Darshan UNIVERSITY

योग: कर्मसु कौशलम्

Python Programming - 2301CS404

Lab - 6

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01) WAP to find sum of all the elements in a List.

In [16]:
```
l = list(map(int,input('Enter element: ').split()))
sum = 0
for i in l:
    sum += i

print(f'SUM: {sum}')
```

```
SUM: 15
```

02) WAP to find largest element in a List.

In [13]:
```
l = input('Enter element: ').split()
l = [int(i) for i in l]
large = 0

for i in l:
    if i > large:
        large = i

print('Large:',large)
```

```
Large: 18
```

03) WAP to find the length of a List.

In [19]:
```
l = list(map(int,input('Enter element: ').split()))
length = 0

for i in l:
```

```
    length += 1

print('Length:',length)
```

```
Length: 10
```

04) WAP to interchange first and last elements in a list.

In [21]:
```
l = list(map(int,input('Enter element: ').split()))

print('Old:',l)

l[0],l[-1] = l[-1],l[0]

print('New:',l)
```

```
Old: [1, 2, 3, 54, 23, 64, 1, -300, 19]
New: [19, 2, 3, 54, 23, 64, 1, -300, 1]
```

05) WAP to split the List into two parts and append the first part to the end.

In [25]:
```
l = list(map(int,input('Enter element: ').split()))
n = int(input('Enter position to part the list: '))

l1 = l[:n+1]
l2 = l[n+1:]

l = l2 + l1

print(l)
```

```
[5, 6, 1, 2, 3, 4]
```

06) WAP to interchange the elements on two positions entered by a user.

In [27]:
```
l = list(map(int,input('Enter element: ').split()))
i = int(input('Enter first position : '))
j = int(input('Enter second position : '))

print('Old:',l)

l[i],l[j] = l[j],l[i]

print('New:',l)
```

```
Old: [1, 20, 30, 43, 53, 128, 100]
New: [1, 128, 30, 43, 53, 20, 100]
```

07) WAP to reverse the list entered by user.

In [28]:
```
l = list(map(int,input('Enter element: ').split()))
print('Old:',l)
l.reverse()
print('New:',l)
```

```
Old: [1, 2, 3, 4, 5, 6]
New: [6, 5, 4, 3, 2, 1]
```

08) WAP to print even numbers in a list.

In [29]:
```
l = list(map(int,input('Enter element: ').split()))

even = [i for i in l if i%2 == 0]

print(even)
```

```
[2, 4, 2, 6]
```

09) WAP to count unique items in a list.

In [32]:
```
l = list(map(int,input('Enter element: ').split()))


count_unique = 0

for i in l:
    count = 0
    for j in l:
        if i == j:
            count += 1
    if count <=1:
        count_unique += 1
print(count_unique)
```

```
3
```

10) WAP to copy a list.

In [33]:
```
l = list(map(int,input('Enter element: ').split()))

new_l = l.copy()

print(f'New_list:{new_l}')
```

```
New_list:[1, 2, 3, 4, 5, 6, 7]
```

11) WAP to print all odd numbers in a given range.

In [35]:
```
lower = int(input('Enter Lower Range: '))
upper = int(input('Enter Upper Range: '))

odd = [i for i in range(lower,upper+1) if i%2 == 1]

print(odd)
```

```
[3, 5, 7]
```

12) WAP to count occurrences of an element in a list.

In [36]:
```
l = list(map(int,input('Enter element: ').split()))
n = int(input('Enter element to find occurrences of that: '))
count = 0
```

```
for i in l:
    if n == i:
        count += 1
print(f'Occurrences of {n} : {count}')
```

```
Occurrences of 1 : 4
```

13) WAP to find second largest number in a list.

In [47]:
```
l = list(map(int,input('Enter element: ').split()))
# l.sort()
first_largest = l[0]
second_largest = l[0]

for i in l:
    if i > first_largest :
        second_largest = first_largest
        first_largest = i
    elif i > second_largest and i != first_largest:
        second_largest = i
print(f'First Largest: {first_largest}, Second Largest: {second_largest}'
```

```
First Largest: 5, Second Largest: 4
```

14) WAP to extract elements with frequency greater than K.

In [49]:
```
l = list(map(int,input('Enter element: ').split()))
k = int(input('Enter K: '))

count_list = []
for i in l:
    frequency = 0
    for j in l:
        if i == j:
            frequency += 1
    if frequency > k and i not in count_list:
        count_list.append(i)
print(count_list)
```

```
[2, 3]
```

15) WAP to create a list of squared numbers from 0 to 9 with and without using List Comprehension.

In [50]:
```
without_l = []

with_l = [i**2 for i in range(10)]

for i in range(10):
    without_l.append(i**2)

print('Without:',without_l)
print('With:',with_l)
```

```
Without: [0, 1, 4, 9, 16, 25, 36, 49, 64, 81]
With: [0, 1, 4, 9, 16, 25, 36, 49, 64, 81]
```

16) WAP to create a new list (fruit whose name starts with 'b') from the list of fruits given by user.

In [55]:
```
l = input('Enter element: ').split()

new_list = []

for i in l:
    if i.startswith('b'):
        new_list.append(i)

print(new_list)
```

```
['banana']
```

17) WAP to create a list of common elements from given two lists.

In [57]:
```
l1 = list(map(int,input('Enter element of list 1: ').split()))
l2 = list(map(int,input('Enter element of list 2: ').split()))
ans_list = []
for i in l1:
    for j in l2:
        if i == j and i not in ans_list:
            ans_list.append(i)
print(ans_list)
```

```
[2, 3, 4]
```