List

```
#Python Program to Put Even and Odd elements in a List into Two Different
Lists.

numbers=[]  #Create a empty list for store number from user input
num=int(input("Enter number of elements: "))
for i in range(1,num+1):
    listElements=int(input("Enter telement %d: "%i))
    numbers.append(listElements)
evenList=[]  #list for store even number
oddList=[] #list for store odd number
for j in numbers:
    if j%2==0:
        evenList.append(j)
    else:
        oddList.append(j)
print("Even number list: ",evenList)#display separated even number list
print("Odd number list: ",oddList) #display separated odd number list
```

Output:

Enter number of elements: 5

Enter telement 1: 15

Enter telement 2: 20

Enter telement 3: 25

Enter telement 4: 30

Enter telement 5: 35

Even number list: [20, 30]

Odd number list: [15, 25, 35]

```python
#2. Python Program to Merge Two Lists and Sort it.

def Merge(list1, list2):
    final_list = list1 + list2
    final_list.sort()
    return (final_list)


# Driver Code
list1 = [25, 90, 9, 41, 100, 31]
list2 = [25, 45, 3, 32, 12, 20]
print(Merge(list1, list2))
```

Output:

[3, 9, 12, 20, 25, 25, 31, 32, 41, 45, 90, 100]

```python
#3. Python Program to Remove the Duplicate Items from a List.

def Remove(duplicate):
    final_list = []
    for num in duplicate:
        if num not in final_list:
            final_list.append(num)
    return final_list



# Driver Code
duplicate = [2, 4, 10, 20, 5, 2, 20, 4]
print(Remove(duplicate))
```

Output:

[2, 4, 10, 20, 5]

```
#4. Python Program to Read a List of Words and Return the Length of the
Longest One.

def longestLength(a):
    max1 = len(a[0])
    temp = a[0]

    # for loop to traverse the list
    for i in a:
        if (len(i) > max1):
            max1 = len(i)
            temp = i

    print("The word with the longest length is:", temp,
          " and length is ", max1)


# Driver Program
a = ["one", "two", "third", "four"]
longestLength(a)
```

Output:

The word with the longest length is: third and length is 5

```python
#5. Python Program to Split a List Into Evenly Sized Chunks.

def split(list_a, chunk_size):

    for i in range(0, len(list_a), chunk_size):
        yield list_a[i:i + chunk_size]

chunk_size = 2
my_list = [1,2,3,4,5,6,7,8,9]
print(list(split(my_list, chunk_size)))
```

Output:

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

```
#6. Write a Python function that takes two lists and returns True if they
have at least one common member.

def common_data (list1, list2) :
    result = False
    for x in list1 :
        for y in list2 :
            if x == y :
                result = True
    return result

print (common_data ([1, 2, 3, 4, 5], [5, 6, 7, 8, 9]))
```

Output:

True

```python
#7. Write a Python program to print the numbers of a specified list after
removing even numbers from it.

num = [7,8, 120, 25, 44, 20, 27]
num = [x for x in num if x%2!=0]
print(num)
```

Output:

[7, 25, 27]

```
#8. Write a Python program to find all the values in a list are greater than
a specified number.

list1 = [220, 330, 500]
list2 = [12, 17, 21]
print(all(x >= 200 for x in list1))
print(all(x >= 25 for x in list2))
```

Output:

True

False

```python
#9. Write a Python program to get all possible combinations of the elements
of a given list.

import itertools

if __name__ == '__main__':
    nums = [1, 2, 3]
    r = 2

    combinations = list(itertools.combinations(nums, r))
    print(combinations)
```

Output:

[(1, 2), (1, 3), (2, 3)]

```
#10. Write a Python program to count number of lists in a given list of
lists.

def countList(lst):
    return len(lst)

lst = [[1, 2, 3], [4, 5], [6, 7, 8, 9], [1,2,3,4,5,6]]
print(countList(lst))
```

Output:

4

Process finished with exit code 0

Tuples

```
#1. Python program to accept elements in the form of tuple and display their
sum and average.

list1=[]
for x in range(1,4):
    temp = int(input('Please enter number{0}'.format(x)))
    list1.append(temp)

tuple1 = tuple(list1)
print("Tuple: ",tuple1)
sum = sum(list(tuple1))

print("Sum of elements of tuple: ",sum)
```

Output:

Please enter number11

Please enter number22

Please enter number33

Tuple: (1, 2, 3)

Sum of elements of tuple: 6

Process finished with exit code 0

```
#2. Python program to find the first occurrence of an element in a tuple.

test = (1, 2, 1, 3, 4,1)

idx = test.index(1)

print("First Occurrence of 1---->",idx)

idx = test.index(2)

print("First Occurrence of 2---->",idx)

idx = test.index(3)

print("First Occurrence of 3---->",idx)

idx = test.index(4)

print("First Occurrence of 4---->",idx)
```

Output:

First Occurrence of 1----> 0

First Occurrence of 2----> 1

First Occurrence of 3----> 3

First Occurrence of 4----> 4

Process finished with exit code 0

```
#3. Python program to sort the tuple with nested tuples.

def SortTuple(tup):
    n = len(tup)
    for i in range(n):
        for j in range(n - i - 1):
            if tup[j][0] > tup[j + 1][0]:
                tup[j], tup[j + 1] = tup[j + 1], tup[j]
    return tup
tup = [("Kishore", 28), ("Zeenat", 30), ("Amitabh", 29),
       ("Rekha", 21), ("Sean Connery", 80)]

print(SortTuple(tup))
```

Output:

[('Amitabh', 29), ('Kishore', 28), ('Rekha', 21), ('Sean Connery', 80), ('Zeenat', 30)]

Process finished with exit code 0

```
#4. Write a program to change values in tuple (Hint: By converting tuple into
list).

aTuple = (123, 'xyz', 'zara', 'abc')
aList = list(aTuple)
aList[0] = 456
aList[1] = 'Hello world'
aList[3] = 'Good Morning !'

print(f"Before Tuple : {aTuple}")
bTuple = tuple(aList)
print(f"After Tuple : {bTuple}")
```

Output:

Before Tuple : (123, 'xyz', 'zara', 'abc')

After Tuple : (456, 'Hello world', 'zara', 'Good Morning !')

Process finished with exit code 0

```
#5. Create a list of tuples from given list having number and its cube in
each tuple.

List_1 = [12, 22, 35, 46]

res = [(val, pow(val, 3)) for val in List_1]

print(res)
```

Output:

[(12, 1728), (22, 10648), (35, 42875), (46, 97336)]

Process finished with exit code 0

```python
#6. Write a Python program to find the repeated items of a tuple.

from collections import Counter

tup = (1, 3, 4, 32, 1, 1, 1, 31, 32, 12, 21, 2, 3)

for k, v in Counter(tup).items():
    if v > 1:
        print("Repeated: {}".format(k))
```

Output:

Repeated: 1

Repeated: 3

Repeated: 32

Process finished with exit code 0

```python
#7. Write a Python program to reverse a tuple.

def Reverse(tuples):
    new_tup = tuples[::-1]
    return new_tup

tuples = ('H', 'E', 'L', 'L', 'O', 'W', 'O', 'L', 'D')
print(Reverse(tuples))
```

Output:

('D', 'L', 'O', 'W', 'O', 'L', 'L', 'E', 'H')

Process finished with exit code 0