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import java.util.Arrays;
import java.util.Scanner;

public class SieveofEratosthenes {
    static int MAX;

    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 ==>> ");
        MAX = input.nextInt();
        boolean primes[] = new boolean[MAX+1];
        computePrimes(primes);
        displayPrimes(primes);
    }

    public static void computePrimes(boolean primeArray[]) {
        // This method will compute the prime numbers
        int i;
        int a;
        for(i = 2; i < primeArray.length; i++) {
            primeArray[i] = true;
        }

        for(i = 2; i < (int)(Math.sqrt(primeArray.length)+1); i++) {
            if (primeArray[i] == true) {
                for(a = 2; i*a < primeArray.length; a++) {
                    primeArray[i*a] = false;
                }
            }
        }
    }

    public static void displayPrimes(boolean primeArray[]) {
        // This method will display the prime numbers
        int i;
        int a = 0;
        for(i = 1; i < primeArray.length; i++) {
            if(primeArray[i] == true) {
                if(Integer.toString(i).length() == 1) {
                    System.out.print("000" + i + " ");
                }
                a++;
            }
        }
    }
}

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    }

    else if(Integer.toString(i).length() == 2) {
        System.out.print("00" + i + " ");
        a++;
    }

    else if(Integer.toString(i).length() == 3) {
        System.out.print("0" + i + " ");
        a++;
    }

    else if(Integer.toString(i).length() == 4) {
        System.out.print(i + " ");
        a++;
    }

    if (a == 16) {
        System.out.println("");
        a = 0;
    }
}

}

}
```