**ANSWERS**

**Q1. Write a Python Program to find sum of array?**

**Ans.** Please find below the code to find sum of array:

def sum\_of\_array(arr):

total = sum(arr)

return total

arr = [int(x) for x in input("Enter the array elements separated by spaces: ").split()]

array\_sum = sum\_of\_array(arr)

print(f"The sum of the array elements is {array\_sum}")

**Q2. Write a Python Program to find largest element in an array?**

**Ans.** Please find below the code to find largest element in an array:

def find\_largest\_element(arr):

max\_element = max(arr)

return max\_element

arr = [int(x) for x in input("Enter the array elements separated by spaces: ").split()]

largest\_element = find\_largest\_element(arr)

print(f"The largest element in the array is {largest\_element}")

**Q3. Write a Python Program for array rotation?**

**Ans.** Please find below the code for array rotation:

def rotate\_array(arr, d):

n = len(arr)

d = d % n # To handle rotations larger than array size

rotated\_arr = arr[d:] + arr[:d]

return rotated\_arr

arr = [int(x) for x in input("Enter the array elements separated by spaces: ").split()]

rotation = int(input("Enter the rotation count: "))

rotated\_array = rotate\_array(arr, rotation)

print("Array after rotation:", rotated\_array)

**Q4. Write a Python Program to Split the array and add the first part to the end?**

**Ans.** Please find below the code to split the array and add the first part to the end:

def split\_and\_add(arr, k):

k = k % len(arr) # To handle splits larger than array size

split\_array = arr[k:] + arr[:k]

return split\_array

arr = [int(x) for x in input("Enter the array elements separated by spaces: ").split()]

split\_position = int(input("Enter the split position: "))

new\_array = split\_and\_add(arr, split\_position)

print("Array after split and addition:", new\_array)

**Q5. Write a Python Program to check if given array is Monotonic?**

**Ans.** Please find below the code to check if given array is monotonic:

def is\_monotonic(arr):

increasing = decreasing = True

for i in range(1, len(arr)):

if arr[i] < arr[i - 1]:

increasing = False

if arr[i] > arr[i - 1]:

decreasing = False

return increasing or decreasing

arr = [int(x) for x in input("Enter the array elements separated by spaces: ").split()]

if is\_monotonic(arr):

print("The array is monotonic.")

else:

print("The array is not monotonic.")