

CASE 01 :-Addition Operation

The screenshot shows the Eclipse IDE with two windows. The top window is 'CalculatorApp.java' and the bottom window is 'Console'. The code in 'CalculatorApp.java' is as follows:

```
15 System.out.println("Subtraction (/)");
16 System.out.println("Multiplication (*)");
17 System.out.println("Division (/)");
18 System.out.println("Exit");
19
20 System.out.println("Choose any NUMBER for operation");
21 int choice = scanner.nextInt();
22
23 if(choice==1)
24 {
25     System.out.println("Enter the first number:");
26     double num1 = scanner.nextDouble();
27     System.out.println("Enter the second number:");
28     double num2 = scanner.nextDouble();
29     Calculator calc = new Calculator(num1,num2);
30     double finalresult=calc.getResult();
31     System.out.println("THE RESULT IS "+finalresult);
32 }
33 }
```

The 'Console' window shows the following output:

```
CalculatorApp [Java Application] C:\Users\nanda.p2\poo\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.jre\bin\java.exe
Welcome to the Basic Calculator
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exit
Choose any NUMBER for operation:
1
Enter the first number: 12
Enter the second number: 12
THE RESULT IS: 24.0
```

CASE 02 :-Subtraction Operation

The screenshot shows the Eclipse IDE with two windows. The top window is 'CalculatorApp.java' and the bottom window is 'Console'. The code in 'CalculatorApp.java' is as follows:

```
15 System.out.println("Subtraction (/)");
16 System.out.println("Multiplication (*)");
17 System.out.println("Division (/)");
18 System.out.println("Exit");
19
20 System.out.println("Choose any NUMBER for operation");
21 int choice = scanner.nextInt();
22
23 if(choice==1)
24 {
25     System.out.println("Enter the first number:");
26     double num1 = scanner.nextDouble();
27     System.out.println("Enter the second number:");
28     double num2 = scanner.nextDouble();
29     Calculator calc = new Calculator(num1,num2);
30     double finalresult=calc.getResult();
31     System.out.println("THE RESULT IS "+finalresult);
32 }
33 }
```

The 'Console' window shows the following output:

```
CalculatorApp [Java Application] C:\Users\nanda.p2\poo\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.jre\bin\java.exe
Welcome to the Basic Calculator
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exit
Choose any NUMBER for operation:
2
Enter the first number: 12
Enter the second number: 11
THE RESULT IS: 1.0
```

CASE 03 :- Multiplication Operation

The screenshot shows the Eclipse IDE with three panels. The top-left panel displays the `CalculatorApp.java` file, which contains the main logic for the calculator. The top-right panel shows the `Console` output, and the bottom panel shows the `Calculator.java` file.

```
CalculatorApp.java
15 System.out.println("2. Subtraction (/)");
16 System.out.println("3. Multiplication (*)");
17 System.out.println("4. Division (/)");
18 System.out.println("5. Exit");
19
20 System.out.println("Choose any NUMBER for operation:");
21 int choice = scanner.nextInt();
22
23 if(choice!=0)
24 {
25     System.out.println("Enter the first number: ");
26     double num1 = scanner.nextDouble();
27     System.out.println("Enter the second number: ");
28     double num2 = scanner.nextDouble();
29
30     Calculator calc=new Calculator(choice,num1,num2);
31
32     double finalresult=calc.result;
33     System.out.println("THE RESULT IS "+finalresult);
34 }
35
```

```
Calculator.java
4
5 class Calculator{
6
7
8     public double result;
9
10    public Calculator(int choice,double num1, double num2)
11    {
12
13        double result;
14
15        switch (choice)
16        {
17            case 1:
18                this.result = num1 + num2;
19                break;
20
21            case 2:
22                this.result = num1 - num2;
23                break;
24
25        }
26    }
27
28    }
29
```

```
Console
CalculatorApp [Java Application] C:\Users\nanda\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full\jre\bin\java.exe
Welcome to the Basic Calculator
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exit
Choose any NUMBER for operation:
3
Enter the first number: 11.2
Enter the second number: 23.56666
THE RESULT IS 263.94669199999995
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exit
Choose any NUMBER for operation:
```

