

eclipse-workspace - komal1/src/komal1/task_4.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Project Explorer X first.jsp task_3.java task_4.java slip10q1.java slip13q2.java demo.java aids.java task4.java
JRE System Library [JavaSE-21]
src
komal1
demo.java
slip10q1.java
slip13q2.java
slip14q1.java
slip17q2.java
slip19q1.java
slip1q1.java
slip21q1.java
slip21q2.java
task_2.java
task_4.java
task.java
task3.java
module-info.java
multithread
opps
Servers
stringtype
task
tejal
JRE System Library [JavaSE-21]
src
tejal
aids.java
demo.java
task_3.java
task.java
task2.java
task4.java
module-info.java
1 package komal1;
2
3 import java.util.Scanner;
4
5 public class task_4 {
6
7     private static double getValidNumber(String prompt)
8     {
9         Scanner sc = new Scanner(System.in);
10        while (true) {
11            try {
12                System.out.print(prompt);
13                return Double.parseDouble(sc.nextLine());
14            } catch (NumberFormatException e) {
15                System.out.println("Invalid input. Enter a number.");
16            }
17        }
18    }
19
20    public static int add(int a, int b) {
21        return a + b;
22    }
23
```

Problems Servers Terminal Data Source Explorer Properties Console X Eclipse IDE for Enterprise Java and Web Developers 2025-12 Release

<terminated> task4 [Java Application] C:\Users\visha\p2\pool\plugins\org.eclipse.jst\openjdkhotspot.jre.full.win32.x86_64.21.0.7.v20250502-0916\jre\bin\javaw.exe (20-Jan-2026, 6:23:48 pm – 6:29:16 pm elapsed: 0:05:27.728) [pid: 12345]

Calculator Menu: Writable | Smart Insert | 89 : 73 : 2744

eclipse-workspace - komal1/src/komal1/task_4.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Project Explorer X first.jsp task_3.java task_4.java slip10q1.java slip17q2.java slip1q1.java slip21q2.java demo.java aids.java task4.java
23
24     // Method overloading - add(double, double)
25● public static double add(double a, double b) {
26     return a + b;
27 }
28
29     // Method overloading - subtract
30● public static int subtract(int a, int b) {
31     return a - b;
32 }
33
34● public static double subtract(double a, double b) {
35     return a - b;
36 }
37
38     // Method overloading - multiply
39● public static int multiply(int a, int b) {
40     return a * b;
41 }
42
43● public static double multiply(double a, double b) {
44     return a * b;

```

Snipping Tool

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```
File Edit Source Refactor Navigate Search Project Run Window Help
Project Explorer X first.jsp task_3.java task_4.java slip10q1.java slip13q2.java slip14q1.java slip17q2.java slip1q1.java slip21q1.java demo.java aids.java task4.java
41 }
42
43● public static double multiply(double a, double b) {
44     return a * b;
45 }
46
47 // Division with exception handling
48● public static double divide(double a, double b) {
49●     if (b == 0) {
50         throw new ArithmeticException("Divide by zero error");
51     }
52     return a / b;
53 }
54
55 // Demonstrating pass-by-value (swap does NOT change original values)
56● public static void swap(int x, int y) {
57     int temp = x;
58     x = y;
59     y = temp;
60     System.out.println("Inside swap: x = " + x + ", y = " + y);
61 }
62
63● public static void main(String[] args) {
64 }
```

Snipping Tool

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eclipse-workspace - komal1/src/komal1/task_4.java - Eclipse IDE

```
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Project Explorer X first.jsp task_3.java task_4.java slip10q1.java slip17q2.java slip1q1.java slip21q2.java demo.java aids.java task4.java
62
63 public static void main(String[] args) {
64     Scanner sc = new Scanner(System.in);
65     int choice;
66
67     do {
68         System.out.println("\nCalculator Menu:");
69         System.out.println("1. Add");
70         System.out.println("2. Subtract");
71         System.out.println("3. Multiply");
72         System.out.println("4. Divide");
73         System.out.println("5. Test Pass-by-Value");
74         System.out.println("6. Exit");
75         choice = sc.nextInt();
76
77         switch (choice) {
78             case 1:
79
80                 System.out.println("Add integers: " + add(7, 8));
81                 System.out.println("Add doubles: " + add(5.4, 3.2));
82                 break;
83             case 2:
84                 System.out.println("Subtract integers: " + sub(10, 5));
```

Calculator Menu:

<terminated> task4 [Java Application] C:\Users\visha\p2pool\plugins\org.eclipse.jst.openjdk.hotspot.jre.full.win32.x86_64.21.0.7.v20250502-0916\jre\bin\java

Writable | Smart Insert | 89 : 73 : 2

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eclipse-workspace - komal1/src/komal1/task_4.java - Eclipse IDE

