


Trie

{ Trie }

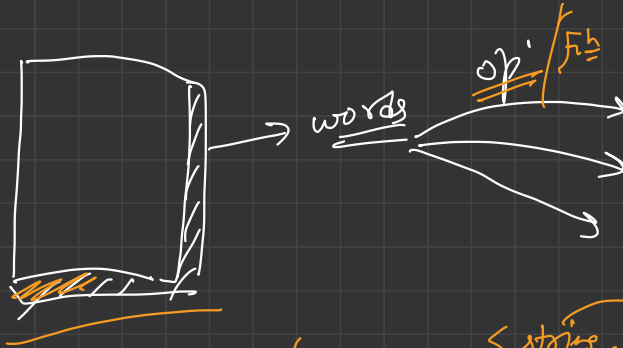
what?
→ why?

→ Imp

→ Ques / Pattern

→ what → ?

P.S. →



add word

search

remove word

T=C

O(1)

O(1)

O(1)

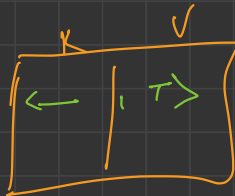
< string, bool >

hash map

why?

avg-case

worst case



word = "abcd ab - - - -" $\rightarrow l \rightarrow \text{length}$

Precisely $\rightarrow O(l)$

$O(\text{length of word})$

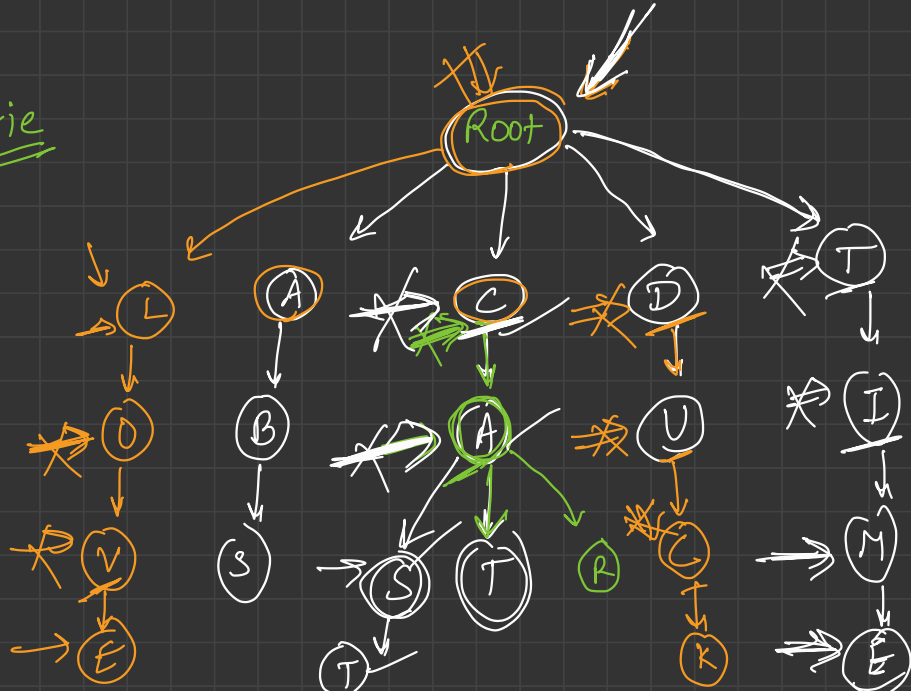
(Tsec)

II

Trie

I add word

Insert



CAR

C | A | R

C A S T

word =

~~XXXXX~~
TIMER

word =

~~XXXXX~~
LOVE

Insertion: -

Algo:-

Character

search

present

age badh
jata hu

absent

create node

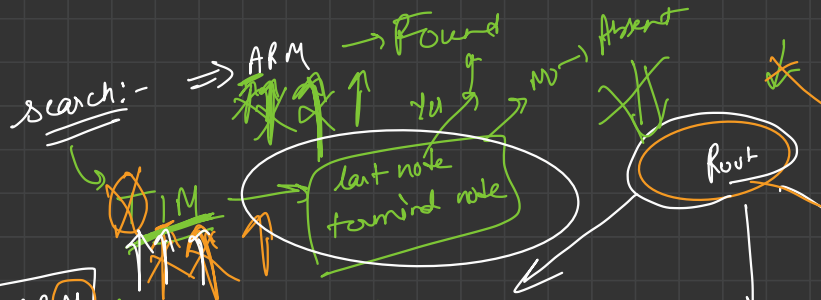
age badh jata

(R)