CASE 04 :- Division Operation

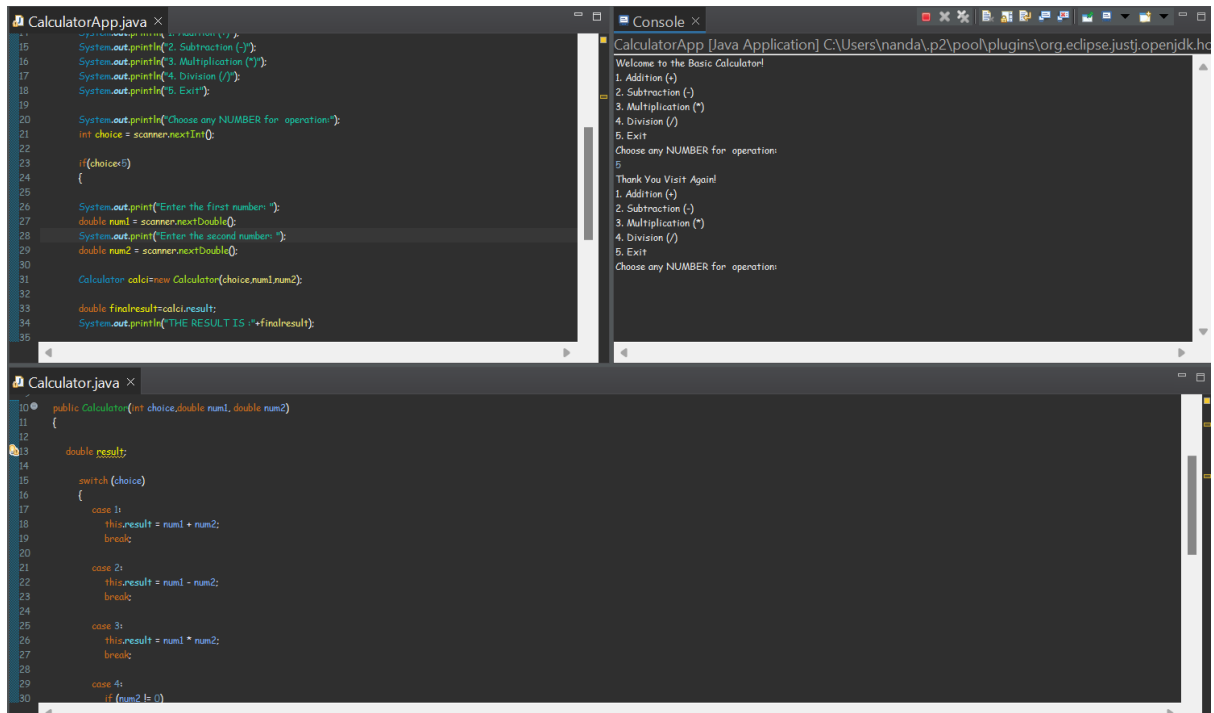
The screenshot shows the Eclipse IDE with three panels. The top-left panel displays the `CalculatorApp.java` file, which contains the main logic for the calculator. The top-right panel shows the `Console` output, and the bottom panel shows the `Calculator.java` file.

```
CalculatorApp.java
15 System.out.println("2. Subtraction (/)");
16 System.out.println("3. Multiplication (*)");
17 System.out.println("4. Division (/)");
18 System.out.println("5. Exit");
19
20 System.out.println("Choose any NUMBER for operation:");
21 int choice = scanner.nextInt();
22
23 if(choice!=0)
24 {
25     System.out.println("Enter the first number: ");
26     double num1 = scanner.nextDouble();
27     System.out.println("Enter the second number: ");
28     double num2 = scanner.nextDouble();
29
30     Calculator calc=new Calculator(choice,num1,num2);
31
32     double finalresult=calc.result;
33     System.out.println("THE RESULT IS "+finalresult);
34 }
35
```

```
Calculator.java
4
5 class Calculator{
6
7
8     public double result;
9
10    public Calculator(int choice,double num1, double num2)
11    {
12
13        double result;
14
15        switch (choice)
16        {
17            case 1:
18                this.result = num1 + num2;
19                break;
20
21            case 2:
22                this.result = num1 - num2;
23                break;
24
25        }
26    }
27
28    }
29
```

```
Console
CalculatorApp [Java Application] C:\Users\nanda\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full\jre\bin\java.exe
Welcome to the Basic Calculator
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exit
Choose any NUMBER for operation:
4
Enter the first number: 5.2
Enter the second number: 12
THE RESULT IS 0.4333333333333333
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exit
Choose any NUMBER for operation:
```

