

# Rajalakshmi Engineering College

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## 2024\_28\_III\_OOPS Using Java Lab

### 2028\_REC\_OOPS using Java\_Week 2\_Q5

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

#### Section 1 : Coding

##### 1. Problem Statement

Ted, the computer science enthusiast, has accepted the challenge of writing a program that checks if the number of digits in an integer matches the sum of its digits.

Guide Ted in designing and writing the code to solve this problem using a 'do-while' loop.

##### ***Input Format***

The input consists of an integer N, representing the number to be checked.

##### ***Output Format***

If the sum is equal to the number of digits, print "The number of digits in N matches the sum of its digits."

Else, print "The number of digits in N does not match the sum of its digits."

Refer to the sample output for formatting specifications.

### **Sample Test Case**

Input: 20

Output: The number of digits in 20 matches the sum of its digits.

### **Answer**

```
import java.util.Scanner;
class digits{
    public static void main(String args[]){
        Scanner sc= new Scanner(System.in);
        int n =sc.nextInt();
        int d;
        int num=n;
        int sum=0;
        int count=0;
        do {
            d = n % 10;    // Get last digit
            sum += d;      // Add digit to sum
            count++;       // Increase digit count
            n /= 10;       // Remove last digit
        } while (n > 0);
        if(sum==count){
            System.out.print("The number of digits in "+num+ " matches the sum of
its digits.");
        }else{
            System.out.println("The number of digits in " +num+ " does not match the
sum of its digits.");
        }
    }
}
```

```
/*
import java.util.Scanner;
```

```

public class DigitSumChecker {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        int N = sc.nextInt(); // Read the number
        int original = N;    // Store original number for later comparison

        int digitCount = 0;
        int digitSum = 0;

        // Use do-while loop to calculate digit count and sum
        do {
            int digit = N % 10;    // Get last digit
            digitSum += digit;    // Add digit to sum
            digitCount++;        // Increase digit count
            N /= 10;              // Remove last digit
        } while (N > 0);

        // Check if digit count matches digit sum
        if (digitCount == digitSum) {
            System.out.println("The number of digits in " + original + " matches the
sum of its digits.");
        } else {
            System.out.println("The number of digits in " + original + " does not match
the sum of its digits.");
        }

        sc.close();
    }
}
*/

```

**Status :** Correct

**Marks :** 10/10