Practical No. 7(2)

```
package Prac7_2;

import java.util.List;
import java.util.*;

interface SomeSpecialNumber<T>
{
	public boolean match(T t);
}

class PrimeNumber implements SomeSpecialNumber<Integer>
{
@Override
public boolean match(Integer t) {
for (int i = 2; i < t; ++i) {
if (t % i == 0) {
return false;
}
}
return true;
}
}

class EvenNumber implements SomeSpecialNumber<Integer>
{
public boolean match(Integer t)
{
return (t % 2 == 0);
}
}


class Algorithm
{
public <T> int count(List<T> list, SomeSpecialNumber<T> s) {
int count = 0;
for (T type : list)
{
if (s.match(type))
{
++count;
}
}
return count;
}
}

public class Template
{
	public static void main(String[] args)
	{
		Template tq = new Template();
		tq.testSpecificElement();
    }


	public void testSpecificElement()
	{
		List<Integer> list = Arrays.asList(1, 4, 5, 7, 8, 9, 13, 11);
		PrimeNumber pn = new PrimeNumber();
		EvenNumber en = new EvenNumber();
```

```
            Algorithm a = new Algorithm();
            System.out.println(" Count of prime numbers: " + a.count(list,
pn));
            System.out.println(" Count of even numbers: " + a.count(list,
en));
    }
}
```

OUTPUT :

```
Count of prime numbers: 5

Count of even numbers: 2
```