Given an array a that contains only numbers in the range from 1 to a.length, find the first duplicate **number** for which the second occurrence has the minimal index. In other words, if there are more than 1 duplicated numbers, return the **number** for which the second occurrence has a smaller index than the second occurrence of the other number does. If there are no such elements, return -1.

Example

* For a = [2, 1, 3, 5, 3, 2], the output should be firstDuplicate(a) = 3.

There are 2 duplicates: numbers 2 and 3. The second occurrence of 3 has a smaller index than the second occurrence of 2 does, so the answer is 3.

* For a = [5, 5], the output should be firstDuplicate(a) = 5;
* For a = [2, 4, 3, 5, 1], the output should be firstDuplicate(a) = -1.

Input/Output

* **[execution time limit] 4 seconds (js)**
* **[input] array.integer a**

*Guaranteed constraints:*  
1 ≤ a.length ≤ 105,  
1 ≤ a[i] ≤ a.length.

* **[output] integer**
  + The element in a that occurs in the array more than once and has the minimal index for its second occurrence. If there are no such elements, return -1.

**[JavaScript (ES6)] Syntax Tips**

// Prints help message to the console

// Returns a string

**function** **helloWorld**(name) {

console.log("This prints to the console when you Run Tests");

**return** "Hello, " + name;

}