

⑦

How many substrings can  
we get, which have unique  
characters in them?

Formula to  
Calculate total  
substrings

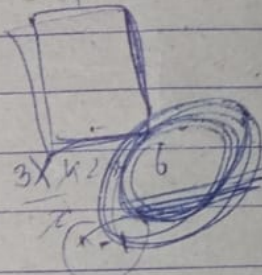
$$i.e. \rightarrow \frac{n(n+1)}{2}$$

Count the no. of substrings having  
All unique characters :-

abc bca  
bc ca

abcabc

3x4/2 = 6



Approach

$$\text{Total substrings} = \frac{n(n+1)}{2}$$

→ Acquire & release strategy.

→

Acquire one by one & store it in  
hash map, till the size of each element  
is max. upto 1 only.

→ when any duplicate came to the  
hashmap, calculate the substrings which



ends to present last element i.e. the size of current hashmap.

ex:- a b c d → (1)

then

a b c d } (2)  
b c d  
c d  
d

→ Then remove the elements from its 'left hand', till there is no duplicates in hashmap. (Release Strategy)

→ Then again start acquire strategy.

Sum up all the instances answers.