Interview Questions: Tries

3/3 points earned (100%)

Excellent!

✓ 1 / 1 points

1.

Prefix free codes. In data compression, a set of binary strings is *prefix free* if no string is a prefix of another. For example, {01,10,0010,1111} is prefix free, but {01,10,0010,10100} is not because 10 is a prefix of 10100. Design an efficient algorithm to determine if a set of binary strings is prefix-free. The running time of your algorithm should be proportional the number of bits in all of the binary stings.

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a
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Thank you for your response.
Hint: insert the binary strings into a 2-way trie.

Remark: it's also possible to solve this problem using radix sorting or a ternary search trie.

✓ 1 / 1 points

2.

Boggle. Boggle is a word game played on an 4-by-4 grid of tiles, where each tile contains one letter in the alphabet. The goal is to find all words in the dictionary that can be made by following a path of adjacent tiles (with no tile repeated), where two tiles are adjacent if they are horizontal, vertical, or diagonal neighbors.

a

Thank you for your response.
Hint: create a trie containing all of the words in the dictionary.

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1 / 1
points

3.
Suffix trees. Learn about and implement *suffix trees*, the ultimate string searching data structure.

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Thank you for your response.
Warning: very difficult material ahead.