

```
1. public class ExceptionEx1 {
```

```
    public static void main(String args[]) {
```

```
        int[] nums = {3, 2, 6, 1};
```

```
        badUse(nums);
```

```
    }
```

```
    public static void badUse(int[] vals) {
```

```
        int total = 0;
```

```
        for (int i = 0; i < vals.length; i++) {
```

```
            try {
```

```
                int index = vals[i];
```

```
                total += vals[index];
```

```
            } catch (ArrayIndexOutOfBoundsException e) {
```

```
                System.out.println("Index " + vals[i] + " is out of bounds. Skipping this index.");
```

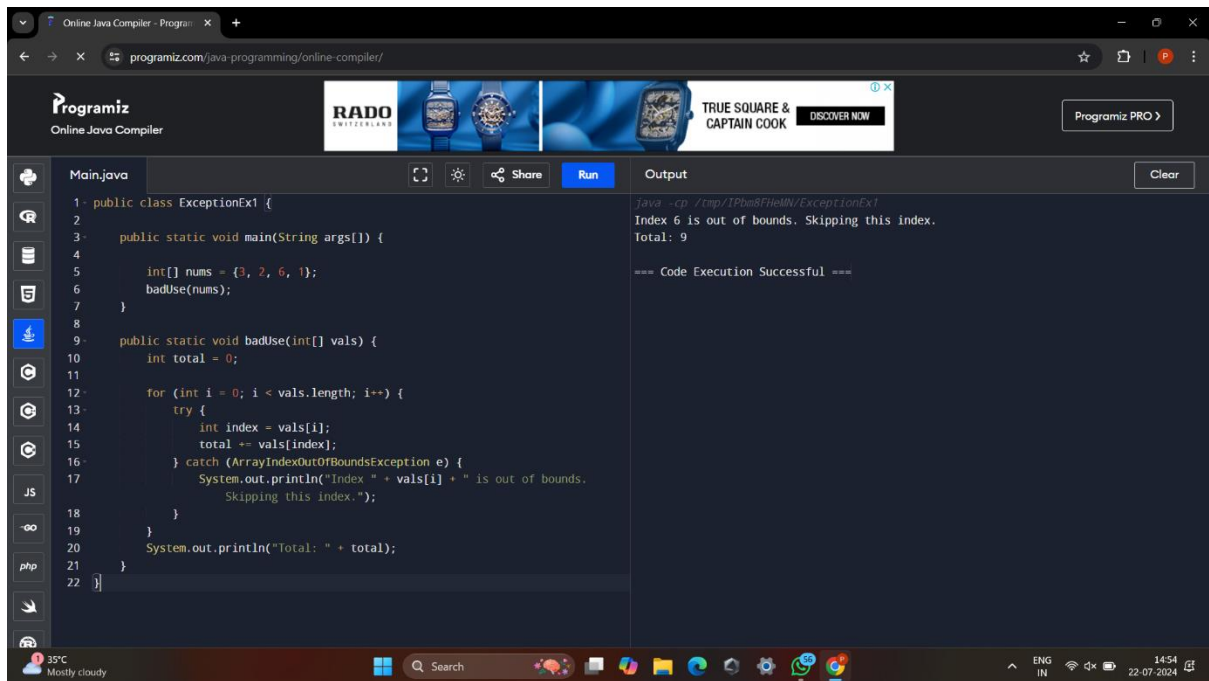
```
            }
```

```
        }
```

```
        System.out.println("Total: " + total);
```

```
    }
```

```
}
```



```
2. public class Calculator {  
    public int add(int x, int y) {  
        return x + y;  
    }  
}
```

// This method now includes exception handling for divide-by-zero

```
public double divide(int x, int y) {  
    try {  
        return x / y;  
    } catch (ArithmeticException e) {  
        System.out.println("Error: Division by zero is not allowed.");  
        return Double.NaN; // Returning NaN to indicate an error  
    }  
}
```

```

public static void main(String[] args) {

    Calculator calculator = new Calculator();


    int a = 10;

    int b = 0;


    // Testing the add method

    System.out.println("Addition: " + calculator.add(a, b));


    // Testing the divide method with exception handling

    System.out.println("Division: " + calculator.divide(a, b));

}
}

```

The screenshot displays the Programiz Online Java Compiler interface. The code editor on the left contains the following Java code:

```

1 public class Calculator {
2     public int add(int x, int y) {
3         return x + y;
4     }
5     public double divide(int x, int y) {
6         try {
7             return x / y;
8         } catch (ArithmeticException e) {
9             System.out.println("Error: Division by zero is not allowed.");
10            return Double.NaN;
11        }
12    }
13
14    public static void main(String[] args) {
15        Calculator calculator = new Calculator();
16
17        int a = 10;
18        int b = 0;
19
20        System.out.println("Addition: " + calculator.add(a, b));
21
22        System.out.println("Division: " + calculator.divide(a, b));
23    }
24 }

```

The output panel on the right shows the execution results:

```

java -cp /tmp/QMMbVWgss/Calculator
Addition: 10
ERROR!
Error: Division by zero is not allowed.
Division: NaN
=== Code Execution Successful ===

```

The bottom of the image shows a Windows taskbar with the date 22-07-2024 and time 14:55.

```
3. class Calculator {
```

```
    public int add(int a, int b) {  
        return a + b;  
    }
```

```
    public double divide(int a, int b) {  
        if (b == 0) {  
            throw new ArithmeticException("Division by zero is not allowed.");  
        }  
        return (double) a / b;  
    }  
}
```

```
public class ShoppingCart {
```

```
    public static void main(String[] args) {  
        Calculator calc = new Calculator();  
        int addResult = calc.add(43, 79);  
        System.out.println("Add Result: " + addResult);  
  
        try {  
            double divResult = calc.divide(15, 0);  
            System.out.println("Division Result: " + divResult);  
        } catch (ArithmeticException e) {  
            System.out.println("Error: " + e.getMessage());  
        }  
    }  
}
```

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Main.java

Run

Output

Clear

```
1- class Calculator {
2-
3-     public int add(int a, int b) {
4-         return a + b;
5-     }
6-
7-     public double divide(int a, int b) {
8-         if (b == 0) {
9-             throw new ArithmeticException("Division by zero is not allowed.");
10-        }
11-        return (double) a / b;
12-    }
13- }
14-
15- public class ShoppingCart {
16-
17-     public static void main(String[] args) {
18-         Calculator calc = new Calculator();
19-         int addResult = calc.add(43, 79);
20-         System.out.println("Add Result: " + addResult);
21-
22-         try {
23-             double divResult = calc.divide(15, 0);
24-             System.out.println("Division Result: " + divResult);
25-         } catch (ArithmeticException e) {
26-             System.out.println("Error: " + e.getMessage());
27-         }
28-     }
29- }
```

```
java -cp ./tmp/gKJ5DXPRa/ShoppingCart
Add Result: 122
ERROR!
Error: Division by zero is not allowed.

=== Code Execution Successful ===
```

35°C Mostly cloudy

Search

ENG IN

14:55 22-07-2024