Question :

**Easy Level (1-3)**

**1. Find the Maximum Element in an Array**

Given an array of n integers, find and print the maximum element.

**Input:** arr = {3, 5, 2, 8, 6}  
**Output:** 8

**2. Calculate the Sum of All Elements**

Given an array, calculate and print the sum of all elements.

**Input:** arr = {1, 2, 3, 4, 5}  
**Output:** 15

**3. Check if Array is Sorted**

Given an array, check whether it is sorted in ascending order.

**Input:** arr = {1, 2, 2, 4, 5}  
**Output:** YES

**🟡 Medium Level (4-7)**

**4. Reverse the Array**

Reverse the given array in-place.

**Input:** arr = {1, 2, 3, 4}  
**Output:** 4 3 2 1

**5. Move Zeros to the End**

Move all zeros in the array to the end while maintaining the order of non-zero elements.

**Input:** arr = {0, 1, 0, 3, 12}  
**Output:** 1 3 12 0 0

**6. Find the Second Largest Element**

Find the second largest element in the array.

**Input:** arr = {10, 20, 4, 45, 99}  
**Output:** 45

**7. Find Duplicate Elements**

Print all elements that appear more than once in the array.

**Input:** arr = {4, 3, 2, 7, 8, 2, 3, 1}  
**Output:** 2 3

**🔴 Hard Level (8-10)**

**8. Subarray with Given Sum (Sliding Window)**

Given an array and a sum, find a continuous subarray that adds up to the sum.

**Input:** arr = {1, 4, 20, 3, 10, 5}, sum = 33  
**Output:** Subarray found from index 2 to 4

**9. Longest Subarray with Equal Number of 0s and 1s**

Given a binary array, find the longest contiguous subarray with equal number of 0 and 1.

**Input:** arr = {0, 1, 0, 1, 0, 1, 1}  
**Output:** 6

**10. Maximum Subarray Sum (Kadane’s Algorithm)**

Find the contiguous subarray with the maximum sum.

**Input:** arr = {-2, 1, -3, 4, -1, 2, 1, -5, 4}  
**Output:** 6 (subarray: [4, -1, 2, 1])