




Java 1D Array

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Problem

Submissions

Leaderboard

Discussions

Editorial

An array is a simple data structure used to store a collection of data in a contiguous block of memory. Each element in the collection is accessed using an *index*, and the elements are easy to find because they're stored sequentially in memory.

Because the collection of elements in an array is stored as a big block of data, we typically use arrays when we know exactly how many pieces of data we're going to have. For example, you might use an array to store a list of student ID numbers, or the names of state capitals. To create an array of integers named *myArray* that can hold four integer values, you would write the following code:

```
int[] myArray = new int[4];
```

This sets aside a block of memory that's capable of storing **4** integers. Each integer storage cell is assigned a unique *index* ranging from **0** to one less than the size of the array, and each cell initially contains a **0**. In the case of *myArray*, we can store integers at indices **0**, **1**, **2**, and **3**. Let's say we wanted the last cell to store the number **12**; to do this, we write:

```
myArray[3] = 12;
```

Similarly, we can print the contents of the last cell with the following code:

```
System.out.println(myArray[3]);
```

The code above prints the value stored at index **3** of *myArray*, which is **12** (the value we previously stored there). It's important to note that while Java initializes each cell of an array of integers with a **0**, not all languages do this.

Task

The code in your editor does the following:

1. Reads an integer from stdin and saves it to a variable, *n*, denoting some number of integers.
2. Reads *n* integers corresponding to *a*₀, *a*₁, ..., *a*_{*n*-1} from stdin and saves each integer *a*_{*i*} to a variable, *val*.
3. Attempts to print each element of an array of integers named *a*.

Write the following code in the unlocked portion of your editor:

1. Create an array, *a*, capable of holding *n* integers.
2. Modify the code in the loop so that it saves each sequential value to its corresponding location in the array. For example, the first value must be stored in *a*₀, the second value must be stored in *a*₁, and so on.

Good luck!

Input Format

The first line contains a single integer, *n*, denoting the size of the array.

Each line *i* of the *n* subsequent lines contains a single integer denoting the value of element *a*_{*i*}.

Output Format

You are not responsible for printing any output to stdout. Locked code in the editor loops through array **a** and prints each sequential element on a new line.

Sample Input

```
5
10
20
30
40
50
```

Sample Output

```
10
20
30
40
50
```

Explanation

When we save each integer to its corresponding index in **a**, we get **a** = [10, 20, 30, 40, 50]. The locked code prints each array element on a new line from left to right.

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Max Score: 5

Difficulty: Easy

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Java 7   

```
1 ▶ import ↔;
2
3 public class Solution {
4
5     public static void main(String[] args) {
6
7         Scanner scan = new Scanner(System.in);
8         int n = scan.nextInt();
9
10        // Declare array a here
11
12        for(int i = 0 ; i < n; i++){
13            int val = scan.nextInt();
14            // Fill array a here
15        }
```

```
16     scan.close();
17
18     // Prints each sequential element in array a
19     for (int i = 0; i < a.length; i++) {
20         System.out.println(a[i]);
21     }
22 }
23 }
```

Line: 8 Col: 1

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