

Programming Basic Assignment 7

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

```
In [1]: array1 = [1, 2, 3, 4, 5, 6]
        sumof = sum(array1)
        print(sumof)
```

21

2. Write a Python Program to find largest element in an array?

```
In [2]: array1 = [1, 2, 3, 4, 5, 6, -2]
        maxofelement = array1[0]
        for i in range(1, len(array1)):
            if maxofelement < array1[i]:
                maxofelement = array1[i]
        print(maxofelement)
```

6

3. Write a Python Program for array rotation?

```
In [3]: def rotateArray(arr : list, k: int):
        while k != 0:
            tempElement = arr[-1]
            arr.pop(-1)
            arr.insert(0, tempElement)
            k -= 1
        array1 = [10,11,12,13,14]
        print(array1)
        rotateArray(array1, 2)
        print(array1)
```

[10, 11, 12, 13, 14]

[13, 14, 10, 11, 12]

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

```
In [4]: def split_and_add(arr, k):
        # Split the array into two parts
        first_part = arr[:k]
        second_part = arr[k:]
        # Add the first part to the end of the second part
        second_part.extend(first_part)
        return second_part

# Test the function
print(split_and_add([1, 2, 3, 4, 5, 6], 3)) # [4, 5, 6, 1, 2, 3]
print(split_and_add([1, 2, 3, 4, 5, 6], 2)) # [3, 4, 5, 6, 1, 2]
print(split_and_add([1, 2, 3, 4, 5, 6], 4)) # [5, 6, 1, 2, 3, 4]
```

```
[4, 5, 6, 1, 2, 3]  
[3, 4, 5, 6, 1, 2]  
[5, 6, 1, 2, 3, 4]
```

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

```
In [5]: def is_monotonic(arr):  
        if len(arr) <= 1:  
            return True  
        increasing = True  
        decreasing = True  
        for i in range(1, len(arr)):  
            if arr[i] > arr[i-1]:  
                decreasing = False  
            elif arr[i] < arr[i-1]:  
                increasing = False  
            if not increasing and not decreasing:  
                return False  
        return True  
  
        # Test the function  
        print(is_monotonic([1, 2, 3, 4, 5])) # True  
        print(is_monotonic([5, 4, 3, 2, 1])) # True  
        print(is_monotonic([1, 2, 3, 2, 1])) # False  
  
True  
True  
False
```

```
In [ ]:
```