**ASSIGNMENT-7**

**1. Write a Python Program to find sum of Array ?**

In [2]:

**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

**2. Write a Python Program to find Largest element in an Array ?**

In [5]:

**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 ?**

In [12]:

**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 ?**

In [14]:

**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 ?**

In [22]:

**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