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Python Programming - 2101CS405 ¶

Lab - 6

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Tuples, dictionary, set

A

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

In [14]:
```
dic = dict()
n = int(input("Enter Size of Dict:"))

for i in range(0,n):
    key = input("Enter Key:")
    dic[key] = input("Enter Key Value:")


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

print(key_sort)

value = list(dic.values())
value.sort()
value_sort = {}
for i in value:
    for j in dic:
        if(i==dic[j]):
            value_sort[j]=i

print(value_sort)
```

```
Enter Size of Dict:2
Enter Key:3
Enter Key Value:f
Enter Key:1
Enter Key Value:c
{'1': 'c', '3': 'f'}
{'1': 'c', '3': 'f'}
```

02) WAP to merge two dictionaries given by user.

In [21]:
```
dic1 = dict()
dic2 = dict()
n1 = int(input("Enter 1st Dict size:"))

for i in range(0,n1):
    key = input("Enter Key:")
    dic1[key] = input("Enter Key Value:")

n2 = int(input("Enter 2nd Dict size:"))

for i in range(0,n2):
    key = input("Enter Key:")
    dic2[key] = input("Enter Key Value:")

ans = dic1 | dic2
print(ans)
finlans = dict()
key1 = list(dic1.keys())
key2 = list(dic2.keys())
for i in key1:
    finlans[i] = dic1[i]

for i in key2:
    finlans[i] = dic2[i]

print(dic1)
print(dic2)
print(finlans)
```

```
Enter 1st Dict size:2
Enter Key:e
Enter Key Value:3
Enter Key:s
Enter Key Value:8
Enter 2nd Dict size:2
Enter Key:c
Enter Key Value:5
Enter Key:d
Enter Key Value:7
{'e': '3', 's': '8', 'c': '5', 'd': '7'}
{'e': '3', 's': '8'}
{'c': '5', 'd': '7'}
{'e': '3', 's': '8', 'c': '5', 'd': '7'}
```

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

In [26]:
```
listoftup = [(2,4),(6,7,8,9,0)]
k = int(input("Enter K:"))

ans = []
for i in listoftup:
    for j in i:
        if(j%k!=0):
            break;
    else:
        ans.append(i)
print(ans)
```

```
Enter K:2
[(2, 4)]
```

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

In [1]:
```
listoftup = [(2,4,-1,-2,),(6,7,8,9,0),(-1,0),(2,5,3)]

ans = []
for i in listoftup:
    for j in i:
        if(j<0):
            break;
    else:
        ans.append(i)
print(ans)
```

```
[(6, 7, 8, 9, 0), (2, 5, 3)]
```

05) WAP which perform union of two sets.

In [40]:
```
set1 = {1, 2, 3, 4, 5}
set2 = {3, 4, 5, 6, 7}

ans = set()
ans = set1.union(set2)
print(ans)
```

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

B

01) WAP to convert binary tuple into integer.

In [16]:
```
import math
tup = (1, 0, 1, 0, 1)

ans = 0
rev_tup = tup[::-1]
for i in range(0, len(tup)):
    ans += ((2 ** i) * rev_tup[i])
print(ans)
```

```
21
```

02) WAP to count frequency in list by dictionary.

In [3]:
```
list = [1, 2, 3, 1, 2, 1, 4, 5, 4, 2, 3, 2]

ans = {}

for i in list:
    if i in ans:
        ans[i]+=1
    else:
        ans[i]=1
print(ans)
```

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

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

In [9]:
```
list = [1,2,3,4,2,4,1]

ans = {}

for i in list:
    if i not in ans:
        ans[i]=True
fin_ans = ans.keys()
print(fin_ans)
```

```
dict_keys([1, 2, 3, 4])
```

In [ ]:
```

```