

CS23333-Object Oriented Programming Using Java-2023

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Status	Finished
Started	Wednesday, 16 October 2024, 7:17 PM
Completed	Wednesday, 16 October 2024, 7:21 PM
Duration	3 mins 5 secs

Question 1

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

```
1 import java.util.InputMismatchException;
2 import java.util.Scanner;
3
4 public class ArrayInput {
5     public static void main(String[] args) {
6         Scanner scanner = new Scanner(System.in);
7
8         try {
9             // Take input for array size
10            // System.out.println("Enter the size of the array:");
11            int size = scanner.nextInt();
12
13            // Initialize the array
14            int[] numbers = new int[size];
15
16            //System.out.println(size );
17            int sum = 0;
18
19            // Take input for each element in the array
20            for (int i = 0; i < size; i++) {
21                numbers[i] = scanner.nextInt();
22                sum += numbers[i];
23            }
24
25            // If no exception, print the total sum
26            System.out.println(sum);
27
28        } catch (InputMismatchException e) {
29            // Handle non-integer input
30            System.out.println("You entered bad data.");
31        } finally {
32            // Closing the scanner to avoid resource leaks
33            scanner.close();
34        }
35    }
36 }
```

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

Passed all tests! ✓

Question 2

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

```

1 class OddNumberException extends Exception {
2     public OddNumberException(String message) {
3         super(message);
4     }
5 }
6
7 public class prog {
8
9     public static void main(String[] args) {
10         // First test with even number 82
11         try {
12             int n = 82;
13             tryNumber(n);
14         } catch (OddNumberException e) {
15             System.out.println("Error: " + e.getMessage());
16         }
17
18         // Second test with odd number 37
19         try {
20             int n = 37;
21             tryNumber(n);
22         } catch (OddNumberException e) {
23             System.out.println("Error: " + e.getMessage());
24         }
25     }
26
27     // Method to check if the number is even or odd
28     public static void tryNumber(int n) throws OddNumberException {
29         if (n % 2 == 0) {
30             System.out.println(n + " is even.");
31         } else {
32             throw new OddNumberException(n + " is odd.");
33         }
34     }
35 }

```

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

Passed all tests! ✓

Question 3

Correct

Marked out of 5.00

Flag question

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 %)

```
1 import java.util.Scanner;
2
3 public class ArrayDivisionExample {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6
7         try {
8             // Reading the number of elements
9             int n = scanner.nextInt();
10
11             // Creating the array with the given input
12             int[] array = new int[n];
13
14             for (int i = 0; i < n; i++) {
15                 array[i] = scanner.nextInt();
16             }
17
18             // Attempting to divide the 0th element by the 1st element
19             // System.out.println("Trying to divide: " + array[0] + " / " + array[1]);
20             int result = array[0] / array[1]; // May throw ArithmeticException if array[1] is 0
21             // System.out.println("Result of division: " + result);
22
23             // Attempting to access the 3rd index
24             System.out.println("Trying to access index 3: " + array[3]);
25
26         } catch (ArithmeticException e) {
27             System.out.println("java.lang.ArithmeticException: / by zero");
28         } catch (ArrayIndexOutOfBoundsException e) {
29             System.out.println("java.lang.ArrayIndexOutOfBoundsException: " + e.getMessage());
30         } finally {
31             System.out.println("I am always executed");
32         }
33
34         scanner.close();
35     }
36 }
```

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

Passed all tests! ✓

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