```java
package euler;

import java.io.BufferedReader;

/**
 * Finds the sum of all primes below n
 * Project Euler Problem Number 10
 * @author sulliadfd
 */

public class SumPrime {
    private static int[] intArray;
    private static boolean[] checkArray;
    private static int N;
    private static double sum=0;

    /**
     * @param args
     */
    public static void main(String[] args) {
        BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
        System.out.println("I will find the sum of all primes below your input n:");
        while(true) {
            try {
                N=Integer.valueOf(br.readLine());
                break;
            } catch (IOException ioe) {
                System.out.println("Incorrect Input, try again:");
            }
        }
        intArray = new int[N-2];
        checkArray = new boolean[N-2];
        fill();
        checkAll();
        sum();
        System.out.format("The solution is %f",sum);
    }

    /**
     * fills integer array with all integers from 2 to N-1
     * @param void
     * @return void
     */
    private static void fill() {
        for (int i=2;i<N;i++) {
            intArray[i-2]=i;
            checkArray[i-2]=true;
        }
    }

    /**
     * sets all multiples of nonprime n equal to false in the checkArray
     * this is because all multiples of a nonprime are also nonprime
     * @param int n
     * @return void
     */
    private static void removeMultiples(int n) {
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        for (int i=1;n*i<N;i++) checkArray[n*i-2]=false;
    }

    /**
     * checks if all the numbers in integer array are prime
     * if so sets all multiples of the current integer equal to false(nonprime) in checkArray
     * @param void
     * @return void
     */
    public static void checkAll() {
        for (int i=2;i<N;i++) {
            if (!checkArray[i-2]==false && !checkPrime(i)) {
                removeMultiples(i);
            }
        }
    }

    /**
     * sums all integers in integer array where the corresponding entry in checkarray is true
(prime)
     * @param void
     * @return void
     */
    private static void sum() {
        for (int i=0;i<intArray.length;i++) {
            if (checkArray[i]==true) sum+=intArray[i];
        }
    }

    /**
     * checks if a single integer p is prime
     * @param int p
     * @return boolean isPrime
     */
    public static boolean checkPrime(int p) {
        if (Math.abs(p)==2) return true;
        if (Math.abs(p)==1) return false;
        int maxCheck = (int) Math.ceil(Math.sqrt(p));
        if (p%2==0) return false;
        for (int i = 3; i<=maxCheck;i+=2) {
            if (p%i==0) return false;
        }
        return true;
    }
}
```