Status	Finished
Started	Tuesday, 12 November 2024, 10:34 AM
Completed	Tuesday, 12 November 2024, 11:20 AM
Duration	46 mins 8 secs

Question **1**

Correct

Marked out of 5.00

Write a Java program to create a method that takes an integer as a parameter

and throws an exception if the number is odd.

Sample input and Output:

```
82 is even.
Error: 37 is odd.
```

Fill the preloaded answer to get the expected output.

For example:

Result
82 is even. Error: 37 is odd.

Answer: (penalty regime: 0 %)

Reset answer

```
class prog {
  public static void main(String[] args) {
    int n = 82;
    trynumber(n);
    n = 37;
    // call the trynumber(n);
    trynumber(n);

  }

  public static void trynumber(int n) {
    try {
        //call the checkEvenNumber()
    checkEvenNumber(n);
      System.out.println(n + " is even.");
    } catch (IllegalArgumentException e) {
      System.out.println("Error: " + e.getMessage());
    }
  }

  public static void checkEvenNumber(int number) {
    if (number % 2 != 0) {
      throw new IllegalArgumentException(number + " is odd.");
    }
  }
}

```

	Expected	Got	
✓	82 is even. Error: 37 is odd.	82 is even. Error: 37 is odd.	✓

Passed all tests! ✓

Question **2**

Correct

Marked out of 5.00

In the following program, an array of integer data is to be initialized.
During the initialization, if a user enters a value other than an integer, it will throw an InputMismatchException exception.
On the occurrence of such an exception, your program should print "You entered bad data."
If there is no such exception it will print the total sum of the array.

/* Define try-catch block to save user input in the array "name"
If there is an exception then catch the exception otherwise print the total sum of the array. */

Sample Input:

3
5 2 1

Sample Output:

8

Sample Input:

2

1 g

Sample Output:

```
You entered bad data.
```

For example:

Input	Result
3 5 2 1	8
2 1 g	You entered bad data.

Answer: (penalty regime: 0 %)

Reset answer

```
import java.util.Scanner;
import java.util.InputMismatchException;

public class ArraySum {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int n;

        // Read the size of the array
        try {

            n = scanner.nextInt();
            int[] array = new int[n];
            int sum = 0;


            for (int i = 0; i < n; i++) {
                array[i] = scanner.nextInt(); // Read and store array elements
                sum += array[i];
            }

            // If all inputs are integers, print the total sum
            System.out.println(sum);

        } catch (InputMismatchException e) {
            // If an invalid input is entered, print error message
            System.out.println("You entered bad data.");
        } finally {
            scanner.close(); // Close scanner
        }
    }
}

```

	Input	Expected	Got	
✓	3 5 2 1	8	8	✓
✓	2 1 g	You entered bad data.	You entered bad data.	✓

Passed all tests! ✓

Question **3**

Correct

Marked out of 5.00

Write a Java program to handle ArithmeticException and ArrayIndexOutOfBoundsException.

Create an array, read the input from the user, and store it in the array.

Divide the 0th index element by the 1st index element and store it.

if the 1st element is zero, it will throw an exception.

if you try to access an element beyond the array limit throws an exception.

Input:

5

10 0 20 30 40

Output:

java.lang.ArithmeticException: / by zero
I am always executed

Input:

3
10 20 30

Output

java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds for length 3
I am always executed

For example:

Test	Input	Result
1	6 1 0 4 1 2 8	java.lang.ArithmeticException: / by zero I am always executed

Answer: (penalty regime: 0 %)

```
import java.util.Scanner;

public class ExceptionHandlingExample {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        try {
            // Read the size of the array

            int n = scanner.nextInt();

            // Initialize the array
            int[] array = new int[n];

            for (int i = 0; i < n; i++) {
                array[i] = scanner.nextInt();
            }

            // Attempt to divide the 0th element by the 1st element
            int result = array[0] / array[1];


            // Attempt to access an element out of bounds to trigger ArrayIndexOutOfBoundsException
            System.out.println("Accessing element at index 3: " + array[3]);

        } catch (ArithmeticException e) {
            System.out.println(e); // Will print java.lang.ArithmeticException: / by zero
        } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println(e); // Will print java.lang.ArrayIndexOutOfBoundsException
        } finally {
            System.out.println("I am always executed"); // This will always execute
            scanner.close();
        }
    }
}

```

	Test	Input	Expected	Got	
✓	1	6 1 0 4 1 2 8	java.lang.ArithmeticException: / by zero I am always executed	java.lang.ArithmeticException: / by zero I am always executed	✓
✓	2	3 10 20 30	java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds for length 3 I am always executed	java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds for length 3 I am always executed	✓

Passed all tests! ✓

◄ Lab-09-MCQ

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The “Nambiar Number” Generator ►