

COUNT NUMBER  
OF DISTINCT  
SUBSTRINGS

Problem: Count no. of distinct substrings present in the given string.  
Include an empty substring as well

String: apple

Substrings of apple:

apple : a, ap, apb, apple, apple

↑

apple : p, pb, pbl, pple

↑

apple : ~~a~~, pl, ple

↑

apple : l, le

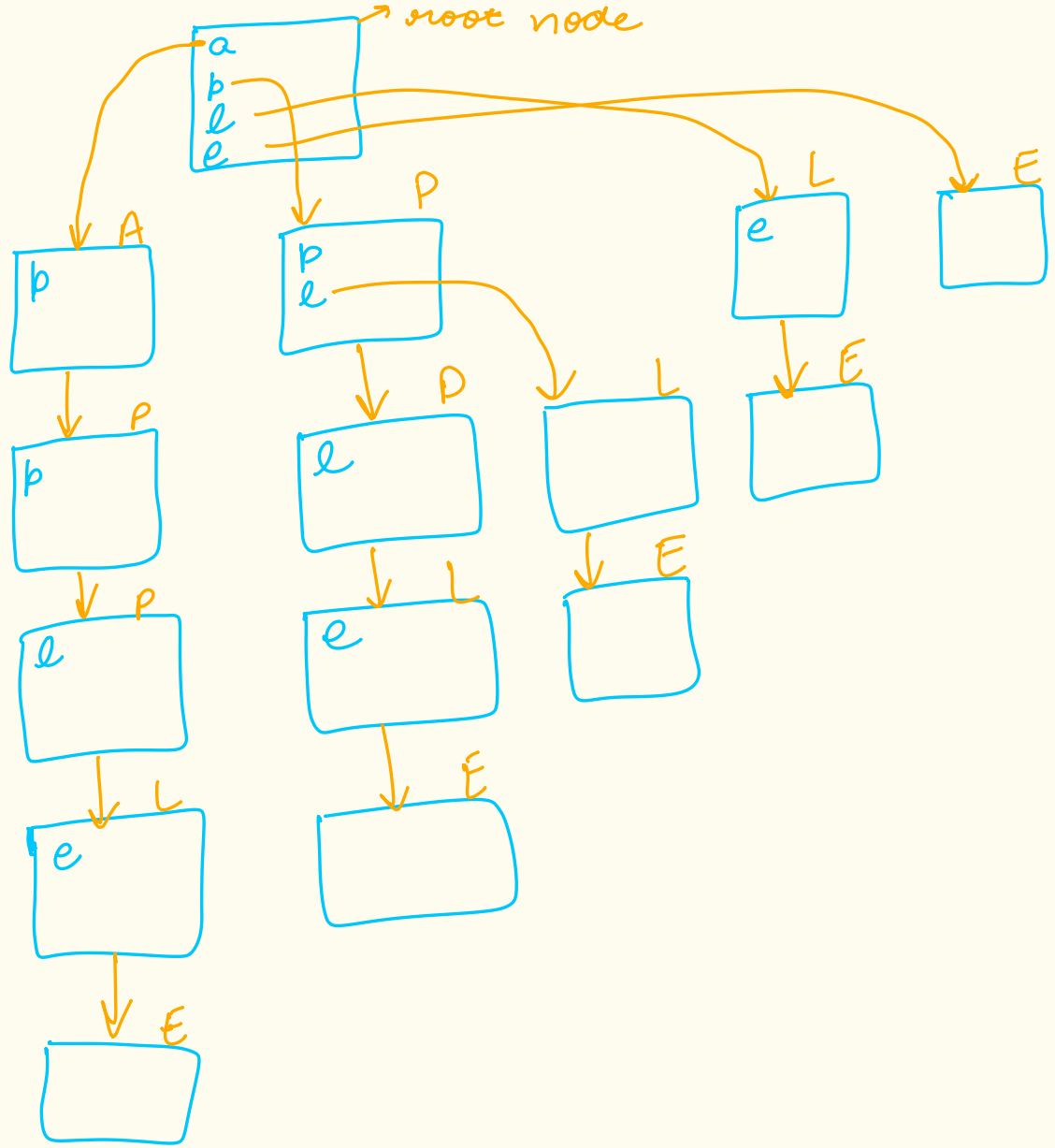
↑

