Find the Missing Number

You are given a list of n-1 integers and these integers are in the range of 1 to n. There are no duplicates in the list. One of the integers is missing in the list. Write an efficient code to find the missing integer.
Example:

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Input: arr[] = {1, 2, 4, 6, 3, 7, 8}
Output: 5
Explanation: The missing number from 1 to 8 is 5

Input: arr[] = {1, 2, 3, 5}
Output: 4
Explanation: The missing number from 1 to 5 is 4
```

Algorithm:

1. Create two variables *a = 0* and *b = 0*
2. Run a loop from 1 to n with i as counter.
3. For every index update *a* as $a = a \wedge i$
4. Now traverse the array from start to end.
5. For every index update *b* as $b = b \wedge array[i]$
6. Print the missing number as $a \wedge b$.