

```

import java.text.DecimalFormat;
import java.util.Scanner;

public class Sieve {

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);
        System.out.print("Enter the primes upper bound ==>> ");
        int upperBound = input.nextInt();
        input.close();
        boolean[] primes = computePrimes(upperBound); // Populate the array
        displayPrimes(primes); // Print the prime numbers

    }

    public static boolean[] computePrimes(int upperBound) {

        // This method will compute the prime numbers
        boolean[] primeArray = new boolean[upperBound + 1];
        for (int a = 0; a < primeArray.length; a++) {
            primeArray[a] = true;
        }
        int sqrt = (int) Math.sqrt(upperBound);
        for (int i = 2; i <= sqrt; i++) {
            if (primeArray[i]) {
                for (int k = i * i; k <= upperBound; k += i) {
                    // false is Not prime
                    primeArray[k] = false;
                }
            }
        }
        return primeArray;
    }

    public static void displayPrimes(boolean[] primeArray) {

        // This method will display the prime numbers
        int l = 0;
        String results = new String();
        for (int a = 0; a < String.valueOf(primeArray.length - 1).length(); a+
+) {
            results = results + "0";
        }
        DecimalFormat df = new DecimalFormat(results);
        for (int j = 2; j < primeArray.length; j++) {
            if (primeArray[j] == true) {
                // true is Prime
                String formattedj = df.format(j);
                System.out.print(formattedj + " ");
                l++;
                if (l % 16 == 0) {
                    System.out.println();
                }
            }
        }
    }

}

```