



HashMap – 1

Assignment Questions



Q. Given a string `s`, find the length of the longest substring without repeating characters.

Q. In an alien language, surprisingly, they also use English lowercase letters, but possibly in a different order. The order of the alphabet is some permutation of lowercase letters.
Given a sequence of words written in the alien language, and the order of the alphabet, return true if and only if the given words are sorted lexicographically in this alien language.

Q. You are given an array of words where each word consists of lowercase letters. `wordA` is a predecessor of `wordB` if and only if we can insert exactly one letter anywhere in `wordA` without changing the order of the other characters to make it equal to `wordB`.

A word chain is a sequence of words `[word1, ..., wordk]` with $k \geq 1$, where `word1` is a predecessor of `word2` and so on. A single word is trivially a word chain with $k = 1$.

Return the length of the longest possible word chain with words chosen from the given list of words.

Q. Design a time-based key-value data structure that can store multiple values for the same key at different time stamps and retrieve the key's value at a certain timestamp.
Implement the `TimeMap` class:

- `TimeMap()` Initializes the object of the data structure.
- `void set(String key, String value, int timestamp)` Stores the key `key` with the value `value` at the given time `timestamp`.
- `String get(String key, int timestamp)` Returns a value such that `set` was called previously, with `timestamp_prev ≤ timestamp`. If there are multiple such values, it returns the value associated with the largest `timestamp_prev`. If there are no values, it returns `""`.



**THANK
YOU !**

