

RSL Programming Test

Q.1 Write a Java program to find the sum of every K-sized window in a given array and print those window sums which are divisible by a given number. Use the sliding window technique.

Input :Array = {2, 7, 6, 1, 4, 5}

K = 3

Divisor = 3

Windows:

{2, 7, 6} → Sum = 15 (Divisible by 3)

{7, 6, 1} → Sum = 14 (Not divisible by 3)

{6, 1, 4} → Sum = 11 (Not divisible by 3)

{1, 4, 5} → Sum = 10 (Not divisible by 3)

Output : 15

Q.2 Write a Java program to find the size of the window (subarray) whose sum is equal to a given target value using the sliding window technique.

Example:

Array = {1, 4, 20, 3, 10, 5}

Target Sum = 33

Explanation:

Subarray {20, 3, 10} → Sum = 33

Output: Window Size = 3

Q.3 Write a Java program to find the first occurrence and last occurrence of a given number in a sorted array using binary search.

Input:

Array = {1, 2, 2, 2, 3, 4, 5}

Key = 2

Output:

First Occurrence = 1

Last Occurrence = 3

Q.4 Write a Java program to find and display the vowels present in each word of a given string.

Example:

Input:

String = "Java Programming Language"

Output:

Java → a, a

Programming → o, a, i

Language → a, u, a, e