Darshan UNIVERSITY
योग: कर्मसु कौशलम्

Python Programming - 2301CS404

Lab - 6

Roll No. : 418

Name : Bhavik Parmar A.

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

In [5]:
```
n = int(input("Enter number OF Elements: "))
lt = []
for i in range(n):
    x = int(input("Enter Element: "))
    lt.append(x)

sum = 0
for i in lt:
    sum += i
print("List =", lt)
print("Sum OF All Element :", sum)
```

```
List = [10, 20, 30, 40, 50]
Sum OF All Element : 150
```

02) WAP to find largest element in a List.

In [63]:
```
lt = [12, 45, 7, 89, 30]
largest = lt[0]
for i in lt:
    if i > largest:
        largest = i

print("List : ", lt)
print("Largest Element in List :", largest)
```

```
List :  [10, 20, 30, 40, 50]
Largest Element in List : 50
```

03) WAP to find the length of a List.

In [64]:
```
lt = [10, 20, 30, 40, 50, 60]
print("List : ", lt)
print("Length OF List :", len(lt))
```

```
List :  [10, 20, 30, 40, 50, 60]
Length OF List : 6
```

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

In [65]:
```
# Tuple Swapping
lt = [10, 20, 30, 40, 50]
print("Original List : ", lt)
lt[0], lt[-1] = lt[-1], lt[0]
print("InterChange List : ", lt)
```

```
Original List :  [10, 20, 30, 40, 50]
InterChange List :  [50, 20, 30, 40, 10]
```

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

In [66]:
```
lt = [10, 20, 30, 40, 50, 60]
print("Original List : ", lt)
mid = len(lt) // 2
firstpart = lt[mid:]
secondpart = lt[:mid]
res = firstpart + secondpart
print("List : ", res)
```

```
Original List :  [10, 20, 30, 40, 50, 60]
List :  [40, 50, 60, 10, 20, 30]
```

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

In [1]:
```
lt = [10, 20, 30, 40, 50, 60]
print("Original List : ", lt)
pos1 = int(input("Enter Position1 To interChange Element (0 Based):"))
pos2 = int(input("Enter Position2 To interChange Element (0 Based):"))
lt[pos1], lt[pos2] = lt[pos2], lt[pos1]
print("InterChange List : ", lt)
```

```
Original List :  [10, 20, 30, 40, 50, 60]
InterChange List :  [10, 20, 50, 40, 30, 60]
```

07) WAP to reverse the list entered by user.

In [68]:
```
lt = [10, 20, 30, 40, 50, 60]
print("Original List : ", lt)
print("Reverse List : ", list(reversed(lt)))
# OR rev = lst[::-1]
```

```
Original List :  [10, 20, 30, 40, 50, 60]
Reverse List :  [60, 50, 40, 30, 20, 10]
```

08) WAP to print even numbers in a list.

In [2]:
```
lt = [10, 15, 20, 25, 30, 35, 40, 45, 50]
res = []
for i in lt:
    if i % 2 == 0:
        res.append(i)
print("Original List : ", lt)
print("Even Number List :", res)
# OR even = [i for i in lst if i % 2 == 0]
```

```
Original List :  [10, 15, 20, 25, 30, 35, 40, 45, 50]
Even Number List : [10, 20, 30, 40, 50]
```

09) WAP to count unique items in a list.

In [3]:
```
lst = [10, 20, 10, 30, 20, 40, 50, 40]
unique = []
for i in lst:
    if i not in unique:
        unique.append(i)

print("List =", lst)
print("Unique items =", unique)
print("Count of unique items =", len(unique))
```

```
List = [10, 20, 10, 30, 20, 40, 50, 40]
Unique items = [10, 20, 30, 40, 50]
Count of unique items = 5
```

10) WAP to copy a list.

In [74]:
```
lt1 = [10, 20, 30, 40, 50, 60]
lt2 = lt1.copy()
print("Original List : ", lt1)
print("Copy List : ", lt2)

# OR
# lst1 = [10, 20, 30, 40, 50]
# lst2 = []

# for i in lst1:
#     lst2.append(i)

# OR
# original_list = [1, 2, 3]
# copied_list = original_list[:]

# OR
# lst2 = lst1   # ❌ Not a copy
```

```
Original List :  [10, 20, 30, 40, 50, 60]
Copy List :  [10, 20, 30, 40, 50, 60]
```

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

In [4]:
```
pos1 = int(input("Enter Starting Range :"))
pos2 = int(input("Enter Ending Range :"))
oddLt = []
for i in range(pos1, pos2):
```

```
    if i % 2 != 0:
        oddLt.append(i)
print("Odd Number List :", oddLt)
```

```
Odd Number List : [1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33,
35, 37, 39, 41, 43, 45, 47, 49]
```

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

In [5]:
```
lt = [10, 10, 20, 20, 30, 30, 30, 40, 50]
key = int(input("Enter Element :"))
count = 0
for i in lt:
    if key == i:
        count += 1
print("Original List : ", lt)
print("Element =", key)
print("Occurrences =", count)
```

```
Original List :  [10, 10, 20, 20, 30, 30, 30, 40, 50]
Element = 30
Occurrences = 3
```

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

In [78]:
```
lt = [10, 20, 30, 40, 50, 60]
print("Original List : ", lt)
print("Second Largest : ", sorted(lt)[-2])
```

```
Original List :  [10, 20, 30, 40, 50, 60]
Second Largest :  50
```

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

In [6]:
```
lt = [10, 10, 10, 20, 30, 40, 50, 60]
k = int(input("Enter Frequency :"))
res = []
for i in lt:
    if lt.count(i) > k and i not in res:
        res.append(i)

print("origina List :", lt)
print("K =", k)
print("Elements with frequency greater than K =", res)
```

```
origina List : [10, 10, 10, 20, 30, 40, 50, 60]
K = 2
Elements with frequency greater than K = [10]
```

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

In [7]:
```
res = []
for i in range(10):
    res.append(i**2)
print("Squared Numbers : ", res)
```

```
# Using list comprehension
# res = [i ** 2 for i in range(10)]
```

```
Squared Numbers :  [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 [9]:
```
# lt = ['banana', 'apple', 'watermelon', 'orange']
n = int(input("Enter number of fruits: "))
fruits = []
for i in range(n):
    fruits.append(input("Enter fruit name: "))

b_fruits = [f for f in fruits if f.startswith('b')]

print("Fruits starting with 'b' =", b_fruits)
```

```
Fruits starting with 'b' = ['banana']
```

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

In [10]:
```
l1 = [10, 20, 30, 40, 50]
l2 = [20, 40, 60]
length = len(l1) + len(l2)
common = []
for i in l1:
    if i in l2 and i not in res:
        common.append(i)
print("Common Element : ", common)
```

```
Common Element :  [20, 40]
```

In [ ]:
```

```