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Source code :
package news;
import java.util.Scanner;

public class ArrayDataAnalysis {

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

        System.out.print("Enter number of elements: ");
        int n = sc.nextInt();

        int[] arr = new int[n];

        System.out.println("Enter elements:");
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }

        int sum = 0;
        int max = arr[0];
        int min = arr[0];

        for (int i = 0; i < n; i++) {
            sum += arr[i];
            if (arr[i] > max) max = arr[i];
            if (arr[i] < min) min = arr[i];
        }

        double average = (double) sum / n;

        for (int i = 0; i < n - 1; i++) {
            for (int j = 0; j < n - i - 1; j++) {
                if (arr[j] > arr[j + 1]) {
                    int temp = arr[j];
                    arr[j] = arr[j + 1];
                    arr[j + 1] = temp;
                }
            }
        }
        int[][] matrix = new int[2][2];
        System.out.println("Enter 4 values for 2x2 matrix:");
        for (int i = 0; i < 2; i++) {
            for (int j = 0; j < 2; j++) {
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            matrix[i][j] = sc.nextInt();
        }
    }

    try {
        System.out.println(arr[n]);
    } catch (ArrayIndexOutOfBoundsException e) {
        System.out.println("ArrayIndexOutOfBoundsException handled");
    }

    System.out.println("\n--- Data Analysis Results ---");
    System.out.println("Sum: " + sum);
    System.out.println("Average: " + average);
    System.out.println("Maximum: " + max);
    System.out.println("Minimum: " + min);

    System.out.print("Sorted Array: ");
    for (int i = 0; i < n; i++) {
        System.out.print(arr[i] + " ");
    }

    System.out.println("\n\n2D Array Output:");
    for (int i = 0; i < 2; i++) {
        for (int j = 0; j < 2; j++) {
            System.out.print(matrix[i][j] + " ");
        }
        System.out.println();
    }

    sc.close();
    }
}
```

OP