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Python Programming - 2101CS405

Lab - 5

list

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

In [4]:

```
list = []
sum = 0

n = int(input('Enter the number of elements : '))

for i in range(n):
    num = int(input('Enter the number : '))
    list.append(num)

for i in list:
    sum = sum + i

print('sum of elements is ',sum)
```

```
Enter the number of elements : 4
Enter the number : 1
Enter the number : 2
Enter the number : 3
Enter the number : 4
sum of elements is 10
```

02) WAP to find largest element in a List.

In [6]:

```
list = []
sum = 0

n = int(input('Enter the number of elements : '))

for i in range(n):
    num = int(input('Enter the number : '))
    list.append(num)

print('Largest number from list is ',max(list))
```

Enter the number of elements : 4
Enter the number : 100
Enter the number : 4557
Enter the number : 85
Enter the number : 66
Largest number from list is 4557

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

In [11]:

```
list = []
sum = 0

n = int(input('Enter the number of elements : '))

for i in range(n):
    num = int(input('Enter the number : '))
    list.append(num)

fList = list[0:int(len(list)/2)];
sList = list[int(len(list)/2):]

sList += fList

print(sList)
```

Enter the number of elements : 4
Enter the number : 1
Enter the number : 2
Enter the number : 3
Enter the number : 4
[3, 4, 1, 2]

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

In [13]:

```
n = int(input("Enter the Size of List : "))
list = [(input("Enter the value : ")) for i in range(0,n)]

lEl = len(list)-1

list[0] , list[-1] = list[-1] , list[0]

print(list)
```

```
Enter the Size of List : 5
Enter the value : 1
Enter the value : 2
Enter the value : 3
Enter the value : 4
Enter the value : 5
['5', '2', '3', '4', '1']
```

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

In [14]:

```
n = int(input("Enter the Size of List : "))
list = [(input("Enter the value : ")) for i in range(0,n)]

lEl = len(list)-1

p1 = int(input('Enter first position : '))
p2 = int(input('Enter second position : '))

list[p1] , list[p2] = list[p2] , list[p1]

print(list)
```

```
Enter the Size of List : 6
Enter the value : 1
Enter the value : 2
Enter the value : 3
Enter the value : 4
Enter the value : 45
Enter the value : 6
Enter first position : 3
Enter second position : 5
['1', '2', '3', '6', '45', '4']
```

06) WAP to reverses the list entered by user.

In [17]:

```
n = int(input("Enter the Size of List : "))
list = [(input("Enter the value : ")) for i in range(0,n)]

list.reverse()

print(list)
```

Enter the Size of List : 4
Enter the value : 1
Enter the value : 2
Enter the value : 3
Enter the value : 4
['4', '3', '2', '1']

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

In [29]:

```
n = int(input("Enter the Size of List : "))
list = [(input("Enter the value : ")) for i in range(0,n)]

print('\n',list)

a = int(input(("Enter the number of element you want to delete : ")))

rElement = [(input("Enter the value : ")) for i in range(0,a)]

for i in range(0,a):
    list.remove(rElement[i]);

print ('\n', list)
```

Enter the Size of List : 8
Enter the value : 1
Enter the value : 2
Enter the value : 3
Enter the value : 4
Enter the value : 5
Enter the value : 6
Enter the value : 7
Enter the value : 8

['1', '2', '3', '4', '5', '6', '7', '8']
Enter the number of element you want to delete : 2
Enter the value : 2
Enter the value : 6

['1', '3', '4', '5', '7', '8']

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

In [20]:

```
n = int(input("Enter the Size of List : "))
list = [(input("Enter the value : ")) for i in range(0,n)]

sIndex = int(input('Enter starting Index : '))
eIndex = int(input('Enter ending Index : '))

nList = list[sIndex:(eIndex+1)]

print(nList)
```

```
Enter the Size of List : 6
Enter the value : 1
Enter the value : 2
Enter the value : 3
Enter the value : 4
Enter the value : 5
Enter the value : 6
Enter starting Index : 2
Enter ending Index : 5
['3', '4', '5', '6']
```

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

In [22]:

```
string = input("Enter the comma separated elements : ")
list = string.split(",")

print(list)
```

```
Enter the comma separated elements : 1,2,3,4,5,6,7
['1', '2', '3', '4', '5', '6', '7']
```

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

In [25]:

```
n = int(input("Enter the Size of List : "));
list = [int((input("Enter the value : "))) for i in range(0,n)];

evenNum = 0;
oddNum = 0;

for i in list:
    if i%2 == 0:
        evenNum += 1;
    else:
        oddNum += 1;

print('count of odd : ',oddNum)
print('count of even : ',evenNum)
```

```
Enter the Size of List : 6
Enter the value : 1
Enter the value : 2
Enter the value : 3
Enter the value : 4
Enter the value : 5
Enter the value : 6
count of odd : 3
count of even : 3
```

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

In [26]:

```
n = int(input("Enter the Size of List : "));
list = [int((input("Enter the value : "))) for i in range(0,n)];

num = int(input("How many Number you want to find Min & Max in List : "));

list.sort();

small = list[0:(num)];
large = list[(-num) : ];

print("Smallest Number : ",small)
print("Largest Number : ",large)
```

```
Enter the Size of List : 6
Enter the value : 1
Enter the value : 2
Enter the value : 3
Enter the value : 4
Enter the value : 5
Enter the value : 6
How many Number you want to find Min & Max in List : 3
Smallest Number : [1, 2, 3]
Largest Number : [4, 5, 6]
```

03) WAP to print duplicates from a list of integers

In [28]:

```
n = int(input("Enter the Size of List : "));
list = [int((input("Enter the value : "))) for i in range(0,n)];

duplicate = [];
for i in list:
    if list.count(i) > 1:
        duplicate.append(i);

print("Duplicate Elements = ", set(duplicate));
```

```
Enter the Size of List : 8
Enter the value : 56
Enter the value : 233
Enter the value : 56
Enter the value : 211
Enter the value : 56
Enter the value : 211
Enter the value : 56
Enter the value : 3
Duplicate Elements = {56, 211}
```

In []:

In []: