**Practical No 01: - Problems on Arrays**

1. **Write a Program to calculate sum of elements of array [size is not fixed]**

**Program: -**

ls = []

n = int(input("Enter the number of elements you want:- "))

for i in range(0,n):

m = int(input(f"Enter the {i+1} element :- "))

ls.append(m)

sum = 0

for j in ls:

sum = sum + j

print(f"The Sum of the elements of the array is {sum}")

**Output: -**

Enter the number of elements you want:- 5

Enter the 0 element :- 2

Enter the 1 element :- 6

Enter the 2 element :- 8

Enter the 3 element :- 9

Enter the 4 element :- 6

The Sum of the elements of the array is 31

1. **Write a Program to Find Maximum and Minimum value from an array**

**Program: -**

ls = []

n = int(input("Enter the number of elements you want:- "))

for i in range(0,n):

m = int(input(f"Enter the {i+1} element :- "))

ls.append(m)

max = ls[0]

min = ls[0]

for j in range(0,n):

if j>max:

max = ls[j]

else :

min = ls[j]

print(f"The maximum element in the array is {max}")

print(f"The minimum element in the array is {min}")

**Output:**

Enter the number of elements you want:- 5

Enter the 1 element :- 63

Enter the 2 element :- 69

Enter the 3 element :- 25

Enter the 4 element :- 58

Enter the 5 element :- 14

The maximum element in the array is 63

The minimum element in the array is 14

1. **Write a Program to sort the elements of array**

**Program: -**

Method Used is Bubble Sort

**Method 01**

ls = []

n = int(input("Enter the number of elements you want:- "))

for i in range(0,n):

m = int(input(f"Enter the {i+1} element :- "))

ls.append(m)

print(ls)

ls.sort()

print(ls)

**Method 02**

def sorting(arr):

n = len(arr)

for i in range(n):

swapped = False

for j in range(0, n - i - 1):

if arr[j] > arr[j + 1]:

arr[j], arr[j + 1] = arr[j + 1], arr[j]

swapped = True

if not swapped:

break

ls = []

n = int(input("Enter the number of elements you want:- "))

for i in range(0,n):

m = int(input(f"Enter the {i+1} element :- "))

ls.append(m)

sorting(ls)

print("Sorted array is", ls)

**Output:**

Enter the number of elements you want:- 4

Enter the 1 element :- 56

Enter the 2 element :- 45

Enter the 3 element :- 67

Enter the 4 element :- 34

Sorted array is [34, 45, 56, 67]