Python Programming - 2301CS404

Lab - 5

23010101161 - Smit Maru - 260

List

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

In [14]:
```
a = []
while True:
    number = int(input("Enter the number and if you enter 0 then out from the list"
    if number != 0:
        a.append(number)
    elif(number == 0):
        break
print(a)
sum = 0
for i in a:
    sum += i
print(sum)
```

```
[1, 2, 1, 2]
6
```

02) WAP to find largest element in a List.

In [22]:
```
a = []
while True:
    number = int(input("Enter the number and if you enter 0 then out from the list"
    if number != 0:
        a.append(number)
    elif(number == 0):
        break
large = a[0]
```

```
for i in a:
    if i >= large:
        large = i
print(large)
```

```
32
```

03) WAP to find the length of a List.

In [23]:
```
a = []
while True:
    number = int(input("Enter the number and if you enter 0 then out from the list"
    if number != 0:
        a.append(number)
    elif(number == 0):
        break
print(len(a))
```

```
3
```

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

In [28]:
```
a = []
while True:
    number = int(input("Enter the number and if you enter 0 then out from the list"
    if number != 0:
        a.append(number)
    elif(number == 0):
        break
temp = a[0]
a[0] = a[-1]
a[-1] = temp
print(a)
```

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

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

In [52]:
```
a = [1,2,3,4,5]
b=[]
b = a[(len(a)//2):]+a[:(len(a)//2) ]
print(b)
```

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

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

In [53]:
```
a = [1,2,3,4,5]
n1 = int(input("Enter the number 1"))
n2 = int(input("Enter the number 2"))
temp = a[n1]
```

```
a[n1] = a[n2]
a[n2] = temp
print(a)
```

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

07) WAP to reverse the list entered by user.

In [54]:
```
l = [1,2,3,4,5,6]
print(l[::-1])
```

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

08) WAP to print even numbers in a list.

In [55]:
```
l = [1,2,3,4,5,6]
for i in l:
    if i%2 == 0:
        print(i)
```

```
2
4
6
```

09) WAP to count unique items in a list.

In [65]:
```
l = [1,2,5,3,4,5,6,6]
a = {i for i in l}
print(len(a))
```

```
6
```

10) WAP to copy a list.

In [66]:
```
l = [1,2,3,4,5,6]
l2 = l.copy()
print(l2)
```

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

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

In [68]:
```
n = int(input("Enter tye range number"))
for i in range(0,n+1):
    if i%2 != 0:
        print(i)
```

```
1
3
5
```

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

In [69]:
```
l = [1,2,5,3,4,5,6,6]
print(l.count(6))
```

```
2
```

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

In [70]:
```
l = [1,2,3,4,5,6]
l.sort()
print(l[-2])
```

```
5
```

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

In [1]:
```
from collections import Counter
l1 = [1, 2, 2, 3, 3, 3, 4, 4, 4, 4, 5]
k = int(input("Enter the frequency: "))
freq_counter = Counter(l1) #create a dictionary
l = [i for i, count in freq_counter.items() if count >= k]
print(l)
```

```
[]
```

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

In [72]:
```
a = []
for i in range(0,10):
    a.append(i*i)
print(a)
```

```
[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 [8]:
```
a = []
ans = []
while True:
    s = (input("Enter the number and if you enter 0 then out from the list"))
    if s != '0':
        a.append(s)
    elif(s == '0'):
        break
for i in a:
    if i[0] == 'b' or i[0] == 'B':
        ans.append(i)
print(ans)
```

```
['baana', 'ba']
```

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

In [4]:
```
list1 = [1, 2, 3, 4]
list2 = [3, 4, 5, 6]

intersection = set(list1).intersection(list2)
print(intersection)
```

```
{3, 4}
```