<u>Dashboard</u> / <u>My courses</u> / <u>CS23333-OOPUJ-2023</u> / <u>Lab-09-Exception Handling</u> / <u>Lab-09-Logic Building</u>

| Status | Finished |
|-----------|------------------------------------|
| Started | Thursday, 17 October 2024, 6:44 PM |
| Completed | Thursday, 17 October 2024, 7:10 PM |
| Duration | 25 mins 44 secs |

```
Question 1
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 | java.lang.ArithmeticException: / by zero |
| | 1 0 4 1 2 8 | I am always executed |

Answer: (penalty regime: 0 %)

```
1 v import java.util.*;
 2 v public class main{
 3 •
        public static void main(String args[]){
            Scanner sc= new Scanner(System.in);
 4
 5 ,
             try{
 6
                 int n = sc.nextInt();
 7
                 int arr[] = new int[n];
 8
                 for(int i=0; i<n; i++)</pre>
 9
                     arr[i] = sc.nextInt();
                 int r = arr[0]/arr[1];
10
                 for(int i=0; i<=n; i++)</pre>
11
12
                     arr[i] = arr[i];
             }catch(ArithmeticException e){
13
14
                 System.out.println(e);
15
             }catch(ArrayIndexOutOfBoundsException e){
16
                 System.out.println(e);
             }finally{
17
18
                 System.out.println("I am always executed");
19
20
        }
21
22
23
```

| | 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 | <pre>java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds for length 3 I am always executed</pre> | <pre>java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds for length 3 I am always executed</pre> | ~ |

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:

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

```
1 | import java.util.Scanner;
    import java.util.InputMismatchException;
 3
 4 •
    public class Prog {
 5 ,
        public static void main(String[] args) {
 6
            Scanner sc = new Scanner(System.in);
 7
            int length;
 8
9
            try {
10
                 length = sc.nextInt();
                 int[] name = new int[length];
11
12
                 int sum = 0;
13
                 for (int i = 0; i < length; i++) {</pre>
14
15
                     try {
16
                         name[i] = sc.nextInt();
17
                         sum += name[i];
18
                     } catch (InputMismatchException e) {
19
                         System.out.println("You entered bad data.");
20
                         return;
                     }
21
22
23
                 System.out.println(sum);
24
            } catch (InputMismatchException e) {
25
                 System.out.println("You entered bad data.");
26 ▼
             } finallv {
```

```
27 | sc.close();

28 | }

29 | }

30 |}
```

| | 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 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
```

```
1 public class Prog {
        public static void main(String[] args) {
 2.
 3
            int n = 82;
 4
            tryNumber(n);
 5
            n = 37;
 6
            tryNumber(n);
 7
        }
 8
 9
        public static void tryNumber(int n) {
10
            try {
11
                checkEvenNumber(n);
                System.out.println(n + " is even.");
12
13
            } catch (Exception e) {
14
                System.out.println("Error: " + e.getMessage());
15
        }
16
17
        public static void checkEvenNumber(int number) throws Exception {
18
19
            if (number % 2 != 0) {
20
                throw new Exception(number + " is odd.");
21
22
        }
23
    }
24
```

| | Expected | Got | |
|----------|----------------------------------|----------------------------------|---|
| ~ | 82 is even. Error: 37 is odd. | 82 is even. Error: 37 is odd. | ~ |

Passed all tests! ✓

■ Lab-09-MCQ

```
Jump to...
```

The "Nambiar Number" Generator ►