```
File Edit Source Refactor Navigate Search Project Run Window Help
Project Explorer X first.jsp task_3.java task_4.java slip10q1.java slip17q2.java slip1q1.java demo.java aidsjava task4.java
e komal [visha master]
  > JRE System Library [JavaSE-21]
  > src
    > komal1
      > demo.java
      > slip10q1.java
      > slip13q2.java
      > slip14q1.java
      > slip17q2.java
      > slip19q1.java
      > slip1q1.java
      > slip21q1.java
      > slip21q2.java
      > task_2.java
      > task_4.java
      > task.java
      > task3.java
    > module-info.java
  > multithread
  > opps
  > Servers
  > stringtype
  > task
  > tejal
    > JRE System Library [JavaSE-21]
    > src
      > tejal
        > aids.java
        > demo.java
        > task_3.java
        > task.java
        > task2.java
        > task4.java
      > module-info.java
83●
84
85
86
87●
88
89
90
91●
92
93
94
95
96
97
98
99
100●
101
102
103
104
105
case 2:
    System.out.println("Subtract integers: " + subtract(1, 8));
    System.out.println("Subtract doubles: " + subtract(8.5, 3.2));
    break;
case 3:
    System.out.println("Multiply integers: " + multiply(5, 7));
    System.out.println("Multiply doubles: " + multiply(7.3, 3.5));
    break;
case 4:
    try {
        double num1 = getValidNumber("Enter dividend: ");
        double num2 = getValidNumber("Enter divisor: ");
        System.out.println("Result: " + divide(num1, num2));
    } catch (ArithmaticException e) {
        System.out.println(e.getMessage());
    }
    break;
case 5:
    int a = 10, b = 20;
    System.out.println("Before swap: a = " + a + " b = " + b);
    swap(a, b);
    System.out.println("After swap: a = " + a + " b = " + b);
}
System.out.println("Calculator Menu:");
<terminated> task4 [Java Application] C:\Users\visha\p2pool\plugins\org.eclipse.jst\openjdkhotspot\jre\full\win32\x86_64_21.0.7.v20250502-0916\jre\bin\java
```

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eclipse-workspace - komal1/src/komal1/task_4.java - Eclipse IDE

