# Assignment 7

#### Write a Python Program to find sum of Array ?

**Answer:**

**def** sumOfArray():  
 in\_arr = eval(input("Enter the Array: "))  
 print(f'The sum of {in\_arr} is {sum(in\_arr)}')  
  
sumOfArray()

Enter the Array: [1,2,3,4,5]  
[1, 2, 3, 4, 5] <class 'list'>  
The sum of [1, 2, 3, 4, 5] is 15

#### Write a Python Program to find Largest element in an Array ?

**Answer:**

def largestElement():  
 in\_arr = eval(input("Enter the Array: "))  
 print(f"The Largest Element in {in\_arr} is {sorted(in\_arr, reverse=True)[0]}")  
   
largestElement()

Enter the Array: [1,2,3,4,5]  
The Largest Element in [1, 2, 3, 4, 5] is 5

#### 3. Write a Python Program for array rotation ?

**Answer:**

def reverseOfArray():  
 in\_arr = eval(input("Enter the Array: "))  
 print(f"The Reverse of Array {in\_arr} is {in\_arr[::-1]}")  
   
reverseOfArray()

Enter the Array: [12,16,11,13,30]  
The Reverse of Array [12, 16, 11, 13, 30] is [30, 13, 11, 16, 12]

#### 4. Write a Python Program to Split the array and add the first part to the end ?

**Answer:**

def sumOfSplits():  
 in\_arr = eval(input("Enter the Array: "))  
 print(f"The Sum of First and Last Elements of Array {in\_arr} is {in\_arr[0]+in\_arr[-1]}")  
   
sumOfSplits()

Enter the Array: [10,13,14,9,18]  
The Sum of First and Last Elements of Array [10, 13, 14, 9, 18] is 28

#### 5. Write a Python Program to check if given array is Monotonic ?

**Answer:**

def checkMonotonic():  
 in\_arr = eval(input("Enter the Array: "))  
 if(all(in\_arr[i]<=in\_arr[i+1] for i in range(len(in\_arr)-1)) or all(in\_arr[i]>=in\_arr[i+1] for i in range(len(in\_arr)-1))):  
 print(f'Array {in\_arr} is Monotonic')  
 else:  
 print(f'Array {in\_arr} is Not Monotonic')  
  
checkMonotonic()  
checkMonotonic()

Enter the Array: [1,2,3,4,5]  
Array [1, 2, 3, 4, 5] is Monotonic  
Enter the Array: 4,2,4,5,6,1  
Array (4, 2, 4, 5, 6, 1) is Not Monotonic