



Python Programming - 2301CS404

Lab - 6

Roll No. : 369

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

```
In [5]: l = map(int, input("enter a list").split(" "))
total = 0
for i in l:
    total = total + i
print (total)

21
```

02) WAP to find largest element in a List.

```
In [7]: l = list(map(int, input("enter a list").split(" ")))
maxEle = l[0]
for i in l:
    if i > maxEle:
        maxEle = i
print(maxEle)

3225
```

03) WAP to find the length of a List.

```
In [8]: l = list(map(int, input("enter a list").split(" ")))
listLen = len(l)
print (listLen)

8
```

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

```
In [11]: l = list(map(int, input("enter a list").split(" ")))
temp = l[0]
l[0] = l[-1]
l[-1] = temp

print(l)

[74576, 23, 34346, 45, 1]
```

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

```
In [15]: l = list(map(int, input("enter a list").split(" ")))
splitIdx = len(l) // 2
first = l[:splitIdx]
second = l[splitIdx:]
l2 = second + first
print(l2)

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

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

```
In [16]: l = list(map(int, input("enter a list").split(" ")))
p1 = int(input("enter first position"))
p2 = int(input("enter second position"))

temp = l[p1]
l[p1] = l[p2]
l[p2] = temp

print(l)

[1, 2, 5, 5, 622, 4, 2, 123, 52]
```

07) WAP to reverse the list entered by user.

```
In [17]: l = list(map(int, input("enter a list").split(" ")))
l.reverse()
print(l)

[23, 25, 5, 62, 5, 3, 1]
```

08) WAP to print even numbers in a list.

```
In [18]: l = list(map(int, input("enter a list").split(" ")))
ans = [i for i in l if i%2==0]
print(ans)

[2, 4, 22, 36, 8, 6]
```

09) WAP to count unique items in a list.

```
In [19]: l = list(map(int, input("enter a list").split(" ")))
unique_items = []

for item in l:
    if item not in unique_items:
        unique_items.append(item)

print(f"Unique items count: {len(unique_items)}")

Unique items count: 4
```

10) WAP to copy a list.

```
In [20]: l = list(map(int, input("enter a list").split(" ")))
l1 = l.copy()
print(l1)

[1, 2, 3, 2, 2, 3, 2, 46, 4]
```

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

```
In [21]: l = list(map(int, input("enter a list").split(" ")))
p1 = int(input("enter first position"))
p2 = int(input("enter second position"))

for number in range(p1, p2):
    if number % 2 != 0:
        print(number)

3
5
```

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

```
In [24]: l = list(map(int, input("enter a list").split(" ")))
element_to_count = 1

count = 0
for item in l:
    if item == element_to_count:
        count += 1

print(count)

4
```

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

```
In [31]: user_input = input("Enter a list of numbers separated by spaces: ").split()

if not user_input:
    print("The list is empty.")
else:
    l = [int(x) for x in user_input]

    largest = second_largest = float('-inf')

    for num in l:
        if num > largest:
            second_largest = largest
            largest = num
        elif num > second_largest and num != largest:
            second_largest = num

    if second_largest == float('-inf'): #-inf is negative infinity
        print("There is no second largest number (all numbers might be the same).")
    else:
        print("The second largest number is:", second_largest)

The second largest number is: 3
```

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

```
In [34]: l = list(map(int, input("enter a list").split(" ")))
k = int(input("enter element"))

l2=[i for i in l if l.count(i) > k]
l3 = list(set(l2))
print(l3)

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

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

```
In [35]: l = list(map(int, input("enter a list").split(" ")))
l2=[]

for i in l:
    l2.append(i**2)
print(l2)

[1, 4, 9, 16, 25]
```

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

```
In [36]: fruit = input("enter a fruit : ").split()

result = []
for i in fruit:
    if i.lower().startswith('b'):
        result.append(i)
print(result)

['banana,', 'barries']
```

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

```
In [41]: l1 = list(map(int, input("Enter first list : ").split(" ")))
l2 = list(map(int, input("Enter second list : ").split(" ")))

common = []
for i in l1:
    if i in l2 and i not in common:
        common.append(i)

print("Common elements:", common)

Common elements: [1, 2]
```