**ASSIGNMENT-10**

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

In [1]:

**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: 5

Enter a element: 1

Enter a element: 2

Enter a element: 3

Enter a element: 4

Enter a element: 5

Sum of Elements: 15

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

In [2]:

**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: 5

Enter a element: 1

Enter a element: 2

Enter a element: 3

Enter a element: 4

Enter a element: 5

120

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

In [3]:

**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: 5

Enter a Element: 34

Enter a Element: 56

Enter a Element: 67

Enter a Element: 87

Enter a Element: 12

The Smallest Element in [34, 56, 67, 87, 12] is 12

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

In [4]:

**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: 12

Enter a Element: 10

Enter a Element: 98

Enter a Element: 12

Enter a Element: 14

Enter a Element: 15

Enter a Element: 65

Enter a Element: 76

Enter a Element: 87

Enter a Element: 34

Enter a Element: 56

Enter a Element: 87

Enter a Element: 34

The Largest Element in [10, 98, 12, 14, 15, 65, 76, 87, 34, 56, 87, 34] is 98

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

In [5]:

**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: 5

Enter a Element: 12

Enter a Element: 13

Enter a Element: 14

Enter a Element: 15

Enter a Element: 16

The Second Largest Element in [12, 13, 14, 15, 16] is 15

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

In [6]:

**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: 10

Enter a Element: 1

Enter a Element: 2

Enter a Element: 3

Enter a Element: 4

Enter a Element: 5

Enter a Element: 6

Enter a Element: 7

Enter a Element: 8

Enter a Element: 9

Enter a Element: 10

The 4 Largest Element in [1, 2, 3, 4, 5, 6, 7, 8, 9, 10] is [10, 9, 8, 7]

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

In [7]:

**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: 1

Enter a Element: 2

Enter a Element: 3

Enter a Element: 4

Enter a Element: 5

Enter a Element: 6

The Even Elements in [1, 2, 3, 4, 5, 6] are [2, 4, 6]

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

In [8]:

**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: 1

Enter a Element: 2

Enter a Element: 3

Enter a Element: 4

Enter a Element: 5

Enter a Element: 6

The Even Elements in [1, 2, 3, 4, 5, 6] are [1, 3, 5]

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

In [9]:

**def** checkEmptyList():

in\_list **=** eval(input('Enter all elements of the list: '))

**if** [] **in** in\_list:

print(f'There is an Empty list in {in\_list} at Position {in\_list**.**index([])}')

in\_list**.**remove([])

print(f'The List after removing [] is {in\_list}')

**else**:

print(f'There is no [] List in the list {in\_list}')

checkEmptyList()

Enter all elements of the list: [1,2,3,4,5,[],6,7,8,9,0]

There is an Empty list in [1, 2, 3, 4, 5, [], 6, 7, 8, 9, 0] at Position 5

The List after removing [] is [1, 2, 3, 4, 5, 6, 7, 8, 9, 0]

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

In [10]:

**import** copy

**def** cloneList():

in\_list **=** eval(input('Enter a list'))

print(in\_list, id(in\_list))

cloned\_list **=** in\_list**.**copy()

print(cloned\_list, id(cloned\_list))

cloneList()

Enter a list[1,2,3,4,5,6,7,8,9,0]

[1, 2, 3, 4, 5, 6, 7, 8, 9, 0] 1804715913280

[1, 2, 3, 4, 5, 6, 7, 8, 9, 0] 1804715963072

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

In [11]:

**def** checkOccurence():

in\_list **=** eval(input('Enter the elements of the list: '))

in\_num **=** eval(input('Enter the element to find: '))

count **=** 0

**if** in\_num **in** in\_list:

**for** ele **in** in\_list:

**if** ele **==** in\_num:

count **=** count**+**1

print(f'There are {count} occurences of {in\_num} in {in\_list}')

checkOccurence()

Enter the elements of the list: [1,2,3,1,2,3,1,2,3,4,5,6,4,5,6]

Enter the element to find: 6

There are 2 occurences of 6 in [1, 2, 3, 1, 2, 3, 1, 2, 3, 4, 5, 6, 4, 5, 6]