Trie Quiz: Test Your Understanding of Tries

We're at the end of our discussion on tries. Here are a few follow up questions to reinforce your concepts.

Trie Interview Questions

1 A trie node can contain references to how many pointers?

- A) 1

Your Answer

- B) 26

- C) Null

Correct Answer

- D) Depends on the language

Explanation

The size of the pointer array will depend on the number of unique characters.

2 What is the worst time complexity for insertion in Trie data structure, while assuming m is the length of the string and n is the total number of non-null nodes?

- A) O(1)

Your Answer

- B) O(m)

Explanation

The time complexity depends solely on the length of the string.

C) O(log n)

D) O(n log m)

3 Choose the correct application of Trie data structure:

A) Auto-complete Words

B) Spell Checking

C) Searching a contact in a phone

Your Answer

D) All of the above

4 By traversing through a Trie, how do we concur that we've attained a word?

A) By reaching the end of a branch i.e. leaf node.

Your Answer

B) By reaching the node whose `isEndWord` flag is true.

Explanation

The flag tells us that a word starts from the root and ends at this node.

C) By hitting every successive node.

D) None of the above.

5 How can we count total number of words in a Trie efficiently?

Your Answer

A) By counting the end nodes(leaves) of tree.

B) By traversing the trie and checking each substring against a dictionary.

Correct Answer

C) By counting the nodes whose `isEndWord` flag is true.

Explanation

Only the `isEndWord` flag shows the existence of a complete word.

D) By counting all the nodes in the tree.

6 Considering that there are no common prefixes, what would be the space complexity of a trie where *N* is the number of words, *L* is the average number of alphabets per word and *A* is the total number of alphabets in our dictionary?

Your Answer

A) O(N * A)

B) O(A^N)

Correct Answer

C) O(N * L * A)

Explanation

N branches of size **L**, with each node containing a `children` list of size **A**.

D) O(N * L)

7 If the key to be deleted shares a prefix with at least one other key, then:

A) Delete the last node where the last alphabet of the key is found.

B) Delete the last node of the branch where key is found.

Your Answer

C) Set the `isEndWord` flag to `False` in the last node of the word.

Explanation

The node can be deleted if it has no children. If it does, then `isEndWord` is simply set to `False` and no node is deleted.

D) Delete the children of last node of the key.

8 If the key to be deleted does not share a prefix with any other key, then:

A) Do not modify the trie.

B) Delete the leaf node i.e. the last node of the key.

C) Delete the root node.

Your Answer

D) Delete all nodes of the key.

Explanation

This type of key would contain nodes which do not have any other children. Hence, all the nodes will be deleted.

SUMMARY

Correct	5
Incorrect	3

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Solution Review: Word Formation Fro...

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What is a Heap?

Mark as Completed