File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Package Explorer ×   JUnit

- calculator
  - JRE System Library [JavaSE-17]
  - src
    - calculator
      - Calculator.java

calculator

- JRE System Library [JavaSE-17]

- src
  - calculator
    - Calculator.java
    - CalculatorTest.java
    - CalculatorVO.java
    - MainClass.java

ile   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Package Explorer ×   JUnit   MainClass.java   Calculator.java ×

- calculator
  - JRE System Library [JavaSE-17]
  - src
    - calculator
      - Calculator.java
      - CalculatorTest.java
      - CalculatorVO.java
      - MainClass.java
  - Referenced Libraries
    - junit-4.13.2-javadoc.jar - C:\Users\Acer\Downloads
  - JUnit 4
    - org.hamcrest_2.2.0.jar - C:\Users\Acer\.p2\pool\plug
    - org.hamcrest.core_2.2.0.v20230809-1000.jar - C:\Use
    - org.junit_4.13.2.v20230809-1000.jar - C:\Users\Acer\.
- dynamic

```java
1  package calculator;
2
3  public class Calculator {
4      int result;
5      //Method for addition
6      public int add(int num1, int num2){
7          result = num1+num2;
8          return result;
9      }
10     //Method for subtraction
11     public int substract(int num1, int num2){
12         result = num1-num2;
13         return result;
14     }
15     //Method for multiplication
16     public int multiply(int num1, int num2){
17         result = num1*num2;
18         return result;
19     }
20     //Method for division
```

```java
package calculator;

public class CalculatorVO {
    private int firstNumber;
    private int secondNumber;

    public int getFirstNumber() {
        return firstNumber;
    }
    public void setFirstNumber(int firstNumber) {
        this.firstNumber = firstNumber;
    }
    public int getSecondNumber() {
        return secondNumber;
    }
    public void setSecondNumber(int secondNumber) {
        this.secondNumber = secondNumber;
    }
}
```

```java
package calculator;

import java.util.Scanner;

public class MainClass {

    public static void main(String[] args) {

        Scanner scan = new Scanner(System.in);
        System.out.println("Enter first number");
        int firstNumber = scan.nextInt();

        System.out.println("Enter second number");
        int secondNumber = scan.nextInt();

        //set the values in VO
        CalculatorVO calVO = new CalculatorVO();
        calVO.setFirstNumber(firstNumber);
        calVO.setSecondNumber(secondNumber);

        Calculator cal = new Calculator();

        int addResult = cal.add(calVO.getFirstNumber(), calVO.getSecondNumber());
        System.out.println("Addition Result ="+addResult);

        int subResult = cal.substract(calVO.getFirstNumber(), calVO.getSecondNumber());
        System.out.println("Subtraction Result ="+subResult);

        int mulResult = cal.multiply(calVO.getFirstNumber(), calVO.getSecondNumber());
        System.out.println("Multiplication Result ="+mulResult);

        float divResult = cal.divide(calVO.getFirstNumber(), calVO.getSecondNumber());
        System.out.println("Division Result ="+divResult);

    }
}
```

```java
package calculator;

import java.util.Scanner;

public class MainClass {

    public static void main(String[] args) {

        Scanner scan = new Scanner(System.in);
        System.out.println("Enter first number");
        int firstNumber = scan.nextInt();

        System.out.println("Enter second number");
        int secondNumber = scan.nextInt();

        //set the values in VO
        CalculatorVO calVO = new CalculatorVO();
        calVO.setFirstNumber(firstNumber);
        calVO.setSecondNumber(secondNumber);

        Calculator cal = new Calculator();

        int addResult = cal.add(calVO.getFirstNumber(), calVO.getSecondNumber());
        System.out.println("Addition Result ="+addResult);

        int subResult = cal.substract(calVO.getFirstNumber(), calVO.getSecondNumber());
        System.out.println("Subtraction Result ="+subResult);

        int mulResult = cal.multiply(calVO.getFirstNumber(), calVO.getSecondNumber());
        System.out.println("Multiplication Result ="+mulResult);

        float divResult = cal.divide(calVO.getFirstNumber(), calVO.getSecondNumber());
        System.out.println("Division Result ="+divResult);

    }

}
```

Console output:
```
<terminated> MainClass [Java Application] C:\Users\Acer\p2\pool\plugins\org.eclips
Enter first number
10
Enter second number
20
Addition Result =30
Subtraction Result =-10
Multiplication Result =200
Division Result =0.0
```

Package Explorer:
- calculator
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    - org.junit_4.13.2.v20230809-1000.jar - C:\Users\Acer\
- dynamic
- Servers

Second screenshot (context menu):

