Darshan UNIVERSITY

योग: कर्मसु कौशलम्

Python Programming - 2301CS404

Lab - 5

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List

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

In [2]:
```
li = [1,2,3,4,5]
sum = 0;
for i in li:
    sum+=i
print(sum)
```

```
15
```

02) WAP to find largest element in a List.

In [14]:
```
li=[]
size = int(input("Enter List size:"))
for i in range(size):
    num = int(input("Enter Element"))
    li.append(num)
print(li)
max=0
for i in li:
    if(max<i):
```

```
        max = i
print(max)
```

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

03) WAP to find the length of a List.

In [16]:
```
li=[]
size = int(input("Enter List size:"))
count=0
for i in range(size):
    num = int(input("Enter Element"))
    li.append(num)
    count+=1
print("length: "count)
```

```
5
```

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

In [21]:
```
li=[1,2,3,4,5]
print(li)
temp=0
temp = li[0]
li[0] = li[-1]
li[-1] = temp
print(li)
```

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

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

In [32]:
```
li = [1,2,3,4,5,6]
l1=[]
for i in range(len(li)//2,len(li)):
    l1.append(li[i])
for i in range(len(li)//2):
    l1.append(li[i])
print(l1)
```

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

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

In [35]:
```
li = [1,2,3,4,5,6,7,8,9,10]
pos1 = int(input("Enter position1: "))
pos2 = int(input("Enter position2: "))
print(li)
temp=0;
temp = li[pos1-1]
li[pos1-1] = li[pos2-1]
li[pos2-1] = temp
print(li)
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
[1, 8, 3, 4, 5, 6, 7, 2, 9, 10]
```

07) WAP to reverse the list entered by user.

In [40]:
```
li=[]
size = int(input("Enter List size:"))
count=0
for i in range(size):
    num = int(input("Enter Element"))
    li.append(num)
print(li)
li.reverse()
li
```

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

Out[40]: [3, 2, 1]

08) WAP to print even numbers in a list.

In [50]:
```
li = [1,2,3,4,5,6,7,8,9,10]
for i in li:
    if i%2==0:
        print(i)
```

```
2
4
6
8
10
```

09) WAP to count unique items in a list.

In [49]:
```
li=[1,1,2,2,3,3,4,4,5,5]
l1=[]
for i in li:
    if i not in l1:
        count+=1
        l1.append(i)
print(count)
```

```
5
```

10) WAP to copy a list.

In [52]:
```
l1 = [1,2,3,4,5]
l2 = l1.copy()
print(l2)
```

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

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

In [54]:
```
li=[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15]
r1 = int(input("Enter Range start :"))
r2 = int(input("Enter Range start :"))
```

```
for i in range(r1,r2):
    if li[i]%2!=0:
        print(li[i])
```

```
5
7
```

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

In [55]:
```
li=[1,1,2,2,3,3,4,4,5,5]
num = int(input("Enter Num:"))
li.count(num)
```

Out[55]: 2

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

In [59]:
```
li=[12,42,1,78,23,8,23,567,74,9,23,65]
li.sort()
li[-2]
```

Out[59]: 78

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

In [9]:
```
li = [1,1,2,2,3,1,5,2,3,4,2,1,5,7,8,1,2,1,3,4,4,5,5,6,6,7]
result = []
k = int(input("Enter Key: "))
for i in li:
    if (li.count(i)>k and i not in result):
        result.append(i);
print("Element which have greater feq than ",k," are:",result)
```

```
Element which have greater feq than  4  are: [1, 2]
```

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

In [11]:
```
#with List Comprehension
li1 = [i**2 for i in range(0,10)]
print(li1)
#without List Comprehension
li2 = []
for i in range(0,10):
    li2.append(i**2)
print(li2)
```

```
[0, 1, 4, 9, 16, 25, 36, 49, 64, 81]
[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 [14]:
```
fruits = []
b_fruits=[]
```

```
f=""
num = int(input("Enter range:"))
for i in range(num):
    f = input("Enter fruit");
    fruits.append(f)
for i in fruits:
    if (i.lower().startswith('b')):
        b_fruits.append(i)
print(b_fruits)
```

```
['banana', 'berry']
```

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

In [20]:
```
li1 = [1,2,3,4,5,6,7,8,9]
li2 = [2,3,4,5,23,43,45,56,65,6]
li = []
for i in li1:
    for j in li2:
        if i==j and i not in li:
            li.append(i)
print(li)
```

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