Python_basic_programming_7

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

```
In [6]: 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: 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 [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: 1,2,4,5,7
The Reverse of Array (1, 2, 4, 5, 7) is (7, 5, 4, 2, 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 [5]: 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: 3,1,5,6,7,9
Array (3, 1, 5, 6, 7, 9) is Not Monotonic
```