

# Assignment 10 Solutions

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

In [1]:

```
1 Number = int(input("Please enter the Total Number of List Elements : "))
2 NumList = []
3 for i in range(1, Number + 1):
4     value = int(input("Please enter the Value of %d Element : " %i))
5     NumList.append(value)
6
7 total = sum(NumList)
8
9 print("\n The Sum of All Element in this List is : ", total)
```

Please enter the Total Number of List Elements : 4  
Please enter the Value of 1 Element : 10  
Please enter the Value of 2 Element : 1  
Please enter the Value of 3 Element : 6  
Please enter the Value of 4 Element : 8

The Sum of All Element in this List is : 25

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

In [2]:

```
1 Number = int(input("Enter the length of your list : "))
2 lst = []
3
4 for i in range(Number):
5     lst.append(int(input()))
6 print("The List is ",lst)
7 product = 1
8 for ele in lst:
9     product = product*ele
10 print("Product of elements in List is :",product)
```

Enter the length of your list : 5  
4  
6  
7  
8  
2  
The List is [4, 6, 7, 8, 2]  
Product of elements in List is : 2688

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

In [3]:

```
1 Number = int(input("Enter the lenh of your list : "))
2 NumList = []
3
4 for i in range(Number):
5     NumList.append(int(input()))
6 print("The List is ",NumList)
7 print("The Smallest element in the list is :",min(NumList))
```

Enter the lenh of your list : 5

7

4

2

8

6

The List is [7, 4, 2, 8, 6]

The Smallest element in the list is : 2

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

In [5]:

```
1 Number = int(input("Enter the lenh of your list : "))
2 NumList = []
3
4 for i in range(Number):
5     NumList.append(int(input()))
6 print("The List is ",NumList)
7 print("The largest element in the list is :",max(NumList))
```

Enter the lenh of your list : 6

3

6

9

4

12

24

The List is [3, 6, 9, 4, 12, 24]

The largest element in the list is : 24

## 5. Write a Python program to find second largest number in a list?

In [6]:

```

1 Number = int(input("Enter the lenh of your list : "))
2 NumList = []
3
4 for i in range(Number):
5     NumList.append(int(input()))
6 print("The List is ",NumList)
7 NumList.sort()
8 print("The sorted list is ",NumList)
9 print("The second largest element in the list is ",NumList[-2])

```

Enter the lenh of your list : 6

3

6

9

8

2

5

The List is [3, 6, 9, 8, 2, 5]

The sorted list is [2, 3, 5, 6, 8, 9]

The second largest element in the list is 8

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

In [7]:

```

1 Number = int(input("Enter the lenh of your list : "))
2 NumList = []
3
4 for i in range(Number):
5     NumList.append(int(input()))
6 print("The List is ",NumList)
7 NumList.sort()
8 print("The sorted list is ",NumList)
9 nlargest = int(input("Enter how many largest number u want to see in from the list :"))
10
11 if Number < nlargest :
12     print("enterted value is larger then that list length")
13 else:
14     print(nlargest,"largest elements from the list are :",NumList[(Number-nlargest):])

```

Enter the lenh of your list : 7

5

9

10

8

6

4

2

The List is [5, 9, 10, 8, 6, 4, 2]

The sorted list is [2, 4, 5, 6, 8, 9, 10]

Enter how many largest number u want to see in from the list :2

2 largest elements from the list are : [9, 10]

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

In [8]:

```
1 Number = int(input("Enter the lenth of your list : "))
2 NumList = []
3
4 for i in range(Number):
5     NumList.append(int(input()))
6 print("The List is ",NumList)
7 evenlist =[]
8
9 for i in NumList:
10     if i % 2 == 0:
11         evenlist.append(i)
12 print("The even numbers in the list are :",evenlist)
```

Enter the lenth of your list : 6

3  
5  
7  
8  
2  
14

The List is [3, 5, 7, 8, 2, 14]

The even numbers in the list are : [8, 2, 14]

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

In [9]:

```
1 Number = int(input("Enter the lenth of your list : "))
2 NumList = []
3
4 for i in range(Number):
5     NumList.append(int(input()))
6 print("The List is ",NumList)
7 oddlist =[]
8
9 for i in NumList:
10     if i % 2 != 0:
11         oddlist.append(i)
12 print("The odd numbers in the list are :",oddlist)
```

Enter the lenth of your list : 6

5  
8  
7  
9  
4  
2

The List is [5, 8, 7, 9, 4, 2]

The odd numbers in the list are : [5, 7, 9]

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

In [10]:

```

1 test_list = [5, 6, [], 3, 8, [], [], 9, 2]
2
3 print("The original list is : " + str(test_list))
4 res = list(filter(None, test_list))
5
6 print("List after empty list removal : " + str(res))

```

The original list is : [5, 6, [], 3, 8, [], [], 9, 2]

List after empty list removal : [5, 6, 3, 8, 9, 2]

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

In [12]:

```

1 Number = int(input("Enter the length of your list : "))
2 NumList = []
3
4 for i in range(Number):
5     NumList.append(int(input()))
6 print("The List is ", NumList)
7
8 print("The cloned/copied list :")
9
10 #Method 1
11 NumListcopy = NumList[:]
12 print("Cloning By list slicing NumList[:]", NumListcopy)
13
14 #method2
15 NumList1 = NumList.copy()
16 print("Cloning By list copying NumList.copy()", NumList1)
17
18
19 #Method3
20 NumListcomprah = [i for i in NumList]
21 print("Cloning By list Comprahention ", NumListcomprah)
22
23
24 #method4
25 NumListappend = []
26 for i in NumList : NumListappend.append(i)
27 print("Cloning By list append ", NumListappend)

```

Enter the length of your list : 6

2

8

5

6

9

3

The List is [2, 8, 5, 6, 9, 3]

The cloned/copied list :

Cloning By list slicing NumList[:] [2, 8, 5, 6, 9, 3]

Cloning By list copying NumList.copy() [2, 8, 5, 6, 9, 3]

Cloning By list Comprahention [2, 8, 5, 6, 9, 3]

Cloning By list append [2, 8, 5, 6, 9, 3]

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

In [17]:

```
1 Number = int(input("Enter the length of your list : "))
2 NumList = []
3
4 for i in range(Number):
5     NumList.append(int(input()))
6 print("The List is ",NumList)
7 ele= int(input("Enter the element to find its occurrence : "))
8 print(ele,"has occurred {} times in the list ".format(NumList.count(ele)))
```

Enter the length of your list : 6

2

4

6

7

7

8

The List is [2, 4, 6, 7, 7, 8]

Enter the element to find its occurrence : 07

7 has occurred 2 times in the list