lv65pwqj0

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Python Programming - 2301CS404

23010101202 | Khushi Patel |27-12-24

Lab - 5

1 List

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

```python
[6]: a=[1,2,3,96]
sum=0
for i in a :
    sum=sum+i
print(sum)
```

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

```python
[7]: a=[1,2,3,96]
max=a[0]
for i in a :
 if(i>max):
    max=i
print(max)
```

96

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

```python
[10]: a=[1,2,3,96]
sum=0
for i in a :
    sum=sum+1
print(sum)
```

4

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

```
[15]:  a=[1,2,3,5,56,25,496]
       sum=0
       for i in a :
           sum=sum+1
       temp=a[0]
       a[0]=a[sum-1]
       a[sum-1]=temp
       print(a)
```

```
[496, 2, 3, 5, 56, 25, 1]
```

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

```
[61]:  a=[1,2,5,2,6,2,8,9,4,6,7,0]
       mid=len(a)//2
       fp=a[0:mid:]
       lp=a[mid+1::]
       res=lp+fp
       print(res)
```

```
[9, 4, 6, 7, 0, 1, 2, 5, 2, 6, 2]
```

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

```
[6]:  a=[1,2,3,4,5,6,7,8,9]
      b=int(input("enter b"))
      c=int(input("enter c"))
      temp=a[b]
      a[b]=a[c]
      a[c]=temp
      print(a)
```

```
enter b 1
enter c 3
```

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

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

```
[19]:  a=[1,2,5,2,6,2,8,9,4,6,7,0]
       for i in range(0,(len(a)//2)):
           temp=a[i]
           a[i]=a[len(a)-i-1]
           a[len(a)-i-1]=temp
       print(a)
```

```
[0, 7, 6, 4, 9, 8, 2, 6, 2, 5, 2, 1]
```

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

```
[4]:  a=[1,2,5,2,6,2,8,9,4,6,7,0]
      b=[]
      for i in a:
          if(i%2==0):
              b.append(i)
      print(b)
```

```
[2, 2, 6, 2, 8, 4, 6, 0]
```

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

```
[28]:  a=[1,2,5,2,6,2,8,9,4,6,7,0]
       count=0;
       for i in a:
           if(i in a and (a.count(i))==1):
               # print(i)
               count=count+1;
       print('total',count)
```

```
total 7
```

1.0.10   10) WAP to copy a list.

```
[15]:  a=[1,2,5,2,6,2,8,9,4,6,7,0]
       b=a.copy()
       print(b)
```

```
[1, 2, 5, 2, 6, 2, 8, 9, 4, 6, 7, 0]
```

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

```
[52]:  a=[1,2,5,2,6,2,8,9,4,3,45,9,6,7,0]
       for i in a:
           if(i%2!=0):
               print(i)
```

```
1
5
9
3
45
9
7
```

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

```
[83]: a=[1,5,6,5,2,3,6,1,4,5,6,8,2,1,9,7,5,2,6,4,1,5,2,3,6,2,5,4,]
      ele=int(input("enter element"))
      for i in a:
          freq=a.count(ele)
      print(freq)
```

```
enter element 2

5
```

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

```
[49]: a=[1,2,5,2,6,2,8,9,4,6,85,14,7,0]
      max_value=0
      secmax=0
      for i in a:
          if i > max_value:
              secmax = max_value
              max_value = i
          elif i > secmax and i != max_value:
              secmax = i

      print(secmax)
```

```
14
```

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

```
[80]: a=[1,5,6,5,2,3,6,1,4,5,6,8,2,1,9,7,5,2,6,4,1,5,2,3,6,2,5,4,]
      k=int(input("enter k"))
      res=[]
      for i in a:
          freq=a.count(i)
          if(freq>k and freq not in res):
              res.append(freq)
      print(res)
```

```
enter k 2

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

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

```python
[65]: l1=[i**2 for i in range(0,10)]
      print(l1)
```

```
[0, 1, 4, 9, 16, 25, 36, 49, 64, 81]
```

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

```python
[71]: a=["banana", "cherry", "date", "blueberry", "apple","blackberry",]
      b=[]
      for i in a:
          # print(i)
          if(i.startswith('b')):
              b.append(i)
      print(b)
```

```
['banana', 'blueberry', 'blackberry']
```

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

```python
[74]: a=[1,2,3,4,5,6,7,8,9]
      b=[2,4,5,6,7,15,56]
      c=[]
      for i in range(len(a)):
          if(a[i] in b):
              c.append(a[i])
      print(c)
```

```
[2, 4, 5, 6, 7]
```