Basic Programming assignment 10

1.Write a Python Program to find sum of elements in a list ?

```python
def sumofList():
    in_ele = int(input('Enter the No of Entries in a List: '))
    in_list = []
    for itr in range(in_ele):
        in_list.append(int(input('Enter a element: ')))
    print(f'Sum of Elements: {sum(in_list)}')

sumofList()
```

```
Enter the No of Entries in a List: 6
Enter a element: 9
Enter a element: 8
Enter a element: 7
Enter a element: 5
Enter a element: 6
Enter a element: 5
Sum of Elements: 40
```

2.Write a Python Program to multiply all numbers in the list ?

```python
def mulofList():
    in_ele = int(input('Enter the No of Entries in a List: '))
    in_list = []
    mul = 1
    for itr in range(in_ele):
        in_list.append(int(input('Enter a element: ')))
    for ele in in_list:
        mul = mul * ele
    print(mul)

mulofList()
```

```
Enter the No of Entries in a List: 6
Enter a element: 2
Enter a element: 3
Enter a element: 5
Enter a element: 6
Enter a element: 4
Enter a element: 8
5760
```

3.Write a Python Program to find smallest number in the list ?

```python
def smallEleInList():
    in_ele = int(input('Enter the No of elements in a list: '))
    in_list = []
    for ele in range(in_ele):
        in_list.append(int(input('Enter a Element: ')))
    print(f'The Smallest Element in {in_list} is {sorted(in_list)[0]}')
smallEleInList()
```

```
Enter the No of elements in a list: 6
Enter a Element: 15
Enter a Element: 14
Enter a Element: 19
Enter a Element: 20
Enter a Element: 23
Enter a Element: 25
The Smallest Element in [15, 14, 19, 20, 23, 25] is 14
```

4.Write a Python Program to find largest number in the list ?

```python
def largestEleInList():
    in_ele = int(input('Enter the No of elements in a list: '))
    in_list = []
    for ele in range(in_ele):
        in_list.append(int(input('Enter a Element: ')))
    print(f'The Largest Element in {in_list} is {sorted(in_list, reverse=True)[0]}')

largestEleInList()
```

```
Enter the No of elements in a list: 6
Enter a Element: 87
Enter a Element: 98
Enter a Element: 95
Enter a Element: 105
Enter a Element: 25
Enter a Element: 250
The Largest Element in [87, 98, 95, 105, 25, 250] is 250
```

5.Write a Python Program to find second largest number in the list ?

```python
def secondLargestEleInList():
    in_ele = int(input('Enter the No of elements in a list: '))
    in_list = []
    for ele in range(in_ele):
        in_list.append(int(input('Enter a Element: ')))
    print(f'The Second Largest Element in {in_list} is {sorted(in_list, reverse=True)[1]}')

secondLargestEleInList()
```

```
Enter the No of elements in a list: 6
Enter a Element: 78
Enter a Element: 75
Enter a Element: 45
Enter a Element: 62
Enter a Element: 53
Enter a Element: 102
The Second Largest Element in [78, 75, 45, 62, 53, 102] is 78
```

6.Write a Python Program to find N largest elements in the list ?

```python
def nLargestEleInList(k):
    in_ele = int(input('Enter the No of elements in a list: '))
    in_list = []
    for ele in range(in_ele):
        in_list.append(int(input('Enter a Element: ')))
    print(f'The {k} Largest Element in {in_list} is {sorted(in_list, reverse=True)[0:k]}')

nLargestEleInList(4)
```

```
Enter the No of elements in a list: 6
Enter a Element: 5
Enter a Element: 105
Enter a Element: 203
Enter a Element: 25
Enter a Element: 782
Enter a Element: 6589
The 4 Largest Element in [5, 105, 203, 25, 782, 6589] is [6589, 782, 203, 105]
```

7.Write a Python Program to find even numbers in the list ?

```python
def evenNoInList():
    in_ele = int(input('Enter the No of elements in a list: '))
    in_list = []
    even_list = []
    for ele in range(in_ele):
        in_list.append(int(input('Enter a Element: ')))
    for ele in in_list:
        if ele%2 == 0:
            even_list.append(ele)
    print(f'The Even Elements in {in_list} are {even_list}')

evenNoInList()
```

```
Enter the No of elements in a list: 6
Enter a Element: 6
Enter a Element: 5
Enter a Element: 3
Enter a Element: 4
Enter a Element: 9
Enter a Element: 10
The Even Elements in [6, 5, 3, 4, 9, 10] are [6, 4, 10]
```

8.Write a Python Program to find odd numbers in the list ?

```python
def oddNoInList():
    in_ele = int(input('Enter the No of elements in a list: '))
    in_list = []
    odd_list = []
    for ele in range(in_ele):
        in_list.append(int(input('Enter a Element: ')))
    for ele in in_list:
        if ele%2 != 0:
```

```
            odd_list.append(ele)
        print(f'The Even Elements in {in_list} are {odd_list}')

oddNoInList()
```

```
Enter the No of elements in a list: 6
Enter a Element: 9
Enter a Element: 5
Enter a Element: 8
Enter a Element: 6
Enter a Element: 1
Enter a Element: 7
The Even Elements in [9, 5, 8, 6, 1, 7] are [9, 5, 1, 7]
```

9.Write a Python Program to remove empty list from list ?

In [10]:
```python
def remove_empty_lists(lst):
    new_list = []
    for sublist in lst:
        if sublist:
            new_list.append(sublist)
    return new_list
```

In [11]:
```python
my_list = [1, [], 3, [], [4, 5], []]
result = remove_empty_lists(my_list)
print(result)
```

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

10.Write a Python Program to Cloning or Copying a list ?

In [15]:
```python
def clone_list(lst):
    return lst.copy()  # or list(lst) or lst[:]

# Example usage
my_list = [1, 2, 3, 4, 5]
cloned_list = clone_list(my_list)
print(cloned_list)
```

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

11.Write a Python Program to count occurences of an element in a list ?

In [16]:
```python
def count_occurrences(lst, element):
    count = 0
    for item in lst:
        if item == element:
            count += 1
    return count

# Example usage
my_list = [1, 2, 2, 3, 4, 2, 5, 2]
element = 2
occurrences = count_occurrences(my_list, element)
print(f"The element {element} occurs {occurrences} times in the list.")
```

```
The element 2 occurs 4 times in the list.
```

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