

Question 8:-(Generics In Array No. odd,Even,Palindrome,Prime Number)

```
import java.util.*;

public class Generics{

    static boolean isPrime(int num){

        int flag =0;

        for(int i = 2;i<num;i++)

            if(num%i==0)

            {

                flag = 1;

                break;

            }

        if(flag==0)

            return true;

        return false;

    }

    static <T> void count(String str,T[] element){

        int even=0,odd=0,prime=0,palin=0;

        if(str.equals("even")){

            for(T value:element)

                if(Integer.parseInt(value.toString())%2==0)

                    even++;

            System.out.println("Total Even : "+even);

        }

        if(str.equals("odd")){

            for(T value:element)

                if(Integer.parseInt(value.toString())%2!=0)

                    odd++;

            System.out.println("Total Odd : "+odd);

        }

    }

}
```

```

if(str.equals("prime")){
for(T value:element)
if(isPrime(Integer.parseInt(value.toString()))
prime++;
System.out.println("Total Prime : "+prime);
}
if(str.equals("palindrome")){
for(T value:element){
StringBuffer rev = new StringBuffer(value.toString());
if(value.toString().equals(new String(rev.reverse())))
palin++;
}
System.out.println("Total Palindrome : "+palin);
}
}

public static void main(String[] args){
Scanner sc=new Scanner(System.in);
int size=0;
System.out.println("Enter Size Of Array:");
size=sc.nextInt();
Integer arr[]=new Integer[size];

for(int i=0;i<size;i++)
{
arr[i]=sc.nextInt();
}
count("even",arr);
count("odd",arr);
count("prime",arr);
count("palindrome",arr);
}

```

