Python Programming - Lab - 5

March 11, 2025

Python Programming - 2301CS404

OM BHUT

OM BHUT | 23010101033 | 122

1 List

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

[3]:
```
l1 = [3,15,23,12]
ans = sum(l1)
print(ans)
```

```
53
```

1.0.2 02) WAP to find largest element in a List.

[4]:
```
l1 = [3,15,23,12]
ans = max(l1)
print(ans)
```

```
23
```

1.0.3 03) WAP to find the length of a List.

[5]:
```
l1 = [3,15,23,12]
ans = len(l1)
print(ans)
```

```
4
```

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

[9]:
```
l1 = [3,15,23,12]
n = len(l1)-1
l1[0],l1[n] = l1[n],l1[0]
print(l1)
```

```
[12, 15, 23, 3]
```

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

[19]:
```
l1 = [3,15,23,12]
n = len(l1)//2
first,last = l1[:n], l1[n:]
last.extend(first)
print(last)
```

```
[23, 12, 3, 15]
```

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

[20]:
```
a = int(input("enter first index"))
b = int(input("enter second index"))
l1 = [3,15,23,12]
l1[a],l1[b] = l1[b],l1[a]
print(l1)
```

```
[3, 23, 15, 12]
```

1.0.7 07) WAP to reverse the list entered by user.

[26]:
```
l1 = input("enter space seperated values").split()
l1 = reversed(l1)
l1 = [int(i) for i in l1]
print(l1)
```

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

1.0.8 08) WAP to print even numbers in a list.

[32]:
```
l1 = [3,15,23,12,24]
l2 = filter(lambda x : x%2==0,l1)
print(list(l2))
```

```
[12, 24]
```

1.0.9 09) WAP to count unique items in a list.

[39]:
```
l1 = [3,3,3,3,15,15,23,12,24]
# ans = []
# for i in l1:
#     if(i not in ans):
#         ans.append(i)
# print(ans)
dict = {}
for i in l1:
    if(i in dict):
        dict[i] += 1
```

```
    else:
        dict[i] = 1
# print(dict)
ans = []
for key,value in dict.items():
    if value==1:
        ans.append(key)
print(ans)
```

```
[23, 12, 24]
```

1.0.10 10) WAP to copy a list.

[40]:
```
l1 = [3,15,23,12,24]
l2 = l1.copy()
print(l2)
```

```
[3, 15, 23, 12, 24]
```

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

[43]:
```
a = int(input("enter first"))
b = int(input("enter second"))
for i in range(a,b):
    if i%3==0:
        print(i)
```

```
3
6
9
```

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

[44]:
```
l1 = [3,3,3,3,15,15,23,12,24]
dict = {}
for i in l1:
    if(i in dict):
        dict[i] += 1
    else:
        dict[i] = 1
print(dict)
```

```
{3: 4, 15: 2, 23: 1, 12: 1, 24: 1}
```

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

[61]:
```
l1 = [3,15,23,12,24]
largest = max(l1)
l1 = filter(lambda x: x<largest,l1)
l1 = list(l1)
print(max(l1))
```

```
23
```

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

[63]:
```
k = int(input("enter frequency"))
l1 = [3,3,3,3,15,15,23,12,24]
dict = {}
for i in l1:
    if(i in dict):
        dict[i] += 1
    else:
        dict[i] = 1
ans = []
for key,value in dict.items():
    if value>=k:
        ans.append(key)
print(ans)
```

```
[3]
```

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

[65]:
```
l1 = [3,15,23,12,24]
l1 = map(lambda x: x**2,l1)
print(list(l1))
```

```
[9, 225, 529, 144, 576]
```

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

[67]:
```
l1 = ['banana','apple','bonanaza']
l2 = filter(lambda x:x[0]=='b',l1)
print(list(l2))
```

```
['banana', 'bonanaza']
```

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

[72]:
```
l1 = [3,3,4,7,12,4]
l2 = [3,4,5,9]
s1 = set(l1)
s2 = set(l2)
print(s1.intersection(s2))
```

```
{3, 4}
```