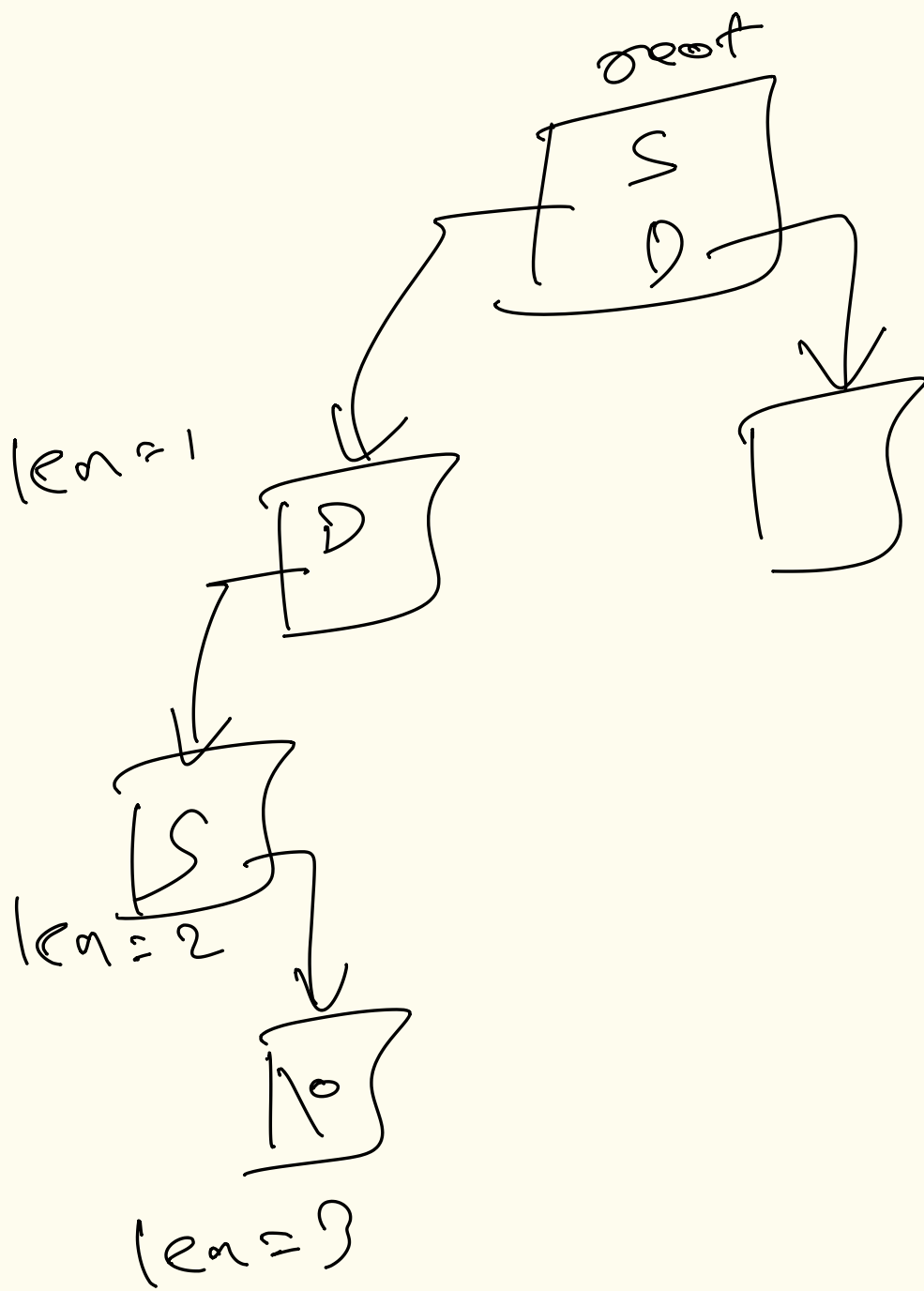
apple : e

↑

Output :  $14 + 1 = 15$

including an empty string ""





dubbin = S

set < string > out;

for (i = 0 → n) {

ans = " ";

for (j = i → n) {

ans = ans + S[j];

out.insert(ans);

}

}

return st.size() + 1;

ans = " "

d

du

dub

dubi

dubin

" "

u

ub

ubi

ubin

n

$O(n) \times O(n) \times O(\log n)$

$O(n^2 \log n)$