

## Problem Set 3 Exercise #03: Max Difference in Adjacent Elements

**Reference:** Lecture 7 notes

**Learning objective:** One-dimensional array

**Estimated completion time:** 20 minutes

### Problem statement:

Write a program **PS3\_Ex03\_MaxDifference.java** to read  $n$  integers into an array `arr` and find out the biggest difference between adjacent array elements (i.e. between `arr[i]` and `arr[i+1]`).

For example, in array { 1, 4, 3, 6, 2 }, the biggest difference in adjacent elements is 4 (= 6 - 2).

Your program should contain a static method

```
int maxDifference(int[] arr)
```

that returns the biggest difference between adjacent array elements.

### Sample run #1:

```
Enter the size of the array: 5
Enter 5 elements: 1 4 3 6 2
Max difference = 4
```

### Sample run #2:

```
Enter the size of the array: 2
Enter 2 elements: 4 62
Max difference = 58
```