359. Logger Rate Limiter Premium

Solved

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Design a logger system that receives a stream of messages along with their timestamps. Each **unique** message should only be printed **at most every 10 seconds** (i.e. a message printed at timestamp `t` will prevent other identical messages from being printed until timestamp `t + 10`).

All messages will come in chronological order. Several messages may arrive at the same timestamp.

Implement the `Logger` class:

- `Logger()` Initializes the `logger` object.
- `bool shouldPrintMessage(int timestamp, string message)` Returns `true` if the `message` should be printed in the given `timestamp`, otherwise returns `false`.

Example 1:

> **Input**
> `["Logger", "shouldPrintMessage", "shouldPrintMessage", "shouldPrintMessage", "shouldPrintMessage", "shouldPrintMessage", "shouldPrintMessage"]`
> `[[], [1, "foo"], [2, "bar"], [3, "foo"], [8, "bar"], [10, "foo"], [11, "foo"]]`
>
> **Output**
> `[null, true, true, false, false, false, true]`
>
> **Explanation**
> `Logger logger = new Logger();`
> `logger.shouldPrintMessage(1, "foo");  // return true, next allowed timestamp for "foo" is 1 + 10 = 11`
> `logger.shouldPrintMessage(2, "bar");  // return true, next allowed timestamp for "bar" is 2 + 10 = 12`
> `logger.shouldPrintMessage(3, "foo");  // 3 < 11, return false`
> `logger.shouldPrintMessage(8, "bar");  // 8 < 12, return false`
> `logger.shouldPrintMessage(10, "foo"); // 10 < 11, return false`
> `logger.shouldPrintMessage(11, "foo"); // 11 >= 11, return true, next allowed timestamp for "foo" is 11 + 10 = 21`

Constraints:

- `0 <= timestamp <= 10^9`
- Every `timestamp` will be passed in non-decreasing order (chronological order).
- `1 <= message.length <= 30`
- At most `10^4` calls will be made to `shouldPrintMessage`.

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

Yes No

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