



```
public class problem7_prime10001 {  
    public static void main(String[] args) {  
        int count = 1;  
  
        // use Integer.MAX_VALUE since we don't know the upper bound, so we let  
        // it run as far as it can as long as i is an integer  
        for (int i = 3; i < Integer.MAX_VALUE; i++) {  
            if (isPrime(i)) {  
                count++;  
            }  
  
            // once we reach the 10001st prime we print that prime and exit the program  
            if (count == 10001) {  
                System.out.println(i);  
                break;  
            }  
        }  
    }  
  
    public static boolean isPrime(int n) {  
        for (int i = 2; i <= Math.sqrt(n); i++) {  
            if (n % i == 0) {  
                return false;  
            }  
        }  
        return true;  
    }  
}
```