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OOPS Lab Assignment 4

Code

public class Assignment4 {

    public static void main(String[] args) {

        // Scenario 1: Divide by Zero Exception

        try {

            int numerator = 10;

            int denominator = 0;

            int result = numerator / denominator; // Attempting to divide by zero

            System.out.println("Result of division: " + result); // This line won't be reached

        } catch (ArithmeticException e) {

            System.out.println("Error: Divide by zero exception occurred.");

        }

        // Scenario 2: Array Index Out of Bounds Exception

        try {

            int[] arr = {1, 2, 3};

            int index = 5; // Attempting to access an index that is out of bounds

            int element = arr[index];

            System.out.println("Element at index " + index + ": " + element); // This line won't be reached

        } catch (ArrayIndexOutOfBoundsException e) {

            System.out.println("Error: Array index out of bounds exception occurred.");

        }

        // Scenario 3: Null Pointer Exception

        try {

            String str = null;

            int length = str.length(); // Attempting to access a method on a null reference

            System.out.println("Length of string: " + length); // This line won't be reached

        } catch (NullPointerException e) {

            System.out.println("Error: Null pointer exception occurred.");

        }

    }

}

Output

