

## 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**