```
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)
  {
     Integer iarray[]={45,70,12,84,38,151,29,30,19,11};
     count("even",iarray);
      count("odd",iarray);
      count("prime",iarray);
      count("palindrome",iarray);
   }
}          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)
  {
     Integer iarray[]={45,70,12,84,38,151,29,30,19,11};
     count("even",iarray);
      count("odd",iarray);
      count("prime",iarray);
      count("palindrome",iarray);
   }
}
```

Output

```
(base) os@os-Vostro-3268:~$ cd Desktop
(base) os@os-Vostro-3268:~/Desktop$ javac Generics.java
(base) os@os-Vostro-3268:~/Desktop$ java Generics
Total even: 5
Total odd: 5
Total prime: 4
Total palindrome: 2
```

(base) os@os-Vostro-3268:~/Desktop$