CS23333-Object Oriented Programming Using Java-2023

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Status	Finished
Started	Sunday, 13 October 2024, 6:03 PM
Completed	Sunday, 13 October 2024, 6:31 PM
Duration	27 mins 53 secs

Question 1
Correct

Marked out of 5.00

⚑ Flag question

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]

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

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

    public static void checkEvenNumber(int number) {
        if (number % 2 != 0) {
            throw new RuntimeException(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

⚑ Flag question

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

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

class prog {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int length = sc.nextInt();
        int[] name = new int[length];
        int sum = 0;

        try {
            for (int i = 0; i < length; i++) {
                name[i] = sc.nextInt();
                sum += name[i];
            }
            System.out.println(sum);
        } catch (InputMismatchException e) {
            System.out.println("You entered bad data.");
        }
    }
}
```

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

Passed all tests!

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 %)

```java
import java.util.Scanner;

public class ExceptionHandlingDemo {

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

        try {
            int size = scanner.nextInt();
            int[] numbers = new int[size];

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

            // Attempt to divide the 0th index by the 1st index
```

```
18            int result = numbers[0] / numbers[1];
19            System.out.println("java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds fc
20
21        } catch (ArithmeticException e) {
22            System.out.println("java.lang.ArithmeticException: " + e.getMessage());
23        } catch (ArrayIndexOutOfBoundsException e) {
24            System.out.println("java.lang.ArrayIndexOutOfBoundsException: " + e.getMessage());
25        } finally {
26            System.out.println("I am always executed");
27            scanner.close();
28        }
29     }
30 }
31
```

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

Passed all tests!

Finish review