Darshan UNIVERSITY
योग: कर्मसु कौशलम्

Python Programming - 2301CS404

Lab - 5

Jeet Bhalodi (23031701006)
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List

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

In [55]:
```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

sum=0
for i in list1:
    sum+=i

print("Sum of all the elements in a List : ",sum)
```

```
Sum of all the elements in a List :  15
```

02) WAP to find largest element in a List.

In [57]:
```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]
large=0
for i in list1:
    if(i>large):
        large=i
else:
    print("Largest element in a List :",large)
```

```
Largest element in a List : 23
```

03) WAP to find the length of a List.

In [61]:
```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

count=0
for i in list1:
    count+=1

print("length of a List : ",count)
```

```
length of a List :  3
```

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

In [63]:
```
list1=[]
print(type(list1))
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

list1[0],list1[-1]=list1[-1],list1[0]
print(list1)
```

```
<class 'list'>
[5, 2, 3, 4, 1]
```

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

In [85]:
```
list1=[]

element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

mid = int((len(list1))/2)

first_part = list1[0:mid]
last_part = list1[mid:]

new=[]
new.append(last_part)
new.append(first_part)
print(new)
```

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

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

In [87]:
```
list1=[]

element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

p1 = int(input("Enter First Possition : "))
p2 = int(input("Enter Second Possition : "))

list1[p1],list1[p2] = list1[p2],list1[p1]

print(list1)
```

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

07) WAP to reverse the list entered by user.

In [67]:
```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]
list1.reverse()
print("Reverse List = ",list1)
```

```
Reverse List =  [5, 4, 3, 2, 1]
```

08) WAP to print even numbers in a list.

In [89]:
```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

new=[]

for i in list1:
    if(i%2==0):
        new.append(i)
print(new)
```

```
[2, 4]
```

09) WAP to count unique items in a list.

In [105…
```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

unique=[]

for i in list1:
    if(i not in unique):
        unique.append(i)

print("Unique list = ",unique)
print("Unique Count = ",len(unique))
```

```
Unique list =  [1, 2, 3, 4]
Unique Count =  4
```

10) WAP to copy a list.

In [93]:
```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

copy_list=list1.copy()
print("COPY : ",copy_list)
```

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

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

In [95]:
```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

new=[]

for i in list1:
    if(i%2!=0):
        new.append(i)
print(new)
```

```
[1, 3, 5]
```

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

In [116…
```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

element = int(input("Enter the element to count its occurrences: "))
print(list1)
count = 0
for i in list1:
    if(i==element):
        count+=1
print(count)
```

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

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

In [120…
```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]
```

```
list1.sort(reverse=True)
print("Second Large = ",list1[1])
```

```
Second Large =  5
```

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

In [128…

```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

k = int(input("Enter the frequency K: "))

ans=[]

for i in list1:
    freq = list1.count(i)

    if(freq>k and i not in ans):
        ans.append(i)

print("The required elements : ",ans)
```

```
The required elements :  [2, 3]
```

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

In [130…

```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

ans=[]

for i in list1:
    ans.append(i*i)
print(ans)
```

```
[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 [144…

```
list1=[]
element = input("Enter Fruit Name With Comma : ")
list1=[i for i in element.split(',')]

fruit_with_B = [i for i in list1 if i.lower().startswith('b')]

print("Fruits whose names start with 'b':", fruit_with_B)
```

```
Fruits whose names start with 'b': ['Banana', 'BlueBerry', 'Blackberry']
```

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

In [136…

```
list1=[]
element = input("Enter Number With Comma : ")
list1=[int(i) for i in element.split(',')]

list2=[]
element = input("Enter Number With Comma : ")
list2=[int(i) for i in element.split(',')]

ans=[i for i in list1 if i in list2]

print("Common elements from given two lists : ",ans)
```

```
Common elements from given two lists :  [2, 4, 6, 8]
```