

Calculator.java



Share

Run

```
1 public class Calculator {
2
3     @FunctionalInterface
4     interface Addition {
5         double add(double a, double b);
6
7         default void showInfo() {
8             System.out.println("Performing addition");
9         }
10
11         static String description() {
12             return "This interface performs addition of two numbers.";
13         }
14     }
15
16     @FunctionalInterface
17     interface Subtraction {
18         double subtract(double a, double b);
19
20         default void showInfo() {
21             System.out.println("Performing subtraction");
22         }
23
24         static String description() {
25             return "This interface performs subtraction of two numbers.";
26         }
27     }
28 }
```

```
28
29 @FunctionalInterface
30 interface Multiplication {
31     double multiply(double a, double b);
32
33     default void showInfo() {
34         System.out.println("Performing multiplication");
35     }
36
37     static String description() {
38         return "This interface performs multiplication of two numbers.";
39     }
40 }
41
42
43 @FunctionalInterface
44 interface Division {
45     double divide(double a, double b);
46
47     default void showInfo() {
48         System.out.println("Performing division");
49     }
50
51     static String description() {
52         return "This interface performs division of two numbers.";
53     }
54 }
55
```

```
public static void main(String[] args) {  
    double a = 10;  
    double b = 5;  
  
    Addition add = (x, y) -> x + y;  
    Subtraction subtract = (x, y) -> x - y;  
    Multiplication multiply = (x, y) -> x * y;  
    Division divide = (x, y) -> y != 0 ? x / y : Double.NaN;  
  
    add.showInfo();  
    System.out.println("Addition: " + add.add(a, b));  
    System.out.println(Addition.description());  
  
    subtract.showInfo();  
    System.out.println("Subtraction: " + subtract.subtract(a, b));  
    System.out.println(Subtraction.description());  
  
    multiply.showInfo();  
    System.out.println("Multiplication: " + multiply.multiply(a, b));  
    System.out.println(Multiplication.description());  
  
    divide.showInfo();  
    System.out.println("Division: " + divide.divide(a, b));  
    System.out.println(Division.description());  
  
    // Divide by zero test  
    System.out.println("Divide by zero: " + divide.divide(a, 0));  
}
```

Output

Clear

```
Performing addition
Addition: 15.0
This interface performs addition of two numbers.
Performing subtraction
Subtraction: 5.0
This interface performs subtraction of two numbers.
Performing multiplication
Multiplication: 50.0
This interface performs multiplication of two numbers.
Performing division
Division: 2.0
This interface performs division of two numbers.
Divide by zero: NaN
```

=== Code Execution Successful ===