

# Python\_basic\_programming\_7

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

```
In [1]: 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  
The sum of (1, 2, 3, 4, 5) is 15

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

```
In [2]: 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: 2,4,6,8,10  
The Largest Element in (2, 4, 6, 8, 10) is 10

3. Write a Python Program for array rotation ?

```
In [3]: 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: 1,3,6,7,8  
The Reverse of Array (1, 3, 6, 7, 8) is (8, 7, 6, 3, 1)

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

```
In [5]: 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: 1,2,4,5,6  
The Sum of First and Last Elements of Array (1, 2, 4, 5, 6) is 7

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

```
In [6]: 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: 9,5,7,3,1  
Array (9, 5, 7, 3, 1) is Not Monotonic