

### Problem 5:

Trie Auto complete problem uses class Trie and TrieNode for suggesting the words. the Trie data structure uses a dict data structure to hold the characters.

#### Time Complexity:

##### Class TrieNode:

insert()  $\rightarrow O(1)$

suffices()  $\rightarrow O(n)$  where n is the char in children

##### Class Trie:

insert()  $\rightarrow O(n)$  where n is the number of char in words

find()  $\rightarrow O(c)$  where c is number of character in prefix

#### Space Complexity:

$O(\text{Total number of words in dict})$