**Project Euler 3**

package largestprimefactorproyeuler;

import java.util.\*;

public class LargestPrimeFactorProyEuler {

int[] prime\_numbers\_list;

public static int[] PrimeFactors(int n)

{

int prime\_numbers\_list[]=new int[n];

int i,k,divisores=0,a;

prime\_numbers\_list[0]=1;

prime\_numbers\_list[1]=2;

a=n-(n-2);

for(i=3;i<=n;i++)

{

divisores=0;

for(k=1;k<i;k++){

if(i%k==0)

divisores++;

}

if(divisores==1)

{

prime\_numbers\_list[a]=i;

a++;

}

}

return prime\_numbers\_list;

}

public static int MaxPrimeFactor(int primes[],int n)

{

int i,prime=1,divisor;

for(i=1;i<primes.length;i++)

{

divisor=primes[i];

if(divisor!=0){

if(n%divisor==0){

prime=primes[i];

}

}

}

return prime;

}

public static void imprime(int primes[])

{

int i;

for(i=0;i<primes.length;i++)

{

System.out.print(" "+primes[i]);

}

}

public static void main(String[] args) {

Scanner lee;

int n,p;

int prime\_numbers[];

lee=new Scanner(System.in);

System.out.print("Número del cual desea obtener los factores primos: ");

n=lee.nextInt();

System.out.println("Los números primos entre 1 y "+n+" son: ");

prime\_numbers=PrimeFactors(n);

imprime(prime\_numbers);

p=MaxPrimeFactor(prime\_numbers,n);

System.out.println("\nEl máximo divisor primo de "+n+" es: "+p);

}

}