- Write a Python Program to find sum of array?

In [1]:
```python
def array_sum(arr):
    return sum(arr)

# Taking user input for the array elements
array = list(map(int, input("Enter the elements of the array separated by space:

# Calculating the sum of array elements using the function
result = array_sum(array)
print(f"The sum of the array elements is: {result}")
```

```
Enter the elements of the array separated by space: 5 6 9 3 2
The sum of the array elements is: 25
```

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

In [3]:
```python
def find_largest(arr):
    if not arr:
        return "Array is empty"
    else:
        max_element = max(arr)
        return max_element

# Taking user input for the array elements
array = list(map(int, input("Enter the elements of the array separated by space:

# Finding the largest element using the function
largest_element = find_largest(array)
print(f"The largest element in the array is: {largest_element}")
```

```
Enter the elements of the array separated by space: 5 22 6 39
The largest element in the array is: 39
```

- Write a Python Program for array rotation?

In [5]:
```python
def rotate_array(arr, n):
    n = n % len(arr)  # To handle cases where n > len(arr)
    return arr[n:] + arr[:n]

# Taking user input for the array elements and rotation count
array = list(map(int, input("Enter the elements of the array separated by space:
rotation_count = int(input("Enter the number of rotations: "))

# Rotating the array using the function
rotated_array = rotate_array(array, rotation_count)
print(f"The array after left rotation by {rotation_count} is: {rotated_array}")
```

```
Enter the elements of the array separated by space: 5 3 6
Enter the number of rotations: 2
The array after left rotation by 2 is: [6, 5, 3]
```

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

```
In [6]:    1  def split_and_add(arr, split_index):
           2      if split_index < 0 or split_index >= len(arr):
           3          return "Invalid split index"
           4      else:
           5          return arr[split_index:] + arr[:split_index]
           6
           7  # Taking user input for the array elements and split index
           8  array = list(map(int, input("Enter the elements of the array separated by space:
           9  split_position = int(input("Enter the split position (index): "))
          10
          11  # Splitting the array and adding the first part to the end using the function
          12  result_array = split_and_add(array, split_position)
          13  print(f"The array after splitting at index {split_position} and adding the first
          14
```

```
Enter the elements of the array separated by space: 5 2 6 3 8 9
Enter the split position (index): 3
The array after splitting at index 3 and adding the first part to the end is: [3, 8,
9, 5, 2, 6]
```

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

```
In [7]:    1  def is_monotonic(arr):
           2      increasing = decreasing = True
           3
           4      for i in range(1, len(arr)):
           5          if arr[i] > arr[i - 1]:
           6              decreasing = False
           7          elif arr[i] < arr[i - 1]:
           8              increasing = False
           9
          10      return increasing or decreasing
          11
          12  # Taking user input for the array elements
          13  array = list(map(int, input("Enter the elements of the array separated by space:
          14
          15  # Checking if the array is monotonic using the function
          16  monotonic = is_monotonic(array)
          17
          18  if monotonic:
          19      print("The array is monotonic.")
          20  else:
          21      print("The array is not monotonic.")
          22
```

```
Enter the elements of the array separated by space: 5 6 3 9 8
The array is not monotonic.
```

```
In [ ]:    1
```