

Problem 5: Autocomplete with Tries

To solve this problem I implemented a Trie, the solution is divided into many parts: **insert word**, **find** and **finding suffixes**.

Time and Space Complexity

Insert word

Time $\rightarrow O(n)$, because we loop through a list of characters and when we finish we set a flag to true.

Space $\rightarrow O(1)$, because we just assign a character to a node.

Find

Time $\rightarrow O(n)$, because we loop a word character per character.

Space $\rightarrow O(1)$, because find returns a single node each time is called.

Find suffix

Time $\rightarrow O(n)$, because it depends on the depth of the Trie.

Space $\rightarrow O(n)$, because we return as many alternatives as possible.