

Python Programming - 2101CS405

Lab - 5

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list

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

```
In [4]: limit = int(input("Enter size of List : "))  
a = [int(input("Enter number")) for i in range(limit)]  
sum = 0  
for i in a:  
    sum += i  
  
print("Sum of all number is :",sum)
```

Sum of all number is : 15

02) WAP to find largest element in a List.

```
In [6]: large = a[0]  
for i in a:  
    if i>large:  
        large = i  
  
print("Largest Element of list is ",large)
```

Largest Element of list is 5

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

```
In [14]: half = int(len(a)/2)
         l1 = a[half:]+a[:half]
         print(l1)
```

[33, 88, 54, 9, 25, 23, 68, 54]

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

```
In [20]: a[0],a[-1] = a[-1],a[0]
         print(a)
```

[9, 23, 68, 54, 33, 88, 54, 25]

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

```
In [7]: first = int(input("Enter first position : "))
        second = int(input("Enter second position : "))
        a[first-1],a[second-1] = a[second-1],a[first-1]
        print(a)
```

[1, 4, 3, 2, 5]

06) WAP to reverses the list entered by user.

```
In [11]: a = a[::-1]
         # a.reverse()
         print(a)
```

[5, 2, 3, 4, 1]

07) Python program to remove multiple elements from a list using list comprehension

```
In [32]: remove = [25,54,88]
         new_list = [i for i in a if i not in remove]
         print(new_list)
```

[23, 33, 68, 9]

08) Create a list from the specified start to end index of another list.

```
In [34]: start = int(input("Enter start index : "))
         end = int(input("Enter end index : "))

         new_list = a[start:end+1]

         print(new_list)
```

[23, 88, 33, 54, 68]

09) Input comma separated elements, convert into list and print.

```
In [35]: str = input("Enter Comma separated Elements : ")

a = str.split(",")

print(a)
```

```
['1', '2', '3', '4', '5', '6', '7', '8']
```

01) WAP to count Even and Odd numbers in a List.

```
In [40]: odd=0
even=0
for i in a:
    i = int(i)
    if i%2==0:
        even+=1
    else:
        odd+=1

print("Odd elemnts count : ",odd)
print("Even elemnts count : ",even)
```

```
Odd elemnts count : 4
Even elemnts count : 4
```

02) Python program to find N largest and smallest elements from the list

```
In [60]: new_list = sorted(a)
N = int(input("Enter N : "))
print("First ",N," largestst :",new_list[:-N-1:-1]) #temp[len(temp)-n:][::-1]
print("First ",N," smallest :",new_list[0:N])
```

```
First 2 largestst : ['8', '7']
First 2 smallest : ['1', '2']
```

03) WAP to print duplicates from a list of integers

```
In [13]: a = [1,2,2,3,3,4,5,6,7,7,8,9,9,9,0]
u_element = set()
d_element = set()

for i in a:
    if i in u_element:
        d_element.add(i)
    else:
        u_element.add(i)

print("Duplicate values : ",list(d_element))
```

Duplicate values : [9, 2, 3, 7]