

python_basic_programming_10

May 12, 2023

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

```
[1]: 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: 4

Enter a Element: 12

Enter a Element: 13

Enter a Element: 14

Enter a Element: 15

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

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

```
[2]: 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: 4

Enter a element: 2

Enter a element: 3

Enter a element: 4

Enter a element: 5

Sum of Elements: 14

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

```
[3]: 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 ?

```
[4]: 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: 14
Enter a Element: 12
Enter a Element: 13
Enter a Element: 15
Enter a Element: 12
The Smallest Element in [14, 12, 13, 15, 12] is 12
```

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

```
[5]: 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: 14
Enter a Element: 12
Enter a Element: 7
Enter a Element: 18
Enter a Element: 19
Enter a Element: 14
The Largest Element in [14, 12, 7, 18, 19, 14] is 19

```

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

```

[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 ?

```

[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 ?

```

[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 ?

```

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

```

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

```
[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[1,23,4,5,6,7,8,0,9]

[1, 23, 4, 5, 6, 7, 8, 0, 9] 2002460201472

[1, 23, 4, 5, 6, 7, 8, 0, 9] 2002460167168

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

```
[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} occurrences 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 occurrences of 6 in [1, 2, 3, 1, 2, 3, 1, 2, 3, 4, 5, 6, 4, 5, 6]

```
[ ]:
```