New
Go Into
Open in New Window
Open Type Hierarchy   F4
Show In   Alt+Shift+W >
Show in Local Terminal
Copy   Ctrl+C
Copy Qualified Name
Paste   Ctrl+V
Delete   Delete
Remove from Context   Ctrl+Alt+Shift+Down
Build Path
Source   Alt+Shift+S >
Refactor   Alt+Shift+T >
Import...
Export...
Source
References
Declarations
Refresh   F5
Assign Working Sets...
Coverage As
Run As
Debug As
Profile As
Restore from Local History...
Team
Compare With
GitHub
Configure
Validate
Properties   Alt+Enter

New submenu:
Java Project
Maven Project
Project...
Package
Class
Interface
Enum
Record
Annotation
Source Folder
Java Working Set
Folder
File
Untitled Text File
Task
JUnit Test Case
Example...
Other...   Ctrl+N

Package Explorer JUnit

- calculator
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- dynamic
- Servers

MainClass.java   Calculator.j...   CalculatorVO.java   CalculatorTest.java

```
40   /**
41    * @throws java.la...
42    */
43   @After
44   public void tearDo...
45   }
46
47   /**
48    * Test method for
49    */
50   @Test
51   public void testAd...
52
53       //fail("Not ye...
54       Calculator ca
55
56       assertTrue("su...
57
58   }
59
60   /**
61    * Test method for
62    */
63   @Test
64   public void testSu...
65       //fail("Not ye...
66       Calculator ca
67       assertTrue("su...
68   }
69
70   /**
71    * Test method for
72    */
73   @Test
74   public void testMu...
75       //fail("Not ye...
76       Calculator ca
77       assertTrue("mu...
78   }
79
80   /**
81    * Test method for
82    */
```

Context menu:
- Undo   Ctrl+Z
- Revert File
- Save   Ctrl+S
- Open Declaration   F3
- Open Type Hierarchy   F4
- Open Call Hierarchy   Ctrl+Alt+H
- Show in Breadcrumb   Alt+Shift+B
- Quick Outline   Ctrl+O
- Quick Type Hierarchy   Ctrl+T
- Open With   >
- Show In   Alt+Shift+W >
- Cut   Ctrl+X
- Copy   Ctrl+C
- Copy Qualified Name
- Paste   Ctrl+V
- Raw Paste
- Quick Fix   Ctrl+1
- Source   Alt+Shift+S >
- Refactor   Alt+Shift+T >
- Local History   >
- References   >
- Declarations   >
- Add to Snippets...
- Coverage As   >
- Run As   >
- Debug As   >
- Profile As   >
- GitHub   >
- Team   >
- Compare With   >
- Replace With   >
- Validate
- Preferences...
- Remove from Context   Ctrl+Alt+Shift+Down

Run As submenu:
- 1 JUnit Test   Alt+Shift+X, T
- Run Configurations...
- 2 CalculatorTest (JUnit)

Smart Insert   51 : 28 : 828

Type to search   ENG IN   2:59 AM 12/21/2023

MainClass.java   Calculator.java   CalculatorVO.java   CalculatorTest.java

```
1   /**
4   package calculator;
5
6   import static org.junit.Assert.*;
13
14   /**
15    *
16    */
17   public class CalculatorTest {
18
19       /**
20        * @throws java.lang.Exception
21        */
22       @BeforeClass
23       public static void setUpBeforeClass() throws Exception {
24       }
25
26       /**
27        * @throws java.lang.Exception
28        */
29       @AfterClass
30       public static void tearDownAfterClass() throws Exception {
31       }
32
33       /**
34        * @throws java.lang.Exception
35        */
36       @Before
37       public void setUp() throws Exception {
38       }
39
40       /**
41        * @throws java.lang.Exception
42        */
43       @After
44       public void tearDown() throws Exception {
45       }
46
47       /**
48        * Test method for {@link calculator.Calculator#add(int, int)}.
49        */
50       @Test
51       public void testAdd() {
```

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Type to search   ENG IN   2:58 AM 12/21/2023

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer JUnit ×

Finished after 0.018 seconds

Runs: 1/1   Errors: 0   Failures: 0

testAdd [Runner: JUnit 4] (0.000 s)

Failure Trace

MainClass.java   Calculator.java   CalculatorVO.java   CalculatorTest.java ×

```java
41        * @throws java.lang.Exception
42        */
43      @After
44      public void tearDown() throws Exception {
45      }
46
47      /**
48        * Test method for {@link calculator.Calculator#add(int, int)}.
49        */
50      @Test
51      public void testAdd() {
52
53          //fail("Not yet implemented");
54          Calculator ca = new Calculator();
55
56          assertTrue("sum is not as expected", ca.add(5, 4)==9);
57
58      }
59
60      /**
61        * Test method for {@link calculator.Calculator#substract(int, int)}.
62        */
63      @Test
64      public void testSubstract() {
65          //fail("Not yet implemented");
66          Calculator ca = new Calculator();
67          assertTrue("sub is not as expected", ca.substract(5, 4)==1);
68      }
69
70      /**
71        * Test method for {@link calculator.Calculator#multiply(int, int)}.
72        */
73      @Test
74      public void testMultiply() {
75          //fail("Not yet implemented");
76          Calculator ca = new Calculator();
77          assertTrue("mul. is not as expected", ca.multiply(5, 4)==20);
78      }
79
80      /**
81        * Test method for {@link calculator.Calculator#divide(int, int)}.
82        */
```

