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Python Programming - 2101CS405

Lab - 5

list

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

```
In [5]: a = int(input("Enter Size of List:"))
list = []
sum = 0
for i in range(0,a):
    x = int(input("Enter Element:"));
    list.append(x)
    sum += list[i]
print(f"ans is {sum}")
```

```
Enter Size of List:5
Enter Element:1
Enter Element:2
Enter Element:4
Enter Element:3
Enter Element:5
ans is 15
```

02) WAP to find largest element in a List.

```
In [12]: a = int(input("Enter Size of List:"))
list = []
max = 0
for i in range(0,a):
    x = int(input("Enter Element:"))
    list.append(x)
    if max <= list[i]:
        max = list[i]
max
```

```
Enter Size of List:5
Enter Element:9
Enter Element:1
Enter Element:7
Enter Element:3
Enter Element:2
```

Out[12]: 9

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

```
In [24]: n = int(input("Enter Size of List:"))
list = []
for i in range(0,n):
    x = int(input("Enter Element:"))
    list.append(x)
newList = list[:len(list)//2:]
newList2 = list[len(list)//2:]
newList2 + newList
```

```
Enter Size of List:5
Enter Element:4
Enter Element:1
Enter Element:2
Enter Element:4
Enter Element:1
```

```
Out[24]: [2, 4, 1, 4, 1]
```

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

```
In [26]: n = int(input("Enter an Element:"))
list = []
for i in range(0,n):
    x = int(input("Enter Element:"))
    list.append(x)
temp = list[0]
list[0] = list[-1]
list[-1] = temp
list
```

```
Enter an Element:5
Enter Element:1
Enter Element:4
Enter Element:2
Enter Element:3
Enter Element:8
```

```
Out[26]: [8, 4, 2, 3, 1]
```

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

```
In [30]: n = int(input("Enter Size of List:"))
list = []
for i in range(0,n):
    # x = int(input("Enter Element:"))
    list.append(int(input("Enter element:")))
a = int(input("Enter two position of the Element u want to Replace\n1.First Position:"))
b = int(input("2.Second Position"))
temp = list[a-1]
list[a-1] = list[b-1]
list[b-1] = temp
list
```

```
Enter Size of List:5
Enter element:1
Enter element:2
Enter element:3
Enter element:4
Enter element:5
Enter two position of the Element u want to Replace
1.First Position:5
2.Second Position1
```

```
Out[30]: [5, 2, 3, 4, 1]
```

06) WAP to reverses the list entered by user.

```
In [33]: n = int(input("Enter Size of List:"))
list = []
for i in range(0,n):
    list.append(int(input("enter Element:")))
nList = list[::-1]
nList
```

```
Enter Size of List:5
enter Element:1
enter Element:2
enter Element:3
enter Element:4
enter Element:5
```

```
Out[33]: [5, 4, 3, 2, 1]
```

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

```
In [52]: n = int(input("Enter Size Of List:"))
list ,nlist =[],[]
for i in range(0,n):
    list.append(int(input("Enter Element:")))
nlist = [ i for i if i not in nlist]
nlist
```

```
File "/tmp/ipykernel_3048/685734921.py", line 5
    nlist = [ i for i if i not in nlist]
                                   ^
```

```
SyntaxError: invalid syntax
```

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

```
In [57]: n = int(input("Enter Size Of List:"))
l1 = []
for i in range(0,n):
    l1.append(int(input("Enter Element:")))
a = int(input("Enter Start index:"))
b = int(input("Enter End index:"))
n11 = l1[a:b:1]
n11
```

```
Enter Size Of List:10
Enter Element:1
Enter Element:2
Enter Element:3
Enter Element:4
Enter Element:5
Enter Element:6
Enter Element:7
Enter Element:8
Enter Element:9
Enter Element:10
Enter Start index:2
Enter End index:7
```

```
Out[57]: [3, 4, 5, 6, 7]
```

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

```
In [62]: n = input("Enter elements using coma separated:")
l1 = n.split(",")
l1
```

```
Enter elements using coma separated:devika,khunt
```

```
Out[62]: ['devika', 'khunt']
```

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

```
In [64]: n = int(input("Enter Element:"))
l1 = []
even, odd = 0, 0
for i in range(0, n):
    l1.append(int(input("Enter Element:")))
    if l1[i] % 2 == 0:
        even += 1
    else:
        odd += 1
print(f"Odd no is: {odd} and Even no is: {even}")
```

```
Enter Element:5
Enter Element:1
Enter Element:2
Enter Element:3
Enter Element:4
Enter Element:5
Odd no is:3 and Even no is:2
```

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

```
In [75]: n = int(input("Enter Size of List:"))
l1 = []
for i in range(0, n):
    l1.append(int(input("Enter Element:")))
l1.sort()
a = int(input("Enter no u want Largest and Smallest:"))
small = l1[:a]
large = l1[a:-1]
print(f"small = {small} and large = {large}")
```

```
Enter Size of List:5
Enter Element:6
Enter Element:3
Enter Element:2
Enter Element:1
Enter Element:4
Enter no u want Largest and Smallest:2
small = [1, 2] and large = [6, 4]
```

03) WAP to print duplicates from a list of integers

```
In [82]: n = int(input("Enter Size of Element:"))
l1, l2 = [], []
for i in range(0, n):
    l1.append(int(input("Enter Element:")))
for i in l1:
    if i not in l2:
        l2.append(i)
l2
```

```
Enter Size of Element:10
Enter Element:1
Enter Element:2
Enter Element:3
Enter Element:4
Enter Element:5
Enter Element:6
Enter Element:1
Enter Element:2
Enter Element:3
Enter Element:4
```

```
Out[82]: [1, 2, 3, 4, 5, 6]
```

```
In [ ]:
```