

```

import java.util.*;

class GenericCollectionExample{
    public static void main(String []args){
        Scanner sc=new Scanner(System.in);
        List<Integer>numbers=new ArrayList<>();
        System.out.println("enter the numers adding in list:");
        int n=sc.nextInt();

        System.out.println("Enter the elements:");
        for(int i=0;i<n;i++){
            numbers.add(sc.nextInt());
        }

        System.out.println("number of even
number"+countIf(numbers,GenericCollectionExample::isEven));
        System.out.println("number of odd
number"+countIf(numbers,GenericCollectionExample::isOdd));
        System.out.println("number of prime
number"+countIf(numbers,GenericCollectionExample::isPrime));
        System.out.println("number of palindrome
number"+countIf(numbers,GenericCollectionExample::isPalindrome));

        } //sc.close();

    public static<T> int
countIf(Collection<T>collection,PropertyChecker<T>checker){
        int count=0;
        for(T element:collection){
            if(checker.test(element)){
                count++;
            }
        }return count;
    }

    interface PropertyChecker<T>{

```

```

        boolean test(T t);
    }

    public static boolean isEven(int number){
        return number%2==0;
    }

    public static boolean isOdd(int number){
        return number%2!=0;
    }

    public static boolean isPrime(int number){
        if(number<1)return false;
        for (int i=2;i<=Math.sqrt( number);i++){
            if(number %i==0)return false;
        }return true;
    }

    public static boolean isPalindrome(int number){
        String str=String.valueOf(number);
        String reversed=new StringBuilder(str).reverse().toString();
        return str.equals(reversed);
    }

}

```