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File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer JUnit ×

Finished after 0.02 seconds

Runs: 1/1   Errors: 0   Failures: 0

testSubstract [Runner: JUnit 4] (0.000 s)

Failure Trace

MainClass.java   Calculator.java   CalculatorVO.java   CalculatorTest.java ×

```java
41        * @throws java.lang.Exception
42        */
43      @After
44      public void tearDown() throws Exception {
45      }
46
47      /**
48        * Test method for {@link calculator.Calculator#add(int, int)}.
49        */
50      @Test
51      public void testAdd() {
52
53          //fail("Not yet implemented");
54          Calculator ca = new Calculator();
55
56          assertTrue("sum is not as expected", ca.add(5, 4)==9);
57
58      }
59
60      /**
61        * Test method for {@link calculator.Calculator#substract(int, int)}.
62        */
63      @Test
64      public void testSubstract() {
65          //fail("Not yet implemented");
66          Calculator ca = new Calculator();
67          assertTrue("sub is not as expected", ca.substract(5, 4)==1);
68      }
69
70      /**
71        * Test method for {@link calculator.Calculator#multiply(int, int)}.
72        */
73      @Test
74      public void testMultiply() {
75          //fail("Not yet implemented");
76          Calculator ca = new Calculator();
77          assertTrue("mul. is not as expected", ca.multiply(5, 4)==20);
78      }
79
80      /**
81        * Test method for {@link calculator.Calculator#divide(int, int)}.
82        */
```

Writable   Smart Insert   64 : 23 : 1090

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File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer JUnit

Finished after 0.021 seconds

Runs: 1/1   Errors: 0   Failures: 0

testMultiply [Runner: JUnit 4] (0.000 s)

Failure Trace

MainClass.java   Calculator.java   CalculatorVO.java   CalculatorTest.java

```java
47  /**
48   * Test method for {@link calculator.Calculator#add(int, int)}.
49   */
50  @Test
51  public void testAdd() {
52
53      //fail("Not yet implemented");
54      Calculator ca = new Calculator();
55
56      assertTrue("sum is not as expected", ca.add(5, 4)==9);
57
58  }
59
60  /**
61   * Test method for {@link calculator.Calculator#substract(int, int)}.
62   */
63  @Test
64  public void testSubstract() {
65      //fail("Not yet implemented");
66      Calculator ca = new Calculator();
67      assertTrue("sub is not as expected", ca.substract(5, 4)==1);
68  }
69
70  /**
71   * Test method for {@link calculator.Calculator#multiply(int, int)}.
72   */
73  @Test
74  public void testMultiply() {
75      //fail("Not yet implemented");
76      Calculator ca = new Calculator();
77      assertTrue("mul. is not as expected", ca.multiply(5, 4)==20);
78  }
79
80  /**
81   * Test method for {@link calculator.Calculator#divide(int, int)}.
82   */
83  @Test
84  public void testDivide() {
85      //fail("Not yet implemented");
86      Calculator ca = new Calculator();
87      assertTrue("Div. is not as expected", ca.divide(8 , 4)==2);
88  }
89
```

Writable   Smart Insert   74 : 24 : 1355

Finished after 0.025 seconds

Runs: 1/1   Errors: 0   Failures: 0

testDivide [Runner: JUnit 4] (0.001 s)

Failure Trace

MainClass.java   Calculator.java   CalculatorVO.java   CalculatorTest.java

```java
54  Calculator ca = new Calculator();
55
56      assertTrue("sum is not as expected", ca.add(5, 4)==9);
57
58  }
59
60  /**
61   * Test method for {@link calculator.Calculator#substract(int, int)}.
62   */
63  @Test
64  public void testSubstract() {
65      //fail("Not yet implemented");
66      Calculator ca = new Calculator();
67      assertTrue("sub is not as expected", ca.substract(5, 4)==1);
68  }
69
70  /**
71   * Test method for {@link calculator.Calculator#multiply(int, int)}.
72   */
73  @Test
74  public void testMultiply() {
75      //fail("Not yet implemented");
76      Calculator ca = new Calculator();
77      assertTrue("mul. is not as expected", ca.multiply(5, 4)==20);
78  }
79
80  /**
81   * Test method for {@link calculator.Calculator#divide(int, int)}.
82   */
83  @Test
84  public void testDivide() {
85      //fail("Not yet implemented");
86      Calculator ca = new Calculator();
87      assertTrue("Div. is not as expected", ca.divide(8 , 4)==2);
88  }
89
90  /**
91   * Test method for {@link java.lang.Object#Object()}.
92   */
93  @Test
94  public void testObject() {
95      fail("Not yet implemented");
96  }
```

Writable   Smart Insert   84 : 20 : 1613