```
import java.util.Scanner;

public class PrimeNumber {

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter a number: ");
        int number = scanner.nextInt();

        boolean isPrime = true;
        for (int i = 2; i * i <= number; i++) {
            if (number % i == 0) {
                isPrime = false;
                break;
            }
        }

        if (isPrime) {
            System.out.println("YES");
        } else {
            System.out.println("NO");
        }
    }
}
```

```
import java.util.Scanner;

public class HCF {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter two numbers: ");
        int a = sc.nextInt();
        int b = sc.nextInt();

        int hcf = a;

        for (int i = b; i > 0; i--) {
            if (a % i == 0 && b % i == 0) {
                hcf = i;
                break;
            }
        }

        System.out.println("The HCF of " + a + " and " +
b + " is " + hcf);
```

```
    }
}
```

```
import java.util.Scanner;

public class ArmstrongNumbers {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter N: ");
        int n = sc.nextInt();

        for (int i = 1; i <= n; i++) {
            int sum = 0;
```

```
            int temp = i;

            while (temp > 0) {
                int digit = temp % 10;
                sum += digit * digit * digit;
                temp /= 10;
            }

            if (sum == i) {
                System.out.println(i);
            }
        }
    }
}
```

```java
import java.util.Scanner;

public class PalindromeNumber {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int A = sc.nextInt();

        int reverse = 0;
        for (int i = A; i > 0; i /= 10) {
            int digit = i % 10;
            reverse = reverse * 10 + digit;
        }

        if (reverse == A) {
            System.out.println("Yes");
        } else {
            System.out.println("No");
        }
    }
}
```

```
// Import the Scanner class
import java.util.Scanner;

// Create a class called LCM
public class LCM {

    // Create a method called main()
    public static void main(String[] args) {

        // Create a Scanner object
        Scanner scanner = new Scanner(System.in);

        // Get the two numbers from the user
        int a = scanner.nextInt();
        int b = scanner.nextInt();

        // Initialize the gcd variable
        int gcd = a;
```

```
        // Use a for loop to find the gcd
        for (int i = 0; b > 0; i++) {

            // Swap the values of b and gcd
            int temp = b;
            b = gcd % b;
            gcd = temp;
        }

        // Calculate the lcm
        int lcm = (a * b) / gcd;

        // Print the lcm
        System.out.println(lcm);
    }
}
```

```
import java.util.Scanner;

public class FactorCount {

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int n = scanner.nextInt();
        int count = 0;
        for (int i = 1; i <= n; i++) {
            if (n % i == 0) {
                count++;
                if (n / i != i) {
                    count++;
                }
            }
        }
        System.out.println(count);
    }
}
```