word →

DUCK
~~XXXXX~~

string entire traversal



\rightarrow ARM
 \Rightarrow DO
 \rightarrow TIME

A - Z

node \rightarrow 26

TrieNode

{

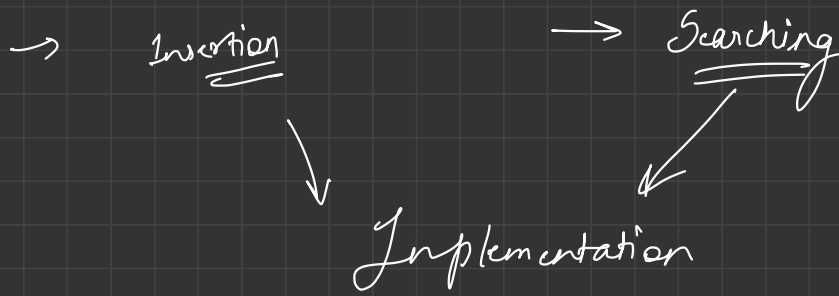
char data;

TrieNode* children[26];

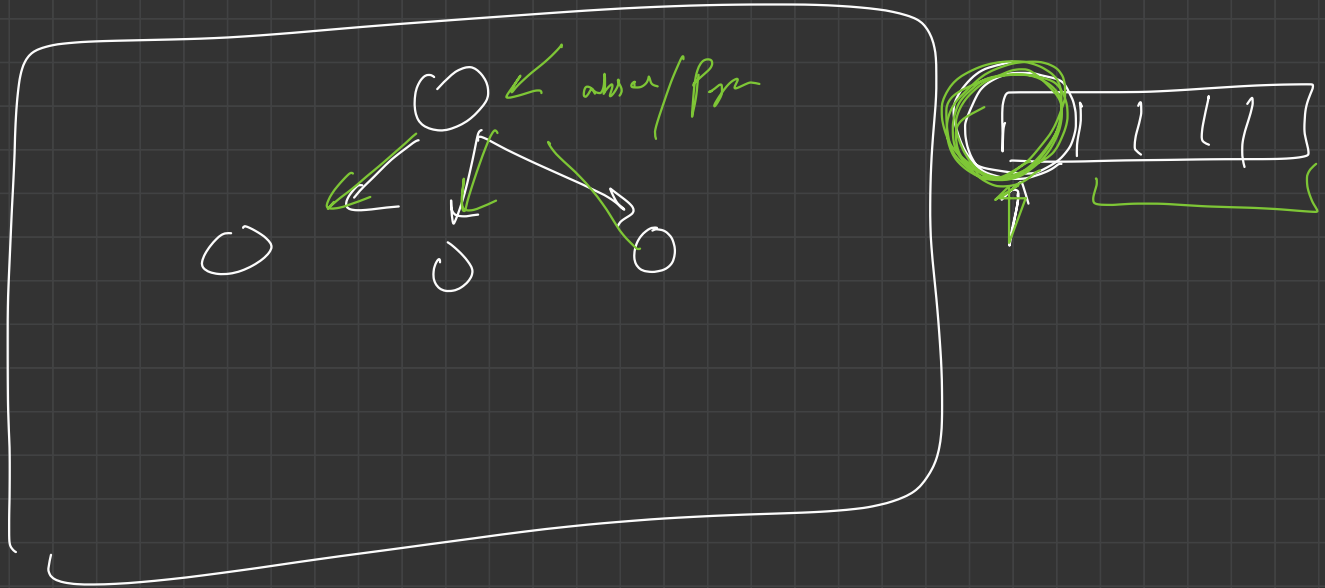
bool isTerminal

}

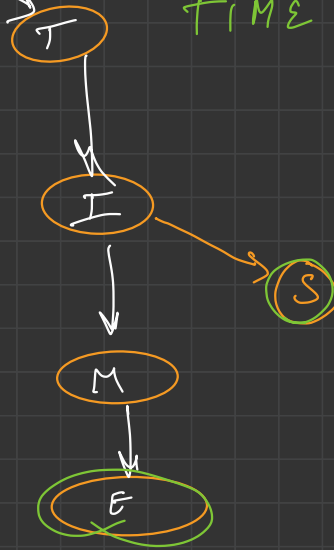
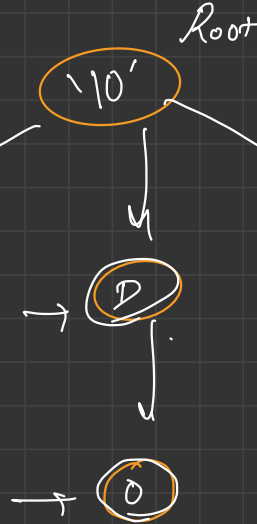
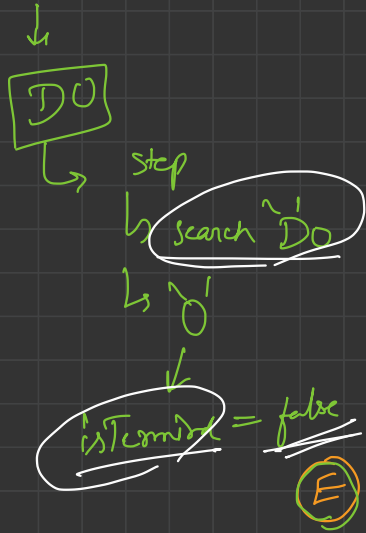
Terminal Node



Recursion → core



Remove Word:

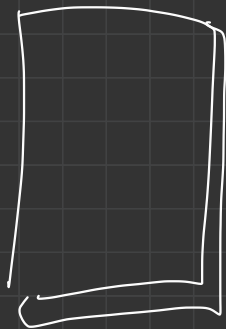


ARM ← wood
ARE
DO ←
TIS
TIME

H/W → Remove word
→ Space Optimise

$I \rightarrow$
 $D \rightarrow$
 $S \rightarrow$

$O(l) \rightarrow l \rightarrow \text{length of word}$

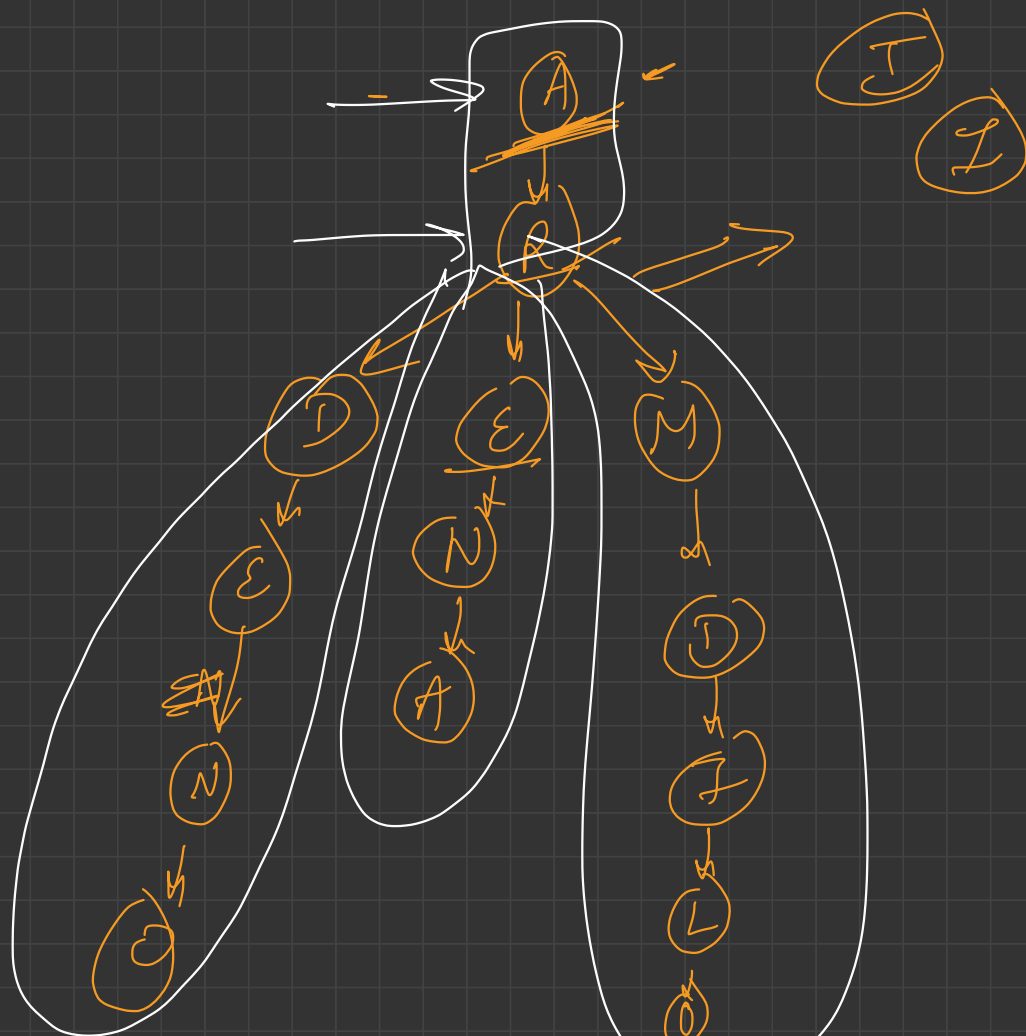


$\Rightarrow \underline{H.M} \xrightarrow{I/S/D} O(l)$
 $\Rightarrow \text{Time} \rightarrow O(l)$

~~ARE~~
~~ARM~~
~~ARENA~~
~~ARMDILO~~
~~ARDENO~~

$H.M \rightarrow$

$\langle \leftarrow, T \rangle$
 $\langle \leftarrow, T \rangle$
 $\langle \leftarrow, T \rangle$
 $\langle \leftarrow, T \rangle$



11

~~8~~

AR

~~AR~~

AR

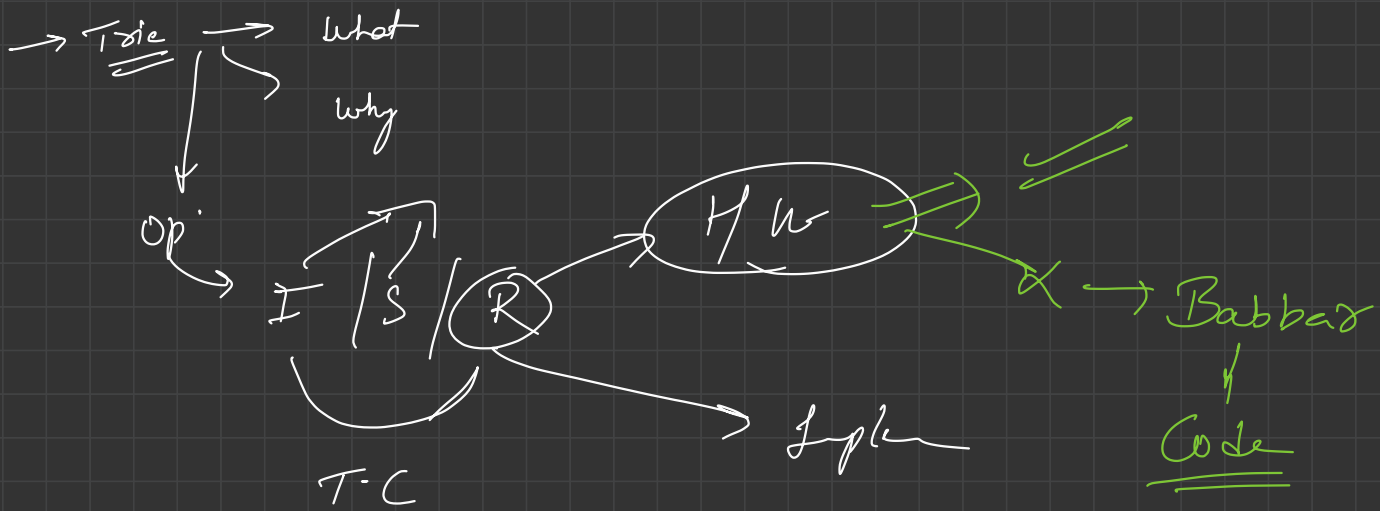
AR

AR

AR

AR

AR



⇒ Test Case

(TIME) → Time

Profit → (TI)

CARS

Toic

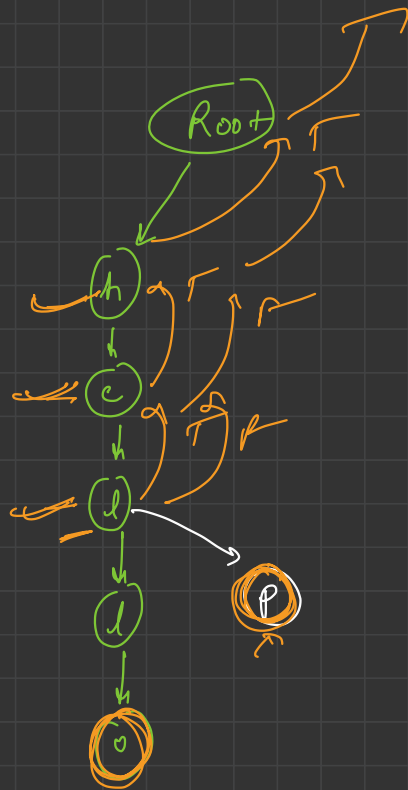
1

2

3

4

Prefix search



1 → ~~het~~

1 → hello

1 → help

2 → help → true

3 → ~~hel~~ hel

2 → hel

