

# Question1

## Main.java

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {

        // Creating a Scanner object to take user input
        Scanner scanner = new Scanner(System.in);

        // Prompting the user for the task description
        System.out.println("Write a program that counts the number of digits in an integer entered by the user.");
        System.out.println("Enter -1 to exit.");

        // Main loop for user interaction
        while(true){
            // Prompting the user for input
            System.out.println(">>>>>>>>>>");
            System.out.print("Please Enter Number:");

            // Reading the user input
            int input = scanner.nextInt();

            // Checking if the user wants to exit the program
            if(input == -1){
                System.out.println("Program Terminated");
                break;
            }

            // Displaying the result - number of digits
            System.out.println("Number of digits in " + input + " is: " + calDigits(input));
        }

        // Function to calculate the number of digits in an integer
        public static int calDigits(int input){
            int count = 0;

            // Special case for input being 0
            if(input == 0){
                return 1;
            }

            // Taking the absolute value of the input
            input = Math.abs(input);

            // Counting the number of digits using a loop
            while(input != 0){
                count++;
                input /= 10;
            }

            // Returning the count of digits
            return count;
        }
    }
}
```

```
Write a program that counts the number of digits in an integer entered by the user.  
Enter -1 to exit.  
>>>>>>>>>>  
Please Enter Number:1234  
Number of digits in 1234 is: 4  
>>>>>>>>>>  
Please Enter Number:5432  
Number of digits in 5432 is: 4  
>>>>>>>>>>  
Please Enter Number:123  
Number of digits in 123 is: 3  
>>>>>>>>>>  
Please Enter Number:12  
Number of digits in 12 is: 2  
>>>>>>>>>>  
Please Enter Number:2  
Number of digits in 2 is: 1  
>>>>>>>>>>  
Please Enter Number:-1  
Program Terminated
```