

Assignment No. 06

Name:

Roll.No.:

/* Implement a program to handle Arithmetic exception, Array Index Out of Bounds. The user enters two numbers Num1 and Num2. The division of Num1 and Num2 is displayed. If Num1 and Num2 are not integers, the program would throw a Number Format Exception. If Num2 were zero, the program would throw an Arithmetic Exception. Display the exception. */

Source Code :

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

        try {
            // Input two numbers
            System.out.print("Enter the first number (Num1): ");
            String input1 = scanner.nextLine();
            System.out.print("Enter the second number (Num2): ");
            String input2 = scanner.nextLine();

            // Convert inputs to integers
            int num1 = Integer.parseInt(input1);
            int num2 = Integer.parseInt(input2);

            // Perform division
            int result = num1 / num2;
            System.out.println("Result of division: " + result);

            // Example of ArrayIndexOutOfBoundsException
            int[] array = new int[1];
            System.out.println("Accessing array element: " + array[2]); // This will throw
            ArrayIndexOutOfBoundsException

        } catch (NumberFormatException e) {
            System.out.println("Error: Invalid number format. Please enter valid
            integers.");
        } catch (ArithmeticException e) {
            System.out.println("Error: Division by zero is not allowed.");
        } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println("Error: Array index out of bounds.");
        }
    }
}
```

Output :

Enter the first number (Num1): 4
Enter the second number (Num2): 0
Error: Division by zero is not allowed.

Enter the first number (Num1): 4
Enter the second number (Num2): 3
Result of division: 1
Error: Array index out of bounds.

Enter the first number (Num1): 45
Enter the second number (Num2): aa
Error: Invalid number format. Please enter valid integers.