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OOP Reviews & Arrays\ITITSB22029\_DoMinhDuy\_Lab1\Problem 1\Problem 1.ii\Main.java

```
1 // Write a function to input a list of integer numbers from users and return the
2 // median of that list.
3 // Median Example
4 // For the data set 1, 1, 2, 5, 6, 6, 9 the median is 5.
5 // For the data set 1, 1, 2, 6, 6, 9 the median is 4. Take the mean of 2 and 6
6 // or, (2+6)/2 = 4.
7
8 import java.util.ArrayList;
9 import java.util.Collections;
10 import java.util.Scanner;
11
12 public class Main {
13     public static void main(String[] args) {
14         Scanner scanner = new Scanner(System.in);
15         ArrayList<Integer> list = new ArrayList<>();
16         System.out.println("Enter the number of elements in the list: ");
17         int n = scanner.nextInt();
18         System.out.println("Enter the elements of the list: ");
19         for (int i = 0; i < n; i++) {
20             list.add(scanner.nextInt());
21         }
22         System.out.println("The median of the list is: " + findMedian(list));
23     }
24
25     public static double findMedian(ArrayList<Integer> list) {
26         Collections.sort(list);
27         int n = list.size();
28         if (n % 2 == 0) {
29             return (list.get(n / 2) + list.get(n / 2 - 1)) / 2.0;
30         } else {
31             return list.get(n / 2);
32         }
33     }
34 }
35
```