

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

```

Console X
terminated: ArrayDataAnalysis [Java Application] C:\Users\Student\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.6.v20250130-0529\jre\bin\javaw.exe (22-Jan-2026, 10:40:56 am - 10:41:23 am elapsed: 0:00:26.769) [pid: 14356]
Enter number of elements: 8
Enter elements:
2
5
6
9
3
1
4
5
Enter 4 values for 2x2 matrix:
5
6
8
9
ArrayIndexOutOfBoundsException handled
--- Data Analysis Results ---
Sum: 35
Average: 4.375
Maximum: 9
Minimum: 1
Sorted Array: 1 2 3 4 5 5 6 9
2D Array Output:
5 6
8 9

```