

Python_basic_programming_10

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

```
In [3]: 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: 4
Enter a element: 5
Enter a element: 6
Sum of Elements: 18
```

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

```
In [4]: 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 [5]: 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: 22
Enter a Element: 19
Enter a Element: 42
Enter a Element: 33
Enter a Element: 17
The Smallest Element in [22, 19, 42, 33, 17] is 17
```

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

```
In [6]: 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: 5
Enter a Element: 24
Enter a Element: 12
Enter a Element: 56
Enter a Element: 42
Enter a Element: 80
The Largest Element in [24, 12, 56, 42, 80] is 80
```

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

```
In [2]: 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: 6
Enter a Element: 7
Enter a Element: 8
Enter a Element: 9
Enter a Element: 10
The Second Largest Element in [6, 7, 8, 9, 10] is 9
```

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

```
In [7]: 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 [9]: 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: 8
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
The Even Elements in [1, 2, 3, 4, 5, 6, 7, 8] are [2, 4, 6, 8]
```

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

```
In [10]: 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: 11
Enter a Element: 12
Enter a Element: 13
Enter a Element: 14
Enter a Element: 15
Enter a Element: 16
The Even Elements in [11, 12, 13, 14, 15, 16] are [11, 13, 15]
```

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

```
In [24]: 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]
There is an Empty list in [1, 2, 3, 4, [], 5, 6, 7, 8] at Position 4
The List after removing [] is [1, 2, 3, 4, 5, 6, 7, 8]
```

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

```
In [23]: 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[1,22,4,5,6,7,8,9]
[1, 22, 4, 5, 6, 7, 8, 9] 2420236399872
[1, 22, 4, 5, 6, 7, 8, 9] 2422354567936
```

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

```
In [25]: 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} occurrences of {in_num} in {in_list}')
```

```
checkOccurence()
```

Enter the elements of the list: 2,1,4,5,1,6,4,7,4,6,1,6,4,8

Enter the element to find: 1

There are 3 occurrences of 1 in (2, 1, 4, 5, 1, 6, 4, 7, 4, 6, 1, 6, 4, 8)