

① Longest word in dictionary

Eg. ["a", "banana", "app", "ap", "apply", "apple"]

Brute force: for a → "" ✓ → Longest
for banana → "b" ✗
for app → "a", "ap", "app" ✓ → Longest
for appl → appl ✓ → Longest
for apply → ✓
apple → ✓
Longest
Longest
Any of 2 are answers

So, only move on nodes that have isEnd = true meaning prefix always exists. & return longest

② Replace words.

IP: ["cat", "bat", "rat"]

Sentence: the cattle was rattled by the battery
the cat was rat by the bat
the cat was rat by the bat

b or by
does not exist as
a complete word in
the trie

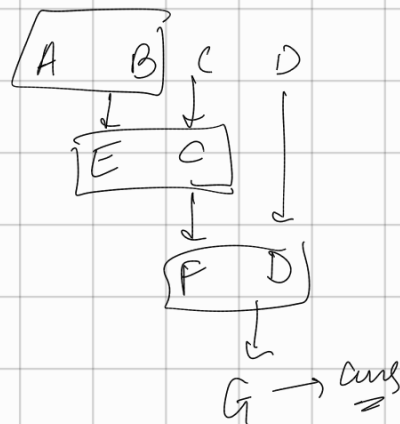
③ Longest common Prefix

Eg: ["flower", "flow", "flower", "fight", "floors"]

→ Brute force: check for f, the l, ... upto when it is not prefix string

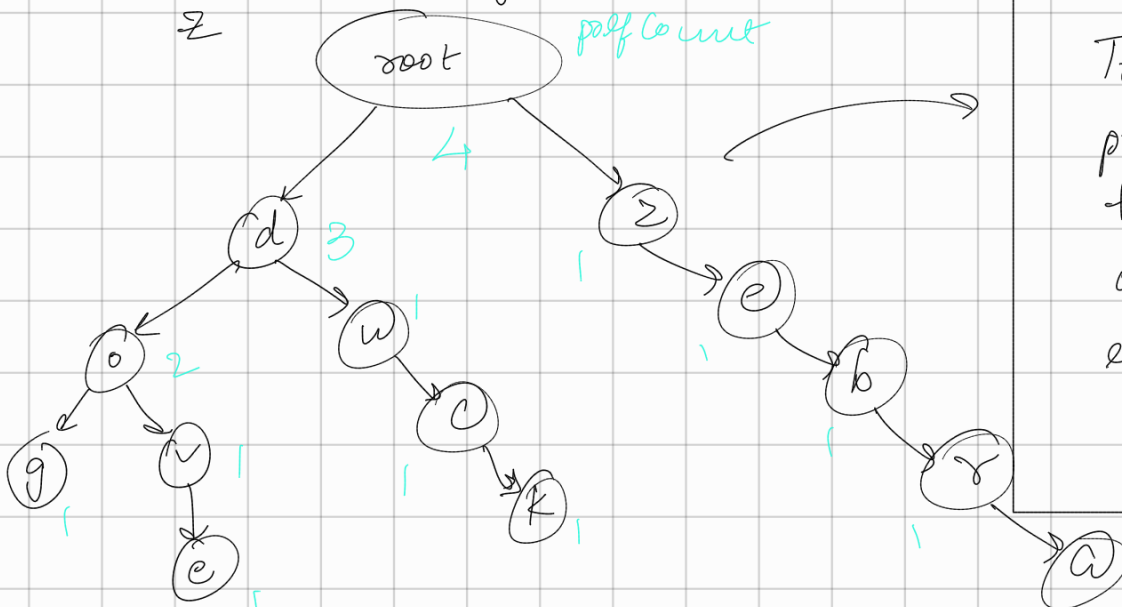
↳ Called Vertical Scanning

→ Horizontal scanning: LCP of 2 adjacent, followed by next 2. —



④ Shortest unique prefix.

["zebra", "dog", "duck", "doxe"]

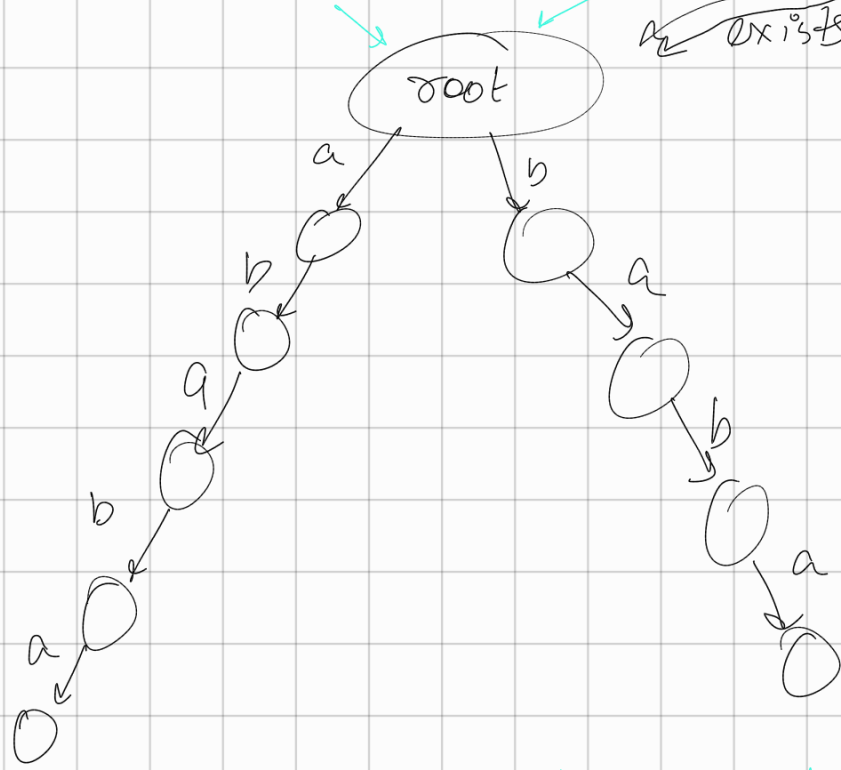


Traverse until
prefixCount == 1
then return
otherwise
return full
word.

⑤ Count Distinct Substrings

"a b a b a"

a					b					a				x
a	b				b	a				ab				ba
a	b	a			b	a	b			aba				bab
a	b	a	b		b	a	ba							
a	b	a	b	a										



add all substring starting
with i=0
with i=1
:
:

Count = No. of nodes in the Trie.