```
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93     double num1 = getValidNumber("Enter dividend: ");
94     double num2 = getValidNumber("Enter divisor: ");
95     System.out.println("Result: " + divide(num1, num2));
96 } catch (ArithmaticException e) {
97     System.out.println(e.getMessage());
98 }
99 break;
100 case 5:
101     int a = 10, b = 20;
102     System.out.println("Before swap: a = " + a + ", b = " + b);
103     swap(a, b);
104     System.out.println("After swap: a = " + a + ", b = " + b);
105     break;
106 case 6:
107     System.out.println("Exiting...");
108     break;
109 default:
110     System.out.println("Invalid choice.");
111 }
112 } while (choice != 6);
113 }
114 }
```

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eclipse-workspace - komal1/src/komal1/task_4.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Project Explorer X first.jsp task_3.java task_4.java X slip10q1.java slip10q2.java slip1q1.java slip1q2.java demo.java aids.java task4.java 93

JRE System Library [JavaSE-21]

komal1

src

- komal1
 - demo.java
 - slip10q1.java
 - slip13q2.java
 - slip14q1.java
 - slip17q2.java
 - slip19q1.java
 - slip21q1.java
 - slip21q2.java
 - task_2.java
 - task_4.java
 - task.java
 - task3.java

module-info.java

multithread

opps

Servers

stringtype

task

tejal

JRE System Library [JavaSE-21]

src

- tejal
 - aids.java
 - demo.java
 - task_3.java
 - task.java
 - task2.java
 - task4.java

module-info.java

double num1 = getValidNumber("Enter dividend: ");

Calculator Menu:

1. Add
2. Subtract
3. Multiply
4. Divide
5. Test Pass-by-Value
6. Exit

1

Add integers: 16

Add doubles: 7.6000000000000005

Calculator Menu:

1. Add
2. Subtract
3. Multiply
4. Divide
5. Test Pass-by-Value
6. Exit

2

Subtract integers: -7

Console X Eclipse IDE for Enterprise Java and Web Developers 2025-12 Release

<terminated> task 4 [Java Application] C:\Users\visha\p2\pool\plugins\org.eclipse.jst.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-0910\re\bin\javaw.exe (20-Jan-2026, 6:35:26 pm – 6:35:50 pm elapsed: 0:00:23.680) [pic]

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Project Explorer X first.jsp task_3.java task_4.java slip10q1.java slip17q2.java slip1q1.java slip21q2.java demo.java aids.java task4.java N1

JRE System Library [JavaSE-21]

src

- komal1
 - demo.java
 - slip10q1.java
 - slip13q2.java
 - slip14q1.java
 - slip17q2.java
 - slip19q1.java
 - slip1q1.java
 - slip21q1.java
 - task_2.java
 - task_4.java
 - task.java
 - task3.java
- multithread
- oops
- Servers
- stringtype
- task
- tejal
 - aids.java
 - demo.java
 - task_3.java
 - task.java
 - task2.java
 - task4.java
- module-info.java

double num1 = getValidNumber("Enter dividend: ");
double num2 = getValidNumber("Enter divisor: ");
System.out.println("Subtract integers: " + (num1 - num2));
System.out.println("Subtract doubles: " + (num1 - num2));

Calculator Menu:
1. Add
2. Subtract
3. Multiply
4. Divide
5. Test Pass-by-Value
6. Exit
3
Subtract integers: -7
Subtract doubles: 5.3

Calculator Menu:
1. Add
2. Subtract
3. Multiply
4. Divide
5. Test Pass-by-Value
6. Exit
3
Multiply integers: 35
Multiply doubles: 25.55

Calculator Menu:
1. Add
2. Subtract
3. Multiply
4. Divide
5. Test Pass-by-Value

Problems Servers Terminal Data Source Explorer Properties Console Eclipse IDE for Enterprise Java and Web Developers 2025-12 Release

<terminated> task_4 [Java Application] C:\Users\visha\p2\pool\plugins\org.eclipse.jdt.openjdk.hotspot.re.full.win32.x86_64_21.0.7.v20250502-0916\jre\bin\javaw.exe (20-Jan-2026, 6:35:26 pm – 6:35:50 pm elapsed: 0:00:23.680) [pid 1044]

2

Subtract integers: -7

Subtract doubles: 5.3

Calculator Menu:

- 1. Add
- 2. Subtract
- 3. Multiply
- 4. Divide
- 5. Test Pass-by-Value
- 6. Exit

3

Multiply integers: 35

Multiply doubles: 25.55

Calculator Menu:

- 1. Add
- 2. Subtract
- 3. Multiply
- 4. Divide
- 5. Test Pass-by-Value

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eclipse-workspace - komal1/src/komal1/task_4.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Project Explorer X first.jsp task_3.java task_4.java 93 double num1 = getValidNumber("Enter dividend: ");

Problems Servers Terminal Data Source Explorer Properties Console X Eclipse IDE for Enterprise Java and Web Developers 2025-12 Release

<terminated> task 4 [Java Application] C:\Users\visha\p2\pool\plugins\org.eclipse.jst.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-0916\re\bin\javaw.exe (20-Jan-2026, 6:35:26 pm – 6:35:50 pm elapsed: 0:00:23.680) [pic]

Calculator Menu:
1. Add
2. Subtract
3. Multiply
4. Divide
5. Test Pass-by-Value
6. Exit
4
Enter dividend: 3
Enter divisor: 3
Result: 1.0

Calculator Menu:
1. Add
2. Subtract
3. Multiply
4. Divide
5. Test Pass-by-Value
6. Exit
5
Before swap: a = 10. b = 20

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eclipse-workspace - komal1/src/komal1/task_4.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Project Explorer X first.jsp task_3.java task_4.java X slip10q1.java slip10q2.java slip1q1.java slip1q2.java demo.java aids.java task4.java

93 double num1 = getValidNumber("Enter dividend: ");

Calculator Menu:

1. Add
2. Subtract
3. Multiply
4. Divide
5. Test Pass-by-Value
6. Exit

5

Before swap: a = 10, b = 20
Inside swap: x = 20, y = 10
After swap: a = 10, b = 20

Calculator Menu:

1. Add
2. Subtract
3. Multiply
4. Divide
5. Test Pass-by-Value
6. Exit

6

Exiting...

Snipping Tool

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The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Shows two projects: "komal1" and "tejal". "komal1" contains several Java files like demo.java, slip10q1.java, etc., and a module-info.java file. "tejal" also contains Java files and a module-info.java file.
- Code Editor:** Displays the task_4.java file with code related to a calculator menu and variable swapping.
- Output Console:** Shows the execution of the program, displaying the menu options, swap operations, and the final exiting message.
- Snipping Tool Overlay:** A window titled "Snipping Tool" is overlaid on the bottom right, indicating a screenshot was taken.