

Description

 Solution

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Autocomplete

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2349. Design a Number Container System

Medium 198 14 Add to List Share

Design a number container system that can do the following:

- **Insert** or **Replace** a number at the given index in the system.
- **Return** the smallest index for the given number in the system.

Implement the `NumberContainers` class:

- `NumberContainers()` Initializes the number container system.
- `void change(int index, int number)` Fills the container at `index` with the `number` . If there is already a number at that `index` , replace it.
- `int find(int number)` Returns the smallest index for the given `number` , or `-1` if there is no index that is filled by `number` in the system.

Example 1:

Input

```
["NumberContainers", "find", "change", "change", "change", "change",  
"find", "change", "find"]
```

```
[[], [10], [2, 10], [1, 10], [3, 10], [5, 10], [10], [1, 20], [10]]
```

Output

```
[null, -1, null, null, null, null, 1, null, 2]
```

Explanation

```
NumberContainers nc = new NumberContainers();
nc.find(10); // There is no index that is filled with number 10.
Therefore, we return -1.
nc.change(2, 10); // Your container at index 2 will be filled with
number 10.
nc.change(1, 10); // Your container at index 1 will be filled with
number 10.
nc.change(3, 10); // Your container at index 3 will be filled with
number 10.
nc.change(5, 10); // Your container at index 5 will be filled with
number 10.
nc.find(10); // Number 10 is at the indices 1, 2, 3, and 5. Since the
smallest index that is filled with 10 is 1, we return 1.
nc.change(1, 20); // Your container at index 1 will be filled with
number 20. Note that index 1 was filled with 10 and then replaced with
20.
nc.find(10); // Number 10 is at the indices 2, 3, and 5. The smallest
index that is filled with 10 is 2. Therefore, we return 2.
```

Constraints:

- $1 \leq \text{index}, \text{number} \leq 10^9$
- At most 10^5 calls will be made **in total** to `change` and `find`.

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```
1 class NumberContainers {
2
3     public NumberContainers() {
4
5     }
6
7     public void change(int index, int number) {
8
9     }
10
11    public int find(int number) {
12
13    }
14 }
15
16 /**
17  * Your NumberContainers object will be instantiated and called as such:
18  * NumberContainers obj = new NumberContainers();
19  * obj.change(index,number);
20  * int param_2 = obj.find(number);
21  */
```