**Problem 5: Missing Roll Number**

**Problem Statement-**You are given an array having roll numbers of n number of students, but actually there are only n-1 number of roll numbers present int the array. The roll numbers are starting from 1 and can be in any sequence. You have to find the missing roll number from the array.

**Example-**

Input- 2 1 4 5

Output-

the missing roll number is : 3

Constraints: roll no > 0

Roll no < 10^16 -1

**Solution:**

import java.util.\*;

public class MissingRollNo {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.println("Enter the roll numbers: ");

        String rollString = scanner.nextLine();

        int rollNo[] = Arrays.stream(rollString.split(" ")).mapToInt(Integer::parseInt).toArray();

        int n = rollNo.length;

        long expectedSum = n \* (n + 1) / 2;

        long actualSum = 0;

        for (int i = 0; i < n - 1; i++) {

            actualSum += rollNo[i];

        }

        long result = expectedSum - actualSum;

        System.out.println("the missing roll number is : ");

        System.out.println(result);

    }

}  
  
**Complexities:**

Time Complexity- O(N)  
Space Complexity- O(N)