Darshan UNIVERSITY

योगः कर्मसु कौशलम्

Python Programming - 2101CS405

Lab - 6

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Tuples, dictionary, set

A

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

In [5]:
```
d1=dict()
for i in range(5):
    i=int(input("Enter Key : "))
    d1[i]=input("Enter Value : ")

key=list(d1.keys())
key.sort()
k_d={}
for i in key:
    k_d[i]=d1[i]

a=list(d1.values())
a.sort()
k_dict={}
for i in a:
    for j in d1:
        if(i==d1[j]):
            k_dict[j]=i
print("Original Dictionary : ",d1)
print("Sorted dictionary by key : ",k_d)
print("Sorted dictionary by Value : ",k_dict)
```

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

02) WAP to merge two dictionaries given by user.

In [31]:
```
d1= {}
print("dictionary-1")
for i in range(3):
    i=input("Enter Key : ")
    d1[i]=int(input("Enter Value : "))

d2={}
print("dictionary-2")
for i in range(3):
    i=input("Enter Key : ")
    d2[i]=int(input("Enter Value : "))

d1.update(d2)
print("Dictionary-1 : ",d1)
print("Dictionary-2 : ",d2)
print("Merged Dictionary : ",d1)
```

```
dictionary-1

dictionary-2

Dictionary-1 :  {'a': 1, 'b': 2, 'c': 3, 'd': 4, 'e': 5, 'f': 6}
Dictionary-2 :  {'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 [57]:
```
t_list=[(1, 2, 3), (4, 5, 6), (7, 8, 9), (3, 6), (9, 12)]
k=int(input("Enter k : "))
res=[tup for tup in t_list if all(ele%k==0 for ele in tup)]
print(res)
```

```
[(3, 6), (9, 12)]
```

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

In [61]:
```
t_list=[(1, 2, 3), (4, 5, 6), (7, 8, 9), (0, -1, -2), (-4, -5, -6), (4, -5, 6)]
res=[tup for tup in t_list if all(ele>0 for ele in tup)]
print("Tuples with positive elements in list of tuples : ",res)
```

```
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 [63]:
```
s1={1, 2, 3, 4, 5}
s2={3, 4, 5, 6, 7}

print("Union : ",s1.union(s2))
```

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

B

01) WAP to convert binary tuple into integer.

In [16]:
```
Tuple=()
tmp=[]

for i in range(4):
    tmp.append(int(input("Enter no : ")))
Tuple=tuple(tmp)

sum=0
ind=0

for i in Tuple[::-1]:
    sum=sum+2**ind*i
    ind+=1
print("Original tuple :: ",Tuple)
print("Integer :: ",sum)
```

```
Original tuple ::  (1, 1, 1, 1)
Integer ::  15
```

02) WAP to count frequency in list by dictionary.

In [13]:
```
list=[]
dict2=dict()
n=int(input("Enter length of list : "))
list=[int(input("Enter Element : ")) for i in range(0,n)]
input_set=set(list)
count1=0
for i in input_set:
    dict2[i]=list.count(i)
print("List :: ",list)
print("Dictionary :: ",dict2)
```

```
List ::  [1, 1, 1, 2, 5]
3
Dictionary ::  {1: 3, 2: 1, 5: 1}
```

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

In [20]:
```
l3=[input("Enter Word : ") for i in range(10)]
l4=[]
for i in l3:
    d3[i]=l3.count(i)
    if i not in l4:
        l4.append(i)

print("Original List :: ",l3)
print("List without Duplicate Elements :: ",l4)
```

```
Original List ::  ['red', 'green', 'yellow', 'orange', 'blue', 'red', 'orange', 'yello
w', 'green', 'blue']
List without Duplicate Elements ::  ['red', 'green', 'yellow', 'orange', 'blue']
```