

Python Programming - 2101CS405

Lab - 6

```
In [ ]: Name :- Vora Yagnik  
Enrollment No :- 23010101661
```

Tuples, dictionary, set

A

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

```
In [27]: d = {3: 'x', 5: 'a', 1: 'z', 4: 'b', 2: 'y'}  
print("Original dictionary: ",d)  
  
l = sorted(d.items(),key=lambda v: v[0])  
  
print("Sorted by Keys : ",dict(l))  
  
l = sorted(d.items(),key=lambda v: v[1])  
print("Sorted by Keys : ",dict(l))
```

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

02) WAP to merge two dictionaries given by user.

```
In [35]: a = {'a': 1, 'b': 2, 'c': 3}  
b = {'d': 4, 'e': 5, 'f': 6}  
  
print("First dictionary : ",a)
```

```
print("Second dictionary : ",b)
a.update(b)
print("Merged dictionary : ",a)
```

First dictionary : {'a': 1, 'b': 2, 'c': 3}

Second dictionary : {'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 [5]: a = [(1,2,3),(3,6,9),(9,8,7),(12,15,18),(8,5,2)]

b = [i for i in a if all(y%3 ==0 for y in i)]

print(b)
```

[(3, 6, 9), (12, 15, 18)]

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

```
In [7]: a = [(1,2,-3),(3,6,9),(-9,8,-7),(12,15,18),(-8,5,2)]

b = [i for i in a if all(y > 0 for y in i)]

print(b)
```

[(3, 6, 9), (12, 15, 18)]

05) WAP which perform union of two sets.

```
In [16]: a = {1,2,3,'a','b','c'}
b = {3,4,5,'c','d','e'}

c = a|b

print(c)
```

{1, 2, 3, 'd', 4, 5, 'e', 'a', 'b', 'c'}

B

01) WAP to convert binary tuple into integer.

```
In [20]: a = (1,1,1,1,1)

int_value = int(''.join(map(str, a)), 2)

print(int_value)
```

02) WAP to count frequency in list by dictionary.

```
In [30]: a = [1, 2, 3, 4, 5, 1, 2, 3, 4, 5]
d = {}

for i in a:
    d[i] = 0

for i in a:
    d[i] += 1

print(d)
```

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

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

```
In [31]: a = ['red', 'orange', 'yellow', 'green', 'blue', 'violet', 'red', 'orange', 'yellow']
b = []
d = {}
for i in a:
    if i not in b:
        b.append(i)
    d[i] = a.count(i)

print(b)
print(d)
```

```
['red', 'orange', 'yellow', 'green', 'blue', 'violet']
{'red': 2, 'orange': 2, 'yellow': 2, 'green': 2, 'blue': 2, 'violet': 2}
```