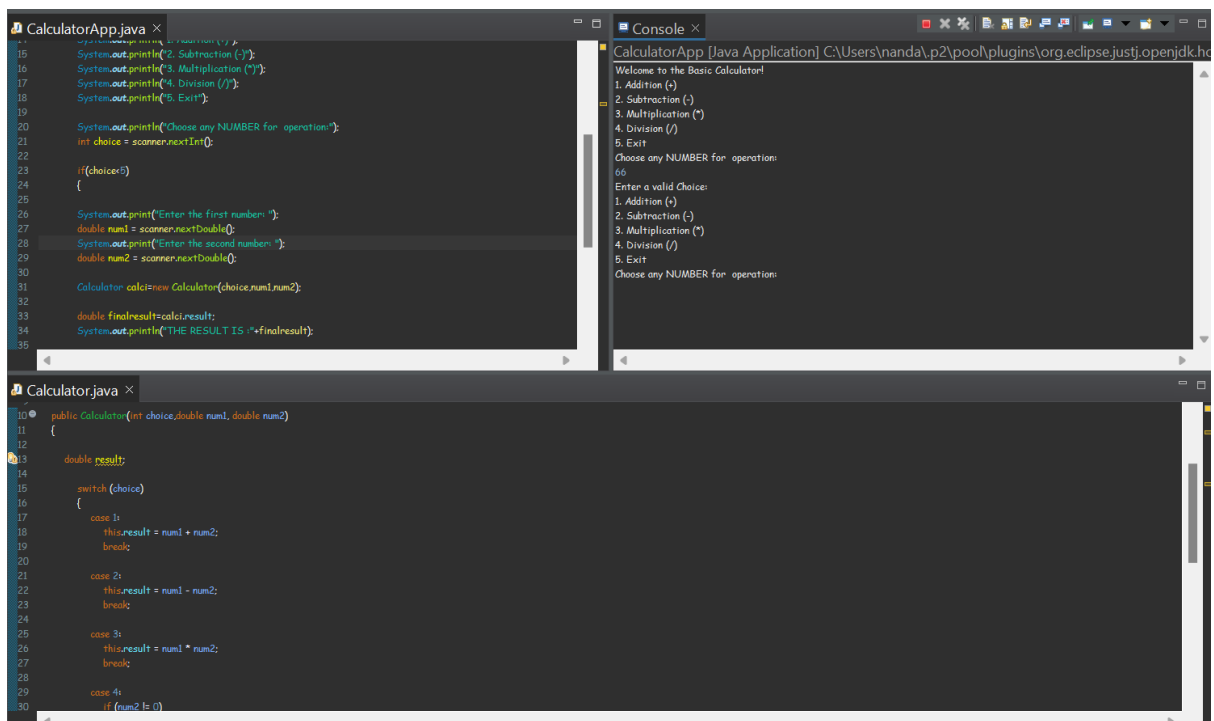
CASE 05 :-Giving Invalid Input



```
CalculatorApp.java
15 System.out.println("2. Subtraction (-)");
16 System.out.println("3. Multiplication (*)");
17 System.out.println("4. Division (/)");
18 System.out.println("5. Exit");
19
20 System.out.println("Choose any NUMBER for operation:");
21 int choice = scanner.nextInt();
22
23 if(choice<5)
24 {
25
26 System.out.println("Enter the first number: ");
27 double num1 = scanner.nextDouble();
28 System.out.println("Enter the second number: ");
29 double num2 = scanner.nextDouble();
30
31 Calculator calci=new Calculator(choice,num1,num2);
32
33 double finalresult=calci.result;
34 System.out.println("THE RESULT IS :"+finalresult);
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Calculator.java
10 public Calculator(int choice,double num1, double num2)
11 {
12
13 double result;
14
15 switch (choice)
16 {
17 case 1:
18 this.result = num1 + num2;
19 break;
20
21 case 2:
22 this.result = num1 - num2;
23 break;
24
25 case 3:
26 this.result = num1 * num2;
27 break;
28
29 case 4:
30 if (num2 != 0)
31 this.result = num1 / num2;
32 break;
33
34 default:
35 this.result = 0;
36 break;
37 }
38 }
39
40 double result()
41 {
42 return result;
43 }
44
45 }
```

```
CalculatorApp [Java Application] C:\Users\nanda\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full\jre\bin\java.exe
Welcome to the Basic Calculator!
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exit
Choose any NUMBER for operation:
5
Thank You Visit Again!
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exit
Choose any NUMBER for operation:
```



```
CalculatorApp.java
15 System.out.println("2. Subtraction (-)");
16 System.out.println("3. Multiplication (*)");
17 System.out.println("4. Division (/)");
18 System.out.println("5. Exit");
19
20 System.out.println("Choose any NUMBER for operation:");
21 int choice = scanner.nextInt();
22
23 if(choice<5)
24 {
25
26 System.out.println("Enter the first number: ");
27 double num1 = scanner.nextDouble();
28 System.out.println("Enter the second number: ");
29 double num2 = scanner.nextDouble();
30
31 Calculator calci=new Calculator(choice,num1,num2);
32
33 double finalresult=calci.result;
34 System.out.println("THE RESULT IS :"+finalresult);
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Calculator.java
10 public Calculator(int choice,double num1, double num2)
11 {
12
13 double result;
14
15 switch (choice)
16 {
17 case 1:
18 this.result = num1 + num2;
19 break;
20
21 case 2:
22 this.result = num1 - num2;
23 break;
24
25 case 3:
26 this.result = num1 * num2;
27 break;
28
29 case 4:
30 if (num2 != 0)
31 this.result = num1 / num2;
32 break;
33
34 default:
35 this.result = 0;
36 break;
37 }
38 }
39
40 double result()
41 {
42 return result;
43 }
44
45 }
```

```
CalculatorApp [Java Application] C:\Users\nanda\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full\jre\bin\java.exe
Welcome to the Basic Calculator!
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exit
Choose any NUMBER for operation:
66
Enter a valid Choice:
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Exit
Choose any NUMBER for operation:
```