

## Task 5: String Handling – Count of Anagram Substrings

### Aim

To write a Java program to count the number of substrings in a given text that are anagrams of a given pattern.

### Algorithm

1. Start the program.
2. Read the input string text.
3. Read the input string pattern.
4. Find the length of pattern and store it in k.
5. Initialize a counter variable count = 0.
6. Sort the characters of the pattern and store it as sortedPattern.
7. Traverse the text from index 0 to text.length() - k:
  - Extract substring of length k.
  - Sort the substring characters.
  - If sorted substring equals sortedPattern, increment count.
8. Print the value of count.
9. Stop the program.

### Program

```
import java.util.Arrays;
import java.util.Scanner;
public class AnagramCount {
    // Function to sort characters of a string
    static String sortString(String str) {
        char[] charArray = str.toCharArray();
        Arrays.sort(charArray);
        return new String(charArray);
    }
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the text: ");
        String text = sc.nextLine();
        System.out.print("Enter the pattern: ");
        String pattern = sc.nextLine();
        int k = pattern.length();
        int count = 0;
        String sortedPattern = sortString(pattern);
        for (int i = 0; i <= text.length() - k; i++) {
            String substring = text.substring(i, i + k);
            if (sortString(substring).equals(sortedPattern)) {
                count++;
            }
        }
    }
}
```

```
        System.out.println("Number of anagram substrings: " + count);  
    }  
}
```

### **Sample Input 1**

Enter the text: forxxorfxdofr

Enter the pattern: for

### **Output 1**

Number of anagram substrings: 3

### **Sample Input 2**

Enter the text: aabaabaa

Enter the pattern: aaba

### **Output 2**

Number of anagram substrings: 4

### **Result**

Thus, the Java program to count the number of substrings in a text that are anagrams of a given pattern was successfully implemented and executed.