911. Online Election

Solved

Medium Topics

You are given two integer arrays `persons` and `times`. In an election, the i^{th} vote was cast for `persons[i]` at time `times[i]`.

For each query at a time `t`, find the person that was leading the election at time `t`. Votes cast at time `t` will count towards our query. In the case of a tie, the most recent vote (among tied candidates) wins.

Implement the `TopVotedCandidate` class:

- `TopVotedCandidate(int[] persons, int[] times)` Initializes the object with the `persons` and `times` arrays.
- `int q(int t)` Returns the number of the person that was leading the election at time `t` according to the mentioned rules.

Example 1:

Input
["TopVotedCandidate", "q", "q", "q", "q", "q", "q"]
[[[0, 1, 1, 0, 0, 1, 0], [0, 5, 10, 15, 20, 25, 30]], [3], [12], [25], [15], [24], [8]]
Output
[null, 0, 1, 1, 0, 0, 1]

Explanation
TopVotedCandidate topVotedCandidate = new TopVotedCandidate([0, 1, 1, 0, 0, 1, 0], [0, 5, 10, 15, 20, 25, 30]);
topVotedCandidate.q(3); // return 0, At time 3, the votes are [0], and 0 is leading.
topVotedCandidate.q(12); // return 1, At time 12, the votes are [0,1,1], and 1 is leading.
topVotedCandidate.q(25); // return 1, At time 25, the votes are [0,1,1,0,0,1], and 1 is leading (as ties go to the most recent vote.)
topVotedCandidate.q(15); // return 0
topVotedCandidate.q(24); // return 0
topVotedCandidate.q(8); // return 1

Constraints:

- `1 <= persons.length <= 5000`
- `times.length == persons.length`
- `0 <= persons[i] < persons.length`
- `0 <= times[i] <= 10^9`
- `times` is sorted in a strictly increasing order.
- `times[0] <= t <= 10^9`
- At most `10^4` calls will be made to `q`.

Seen this question in a real interview before? 1/5

Yes No

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