

~\OneDrive - VietNam National University - HCM INTERNATIONAL UNIVERSITY\Desktop\DSA\DSA LAB NEW\Lab 1
OOP Reviews & Arrays\ITITSB22029_DoMinhDuy_Lab1\Problem 1\Problem 1.iii\Main.java

```
1 // Find the min-gap (10pts)
2 // Write a method named minGap that accepts an integer array and a number of
3 // elements as parameters and
4 // returns the minimum 'gap' between adjacent values in the array. The gap
5 // between two adjacent values in an
6 // array is defined as the second value minus the first value.
7 // For example, suppose a variable called array is an array of integers that
8 // stores the following sequence of
9 // values:
10 // int[] array = {1, 3, 6, 7, 12};
11 // The first gap is 2 (3 - 1), the second gap is 3 (6 - 3), the third gap is 1
12 // (7 - 6) and the fourth gap is 5 (12 - 7).
13 // Thus, the call of minGap(array, n) should return 1 because that is the
14 // smallest gap in the array. If you are
15 // passed an array with fewer than 2 elements, you should return 0.
16
17 public class Main {
18     public static void main(String[] args) {
19         int[] array = { 1, 3, 6, 7, 12 };
20         System.out.println(minGap(array, 5));
21     }
22
23     public static int minGap(int[] array, int n) {
24         if (n < 2) {
25             return 0;
26         }
27         int min = array[1] - array[0];
28         for (int i = 1; i < n - 1; i++) {
29             if (array[i + 1] - array[i] < min) {
30                 min = array[i + 1] - array[i];
31             }
32         }
33         return min;
34     }
35 }
```