Darshan UNIVERSITY
योगः कर्मसु कौशलम्

Python Programming - 2301CS404

Lab - 7

Name: Jadeja Rudrarajsinh

Enrollment No: 23010101411

Roll No: 487

Set & Dictionary

01) WAP to iterate over a set.

In [2]:
```
n = input("Enter space separated values : ")
s = set(map(int,n.split()))
for i in s:
    print(i)
```

```
1
2
6
```

02) WAP to convert set into list, string and tuple.

In [4]:
```
n = input("Enter space separated values : ")
s = set(map(int,n.split()))
li = list(s)
st = str(s)
t = tuple(s)
print("List =",li)
print("String =",st)
print("Tuple =",t)
```

```
List = [1, 2, 4, 6]
String = {1, 2, 4, 6}
Tuple = (1, 2, 4, 6)
```

03) WAP to find Maximum and Minimum from a set.

In [6]:
```
n = input("Enter space separated values : ")
s = set(map(int,n.split()))
print("Maximum = ",max(s))
print("Minimum = ",min(s))
```

```
Maximum =  6
Minimum =  2
```

04) WAP to perform union of two sets.

In [8]:
```
n1 = input("Enter space separated values : ")
n2 = input("Enter space separated values : ")
s1 = set(map(int,n1.split()))
s2 = set(map(int,n2.split()))
print("Union using union() = ",s1.union(s2))
print("Union using | = ",s1|s2)
```

```
Union using union() =  {1, 2, 3, 4, 5, 6, 7, 9}
Union using | =  {1, 2, 3, 4, 5, 6, 7, 9}
```

05) WAP to check if two lists have at-least one element common.

In [12]:
```
l1 = input("Enter space separated values : ").split()
l2 = input("Enter space.separated values : ").split()
s1 = set(map(int,l1))
s2 = set(map(int,l2))
if s1.intersection(s2):
    print("Atleast one element is common")
else:
    print("No element is common")
```

```
Atleast one element is common
```

06) WAP to remove duplicates from list.

In [14]:
```
li = input("Enter space separated values : ").split()
li = map(int,li)
s = set(li)
li = list(s)
print("List = ",li)
```

```
List =  [1, 3, 5, 7]
```

07) WAP to find unique words in the given string.

In [16]:
```
words = input("Enter sentence : ").split()
word = set(i for i in words if words.count(i)==1)
print("Unique words = ",word)
```

```
Unique words =  {'Rudrarajsinh', 'Jadeja'}
```

08) WAP to remove common elements of set A & B from set A.

In [18]:
```
n1 = input("Enter space separated values : ")
n2 = input("Enter space separated values : ")
a = set(map(int,n1.split()))
b = set(map(int,n2.split()))
a.symmetric_difference_update(b)
print("a =",a)
```

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

09) WAP to check whether two given strings are anagram or not using set.

In [20]:
```
s1 = input("Enter a string ")
s2 = input("Enter a string ")
if len(s1)!=len(s2):
    print("Not Anagrams")
else:
    count1 = {}
    count2 = {}
    for i in s1:
        count1[i] = s1.count(i)
    for i in s2:
        count2[i] = s2.count(i)
    if count1==count2:
        print("Both are anagrams")
    else:
        print("Not Anagrams")
```

```
Both are anagrams
```

10) WAP to find common elements in three lists using set.

In [22]:
```
n1 = input("Enter space separated values : ")
n2 = input("Enter space separated values : ")
n3 = input("Enter space separated values : ")
l1 = map(int,n1.split())
l2 = map(int,n2.split())
l3 = map(int,n3.split())
s1 = set(l1)
s2 = set(l2)
s3 = set(l3)
print("Common elements = ",list(s1&s2&s3))
```

```
Common elements =  []
```

11) WAP to count number of vowels in given string using set.

In [26]:
```
n = input("Enter a string : ")
s = set("AEIOUaeiou")
count=0
for i in n:
    if i in s:
```

```
        count+=1
print("Total number of vowels = ",count)
```

```
Total number of vowels =  3
```

12) WAP to check if a given string is binary string or not.

In [32]:
```
n = input("Enter a string:")
s = set("01")
for i in n:
    if i not in s:
        print("Not a Binary String")
        break
else:
    print("Is a Binary String")
```

```
Not a Binary String
```

13) WAP to sort dictionary by key or value.

In [34]:
```
key = input("Enter keys in space-separated form: ").split()
key = map(int, key)
value = input("Enter values in space-separated form: ").split()
value = map(int, value)
d = {i: j for (i, j) in zip(key, value)}
sorted_by_key = {k: v for k, v in sorted(d.items())}
sorted_by_value = {k: v for k, v in sorted(d.items(), key=lambda item: item[1])}
print("Sort by Key =", sorted_by_key)
print("Sort by Value =", sorted_by_value)
```

```
Sort by Key = {2: 1, 4: 3, 6: 5, 8: 7}
Sort by Value = {2: 1, 4: 3, 6: 5, 8: 7}
```

14) WAP to find the sum of all items (values) in a dictionary given by user. (Assume: values are numeric)

In [36]:
```
key = input("Enter keys in space-separated form: ").split()
key = map(int, key)
value = input("Enter values in space-separated form: ").split()
value = map(int, value)
d = {i: j for (i, j) in zip(key, value)}
print("Sum of values = ",sum(d.values()))
```

```
Sum of values =  22
```

15) WAP to handle missing keys in dictionaries.

Example : Given, dict1 = {'a': 5, 'c': 8, 'e': 2}

if you look for key = 'd', the message given should be 'Key Not Found', otherwise print the value of 'd' in dict1.

In [40]:
```
key = input("Enter keys in space-separated form: ").split()
value = input("Enter values in space-separated form: ").split()
value = map(int, value)
dict1 = {i:j for (i,j) in zip(key,value)}
n = input("Enter the key : ")
```

```
if n not in dict1.keys():
    print("Key Not Found")
else:
    print("Value = ",dict1[n])
```

```
Value =  3
```

In [ ]: