```java
import java.util.Scanner;
public class Sieve {
public static void main(String[] args)
{
System.out.println("\nSieve of Eratosthenes\n");
Scanner input = new Scanner(System.in);
System.out.print("Enter the primes upper bound ===>> ");

final int MAX = input.nextInt();
input.close();
boolean[] primes = computePrimes(MAX);
displayPrimes(primes);
}
public static boolean[] computePrimes(int upperBound){
// This method will compute the prime numbers
    boolean[] primeArray = new boolean[upperBound+1];
    if (upperBound>=1) {
        primeArray[0]=false;
        primeArray[1]=false;
        for(int i=2;i<=upperBound;i++) {
            primeArray[i]=true;
        }
        for(int i=2;i<=(int)Math.sqrt(upperBound);i++) {
            if (primeArray[i]==true) {
                for(int z=2*i;z<=upperBound;z+=i) {
                    primeArray[z]=false;
                }
            }

        }

    } else {
        if (upperBound==0)
            primeArray[0]=false;

    }


return primeArray;
}
public static void displayPrimes(boolean[] primeArray){
// This method will display the prime numbers
    //Origional Method w/o DecimalFormat
    /*int z = 0;
    for(int i=0;i<primeArray.length;i++) {
        if(primeArray[i]==true) {
            if(Integer.toString(i).length()<Integer.toString
(primeArray.length-1).length()) {
            for(int dig=Integer.toString(primeArray.length).length()-Integer.toString
(i).length();dig>0;dig--)
                System.out.print("0");
            }
            System.out.print(i + " ");
            z++;
        if(z==16) {
            System.out.println();
            z = 0;
        }
        }
```

```
60      } */
61
62      System.out.println("\nCOMPUTING PRIME NUMBERS");
63      String length = new String();
64      for(int i=Integer.toString(primeArray.length).length()-1;i>=0;i--)
65          length=length+"0";
66
67      System.out.println("\nPRIMES BETWEEN 1 AND " + (primeArray.length-1)+"\n");
68      DecimalFormat df = new DecimalFormat(length);
69      int z=0;
70      for(int i=0;i<primeArray.length;i++) {
71          if(primeArray[i]==true) {
72              System.out.print(df.format(i) + " ");
73              z++;
74          }
75          if(z==16) {
76              System.out.println();
77              z = 0;
78          }
79
80  }
81  }
82  }
83
```