Darshan UNIVERSITY

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Python Programming - 2301CS404

Lab - 7

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448-8th batch

Set & Dictionary

01) WAP to iterate over a set.

In [3]:
```
s1 = set()
n = int(input("Enter number of Element "))
for i in range(n):
    x = int(input("Enter number "))
    s1.add(x)
print(s1)
```

```
{1, 2, 4, 5, 9}
```

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

In [9]:
```
s1 = set()
n = int(input("Enter number of Element "))
for i in range(n):
    x = int(input("Enter number "))
    s1.add(x)
print(s1)

l1 = list(s1)
print(l1)
print(type(l1))

t1 = tuple(s1)
print(t1)
print(type(t1))

str1 = str(s1)
print(str1)
print(type(str1))
```

```
{17, 4, 13, 9}
[17, 4, 13, 9]
<class 'list'>
(17, 4, 13, 9)
<class 'tuple'>
{17, 4, 13, 9}
<class 'str'>
```

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

In [11]:
```
s1 = set()
n = int(input("Enter number of Element "))
for i in range(n):
    x = int(input("Enter number "))
```

```
    s1.add(x)
print(s1)
maximum = 0
for i in s1:
    if(i>maximum):
        maximum = i
print('Maximum element is ',maximum)
minimum = maximum
for i in s1:
    if(i < minimum):
        minimum = i
print('Minimum element is ',minimum)
```

```
{3, 4, 13, 6}
Maximum element is  13
Minimum element is  3
```

04) WAP to perform union of two sets.

In [15]:
```
s1 = set()
n1 = int(input("Enter number of Element "))
for i in range(n1):
    x1 = int(input("Enter number "))
    s1.add(x1)
print(s1)

s2 = set()
n2 = int(input("Enter number of Element "))
for i in range(n2):
    x2 = int(input("Enter number "))
    s2.add(x2)
print(s2)

print('Union of two set is ',s1.union(s2))
```

```
{1, 4}
{1, 2}
Union of two set is  {1, 2, 4}
```

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

In [21]:
```
list1 = [1, 2, 3]
list2 = [3, 4, 5]
common_elements = set(list1) & set(list2)
if common_elements:
    print("Common elements:", common_elements)
else:
    print("No common elements.")
```

```
Common elements: {3}
```

06) WAP to remove duplicates from list.

In [19]:
```
l1 = [1, 2, 2, 3, 4, 4, 5]
unique_list = list(set(l1))
print("List after removing duplicates:", unique_list)
```

```
List after removing duplicates: [1, 2, 3, 4, 5]
```

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

In [36]:
```
str1 = "hello world hello"
words = str1.split()
unique_words = set(words)
print("Unique words:", unique_words)
```

```
Unique words: {'hello', 'world'}
```

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

In [28]:
```
setA = {1, 2, 3,7 ,5,8,4}
setB = {3, 4, 5, 6}
setA = setA - (setA & setB)
print("Set A after removing common elements:", setA)
```

```
Set A after removing common elements: {8, 1, 2, 7}
```

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

In [54]:
```
str1 = input("Enter a String ")
```

```
str2 = input("Enter a String ")

if len(str1) != len(str2):
    print("Not Anagram")
else:
    dict1 = {}
    for char in str1:
        dict1[char] = dict1.get(char, 0) + 1

    dict2 = {}
    for char in str2:
        dict2[char] = dict2.get(char, 0) + 1

    if dict1 == dict2:
        print("String is Anagram")
    else:
        print("String is Not Anagram")
```

```
String is Anagram
```

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

In [62]:
```
list1 = [1, 2, 3,4,5]
list2 = [2, 3,7, 4,6]
list3 = [3, 4,5,10,2]
common_elements = set(list1) & set(list2) & set(list3)
print("Common elements:", common_elements)
```

```
Common elements: {2, 3, 4}
```

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

In [64]:
```
str1 = input("Enter a String: ")
count = 0;
for i in str1:
    if i in set('aeiouAEIOU'):
        count+=1
print('Number of vowel is:' , count)
```

```
Number of vowel is: 6
```

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

In [70]:
```
str1 = input("Enter a String ")
length = len(str1)
count = 0

for i in str1:
    if i in set('01'):
        count+=1
if count == length:
    print("yes",str1, "is binary string")
else:
    print("No",str1, "is not binary string")
```

```
yes 1101010 is binary string
```

13) WAP to sort dictionary by key or value.

In [ ]:
```

```

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

In [85]:
```
d1 = dict()
sum = 0
for i in range(5):
    temp = int(input("Enter number "))
    d1[i] = temp
print(d1)

l1 = d1.values()
for i in l1:
    sum += i
print(sum)
```

```
{0: 1, 1: 2, 2: 3, 3: 4, 4: 5}
15
```

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 [87]:
```
dict1 = {'a': 5, 'c': 8, 'e': 2}
key = input("Enter key ")

if key in dict1:
    print(dict1[key])
else:
    print("Key Not Found")
```

```
Key Not Found
```

In [ ]: