 'z', 2: 'c', 4: 'p', 5: 'o', 7: 'w', 6: 'x', 8: 'y'}
```

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

In [26]:
```
listOfTuple=[(1, 2, 3), (4, 5, 6), (7, 8, 9), (3, 6), (9, 12)]
k=int(input("Enter number : "))
result_tuple=[]

for tpl in listOfTuple:
    if all(j%k==0 for j in tpl):
        result_tuple.append(tpl)
print(result_tuple)
```

```
Enter number : 3
[(3, 6), (9, 12)]
```

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

In [29]:
```
listOfTuple=[(-1, 2, 3), (4, 5, 6), (7, 8, 9), (0, -1, -2), (-4, -5, -6), (
ans_tup=[]
for tup in listOfTuple:
    if all(tupElement>=0 for tupElement in tup):
        ans_tup.append(tup)
print(ans_tup)
```

```
[(4, 5, 6), (7, 8, 9)]
```

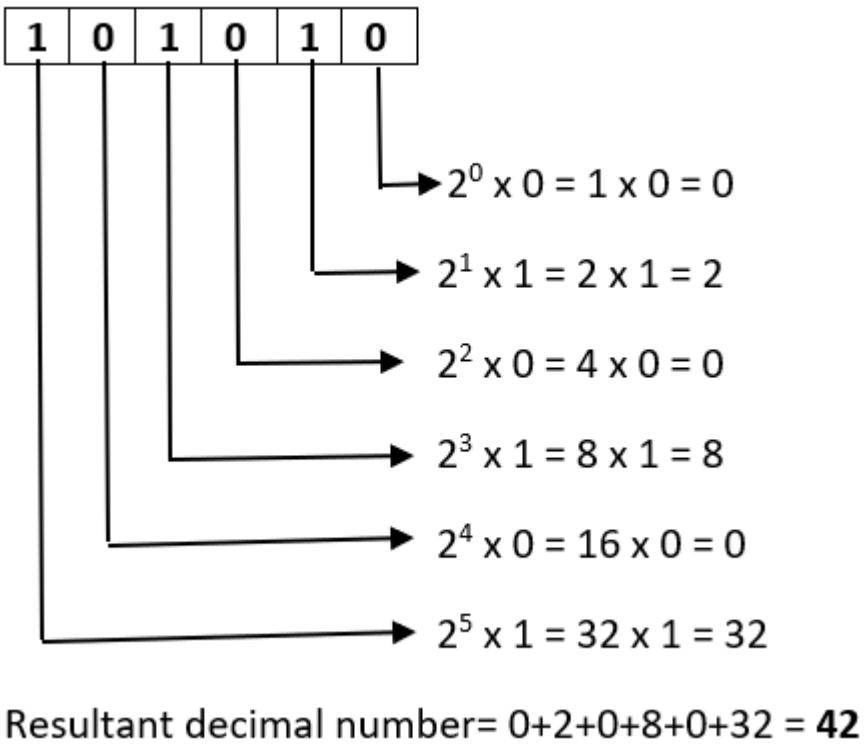
05) WAP which perform union of two sets.

In [3]:
```
set_1={1, 2, 3, 4, 5}
set_2={3, 4, 5, 6, 7, 8}
set_3=set_1.union(set_2)
print(set_3)
```

```
{1, 2, 3, 4, 5, 6, 7, 8}
```

B

01) WAP to convert binary tuple into integer.



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

In [2]:
```
n = 5
for i in range(5):
    print(n-i)
```

```
5
4
3
2
1
```

In [1]:
```
my_tup=(1, 0, 1, 0, 1)
sum=0
n=len(my_tup)-1
for i in range(len(my_tup)):
    sum+=((2**i)*my_tup[n])
    n=n-1
print(f"integet num is {sum}")
```

```
integet num is 21
```

02) WAP to count frequency in list by dictionary.

In [9]:
```
my_list=[1, 2, 3, 4, 5, 1, 2, 3, 4, 5, 6,10]
my_dict={}
for i in my_list:
    if i in my_dict:
        my_dict[i]+=1
    else:
        my_dict[i]=1
print(my_dict)
```

```
{1: 2, 2: 2, 3: 2, 4: 2, 5: 2, 6: 1, 10: 1}
```

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

In [16]:
```
my_list=['red', 'orange', 'yellow', 'green', 'blue', 'violet', 'red', 'orar
unique_elements={}
for i in my_list:
    if i in unique_elements:
        unique_elements[i]+=1
    else:
        unique_elements[i]=1
print(unique_elements)
```

```
{'red': 2, 'orange': 2, 'yellow': 2, 'green': 2, 'blue': 2, 'violet': 2,
'pink': 1}
```