895. Maximum Frequency Stack

Description

Design a stack-like data structure to push elements to the stack and pop the most frequent element from the stack.

Implement the `FreqStack` class:

- `FreqStack()` constructs an empty frequency stack.
- `void push(int val)` pushes an integer `val` onto the top of the stack.
- `int pop()` removes and returns the most frequent element in the stack.
  - If there is a tie for the most frequent element, the element closest to the stack's top is removed and returned.

Example 1:

```
Input
["FreqStack", "push", "push", "push", "push", "push", "push", "pop", "pop", "pop", "pop"]
[[], [5], [7], [5], [7], [4], [5], [], [], [], []]
Output
[null, null, null, null, null, null, null, 5, 7, 5, 4]

Explanation
FreqStack freqStack = new FreqStack();
freqStack.push(5); // The stack is [5]
freqStack.push(7); // The stack is [5,7]
freqStack.push(5); // The stack is [5,7,5]
freqStack.push(7); // The stack is [5,7,5,7]
freqStack.push(4); // The stack is [5,7,5,7,4]
freqStack.push(5); // The stack is [5,7,5,7,4,5]
freqStack.pop();   // return 5, as 5 is the most frequent. The stack becomes [5,7,5,7,4].
freqStack.pop();   // return 7, as 5 and 7 is the most frequent, but 7 is closest to the top. The stack becomes [5,7,5,4].
freqStack.pop();   // return 5, as 5 is the most frequent. The stack becomes [5,7,4].
freqStack.pop();   // return 4, as 4, 5 and 7 is the most frequent, but 4 is closest to the top. The stack becomes [5,7].
```

Constraints:

- $0 <= val <= 10^9$
- At most `2 * 10 4` calls will be made to `push` and `pop`.
- It is guaranteed that there will be at least one element in the stack before calling `pop`.