Unknown Title

Description

Description

Note

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Code

Code

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Testcase

Testcase

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Test Result

Test Result

380. Insert Delete GetRandom O(1)

Medium

Topics
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Implement the `RandomizedSet` class:

- `RandomizedSet()` Initializes the `RandomizedSet` object.
- `bool insert(int val)` Inserts an item `val` into the set if not present. Returns `true` if the item was not present, `false` otherwise.
- `bool remove(int val)` Removes an item `val` from the set if present. Returns `true` if the item was present, `false` otherwise.
- `int getRandom()` Returns a random element from the current set of elements (it's guaranteed that at least one element exists when this method is called). Each element must have the **same probability** of being returned.

You must implement the functions of the class such that each function works in **average** `O(1)` time complexity.

Example 1:

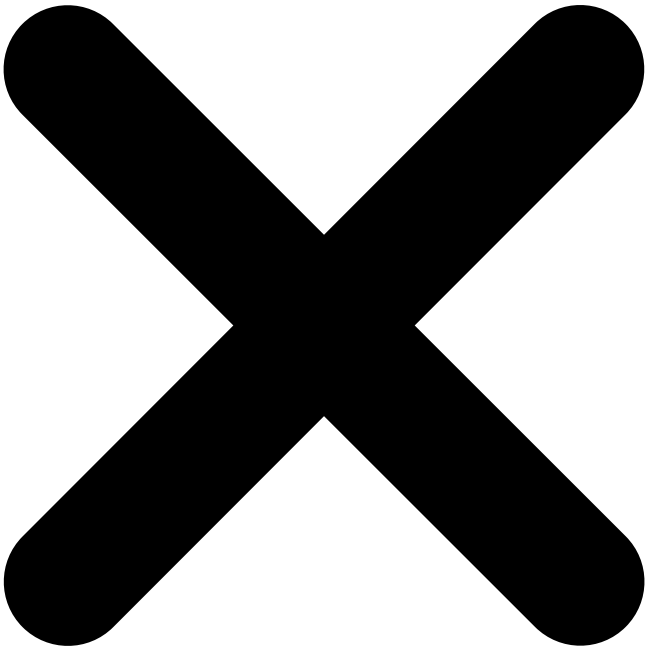
Input
```
["RandomizedSet", "insert", "remove", "insert", "getRandom", "remove", "insert", "getRandom"]
[[], [1], [2], [2], [], [1], [2], []]
```
Output
```
[null, true, false, true, 2, true, false, 2]
```

Explanation

```
RandomizedSet randomizedSet = new RandomizedSet();
randomizedSet.insert(1); // Inserts 1 to the set. Returns true as 1 was inserted successfully.
randomizedSet.remove(2); // Returns false as 2 does not exist in the set.
randomizedSet.insert(2); // Inserts 2 to the set, returns true. Set now contains [1,2].
randomizedSet.getRandom(); // getRandom() should return either 1 or 2 randomly.
randomizedSet.remove(1); // Removes 1 from the set, returns true. Set now contains [2].
randomizedSet.insert(2); // 2 was already in the set, so return false.
randomizedSet.getRandom(); // Since 2 is the only number in the set, getRandom() will always return 2.
```

Constraints:

- -2^{31} <= val <= 2^{31} - 1
- At most $2 * 10^5$ calls will be made to `insert`, `remove`, and `getRandom`.
- There will be **at least one** element in the data structure when `getRandom` is called.



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1/5

Yes

No

Accepted

1M

Submissions

1.9M

Acceptance Rate

54.7%

Companies

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Insert Delete GetRandom O(1) - Duplicates allowed

Hard

Discussion (166)

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2. The problem discussion is for asking questions about the problem or for sharing tips - anything except for solutions.

3. If you'd like to share your solution for feedback and ideas, please head to the solutions tab and post it there.

No comments yet.

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18
class RandomizedSet {
    public RandomizedSet() {

    }

    public boolean insert(int val) {

    }

    public boolean remove(int val) {

    }
```

```
    public int getRandom() {


    }
}
```

Saved

Ln 1, Col 1

["RandomizedSet","insert","remove","insert","getRandom","remove","insert","getRandom"]

[[],[1],[2],[2],[],[1],[2],[]]

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["RandomizedSet","insert","remove","insert","getRandom","remove","insert","getRandom"]

[[],[1],[2],[2],[],[1],[2],[]]

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Source

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