Assignment 7 Solutions

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

In [2]:

```
# Python 3 code to find sum
# of elements in given array
# driver function
arr = []

# input values to list
arr = [12, 3, 4, 15]

# sum() is an inbuilt function in python that adds
# all the elements in list,set and tuples and returns
# the value
ans = sum(arr)

# display sum
print('Sum of the array is ', ans)
```

```
Sum of the array is  34
```

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

In [3]:

```
# Python3 program to find maximum
# in arr[] of size n

# python function to find maximum
# in arr[] of size n


 def largest(arr, n):

    # Initialize maximum element
    max = arr[0]

    # Traverse array elements from second
    # and compare every element with
    # current max
    for i in range(1, n):
        if arr[i] > max:
            max = arr[i]
    return max


 # Driver Code
arr = [10, 240, 48, 98, 2022]
n = len(arr)
Ans = largest(arr, n)
print("Largest in given array ", Ans)
```

```
Largest in given array  2022
```

3. Write a Python Program for array rotation ?

In [2]:

```
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: 4,5,6,7,8,9
The Reverse of Array (4, 5, 6, 7, 8, 9) is (9, 8, 7, 6, 5, 4)
```

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

In [3]:

```
def SplitArray(arr, n, k):
    for i in range(0, k):
        x = arr[0]
        for j in range(0, n-1):
            arr[j] = arr[j + 1]

        arr[n-1] = x
arr = [15, 36, 18, 16, 65, 40]
n = len(arr)
position = 2
SplitArray(arr, n, position)
for i in range(0, n):
    print(arr[i], end = ' ')
```

```
18 16 65 40 15 36
```

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

In [8]:

```
#This is the program to check if an array is monotone or not. We have defined a functio
#check if monotone
#function definition
def ismonotone(a):
    n=len(a) #size of array
    if n==1:
        return True
    else:
        #check for monotone behaviour
        if all(a[i]>=a[i+1] for i in range(0,n-1) or a[i]<=a[i+1] for i in range(0,n-1)
            return True
        else:
            return False

A = [8, 7, 6, 5]
print(ismonotone(A))
b = [8, 3, 4, 3]
print(ismonotone(b))
c=[5,4,3]
print(ismonotone(c))
d=[1]
print(ismonotone(d))
```

```
True
False
True
True
```