python_basic_programming_7

May 12, 2023

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

```
[4]: 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 ?

```
[3]: 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 ?

```
[5]: 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: [12,14,15,13,12]
The Reverse of Array [12, 14, 15, 13, 12] is [12, 13, 15, 14, 12]
```

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

```
[6]: 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: [1,2,7,8]
The Sum of First and Last Elements of Array [1, 2, 7, 8] is 9

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

```
[7]: 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: 4,2,1,5,9,7
Array (4, 2, 1, 5, 9, 7) is Not Monotonic

[ ]: