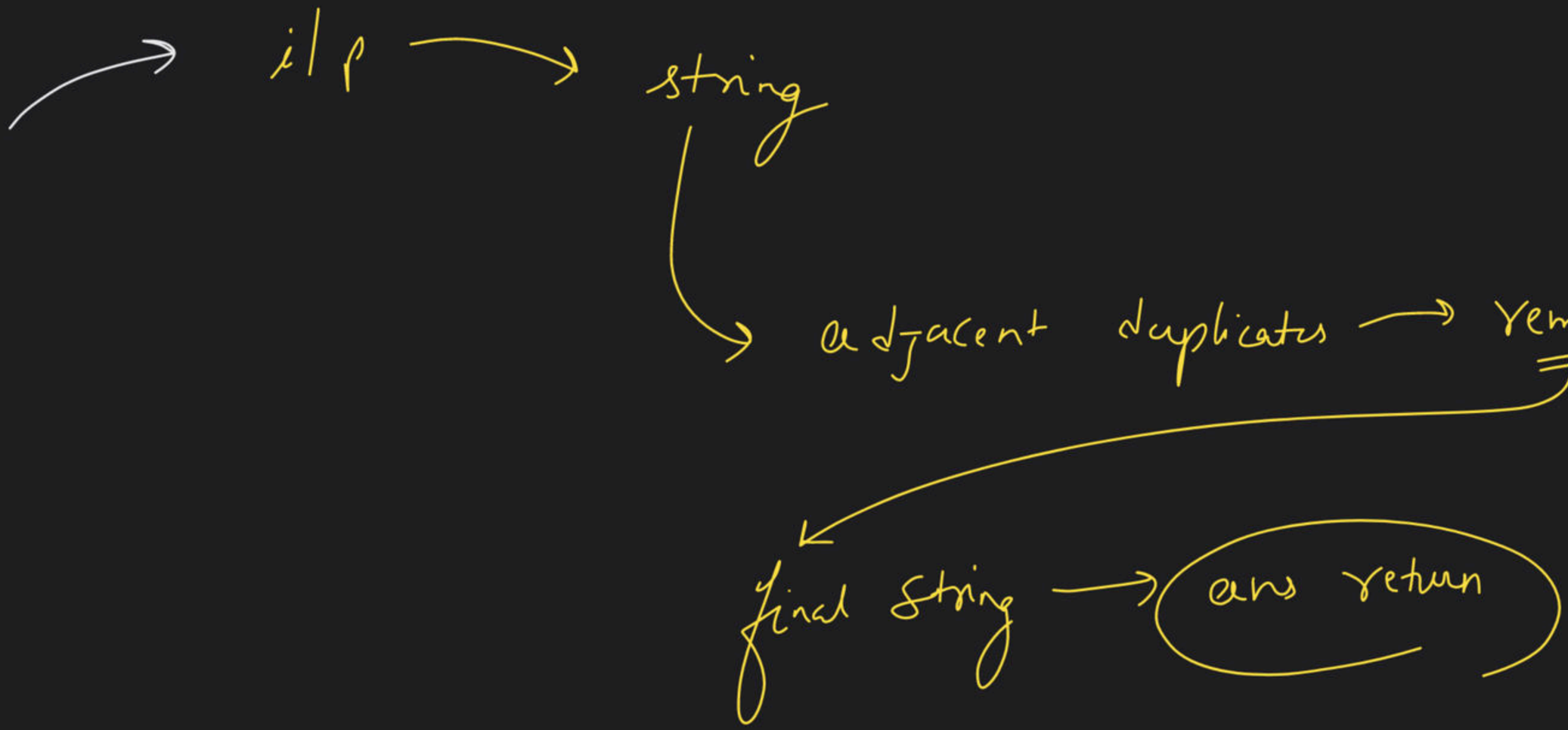
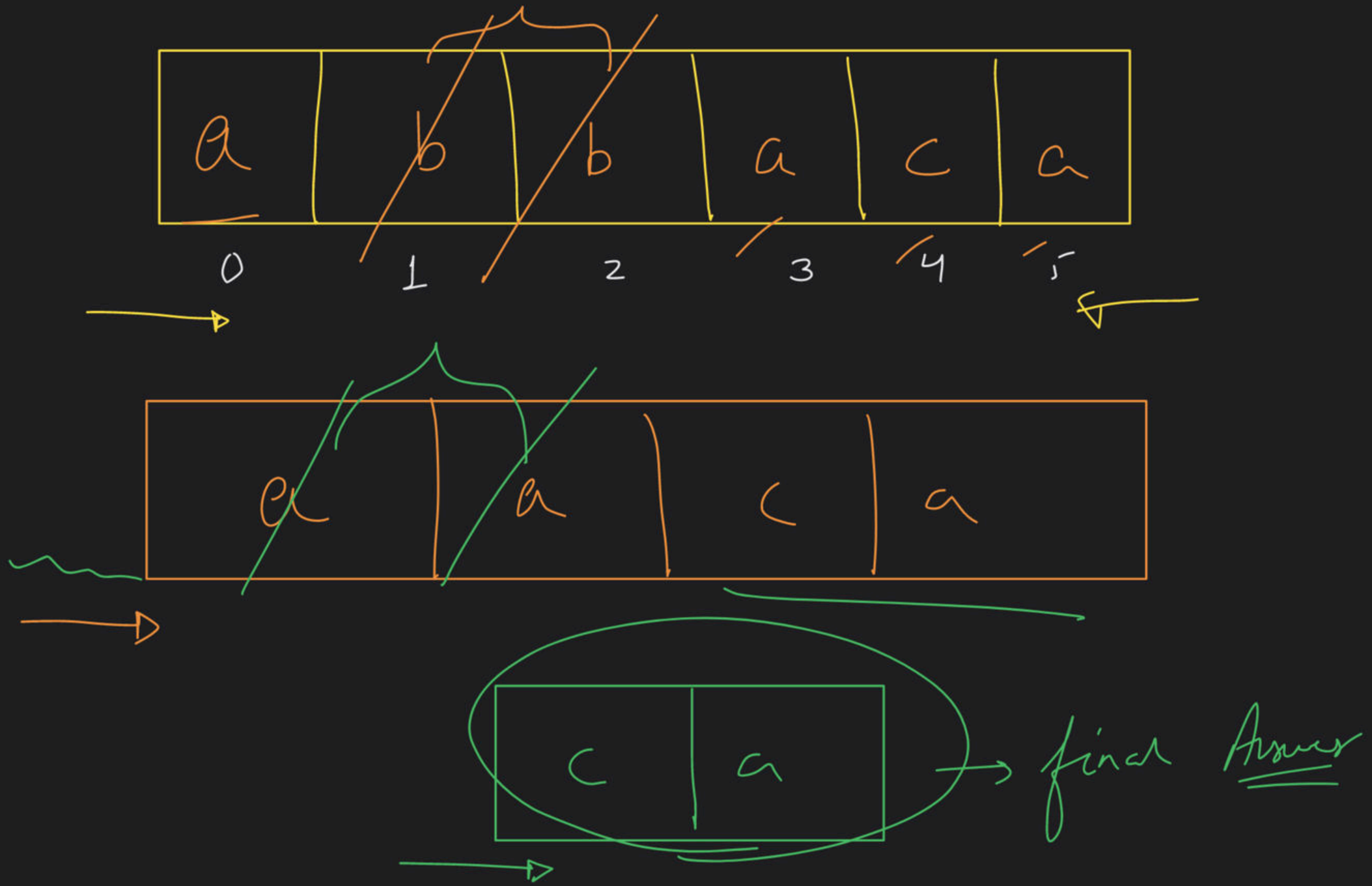
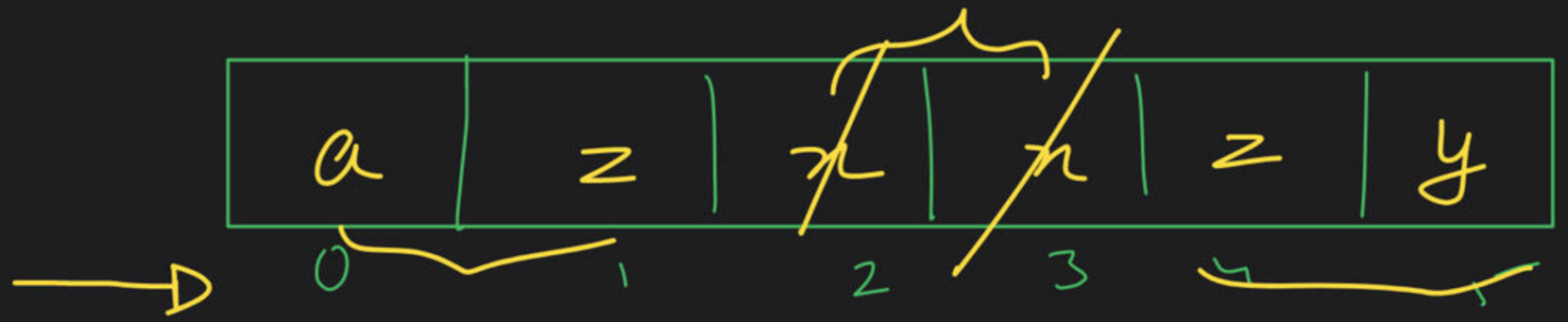
Char Arrays & Strings Class 2

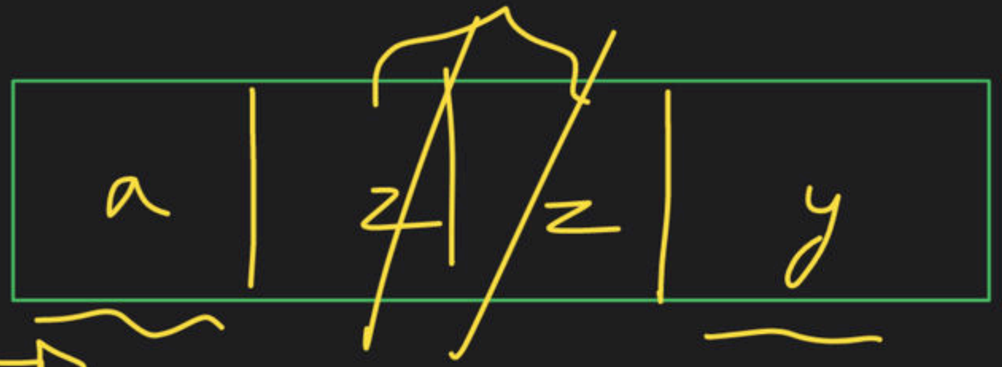
Special class

Love Babbar • Sept 25, 2023


i/p
string
adjacent duplicates → remove
final string → ans return


a b b a c a
0 1 2 3 4 5
c a c a
c a
final Answer

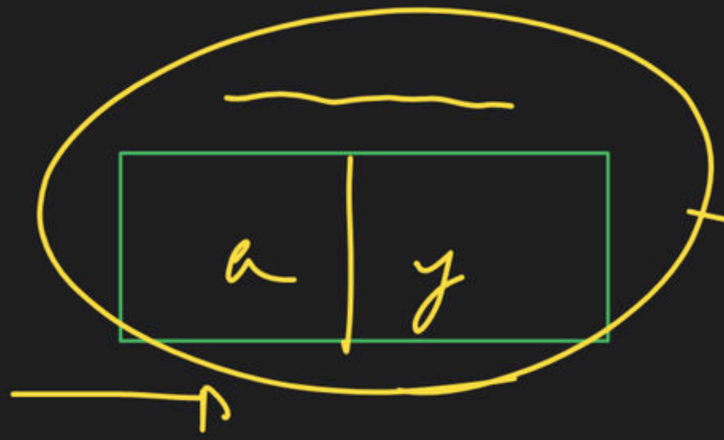




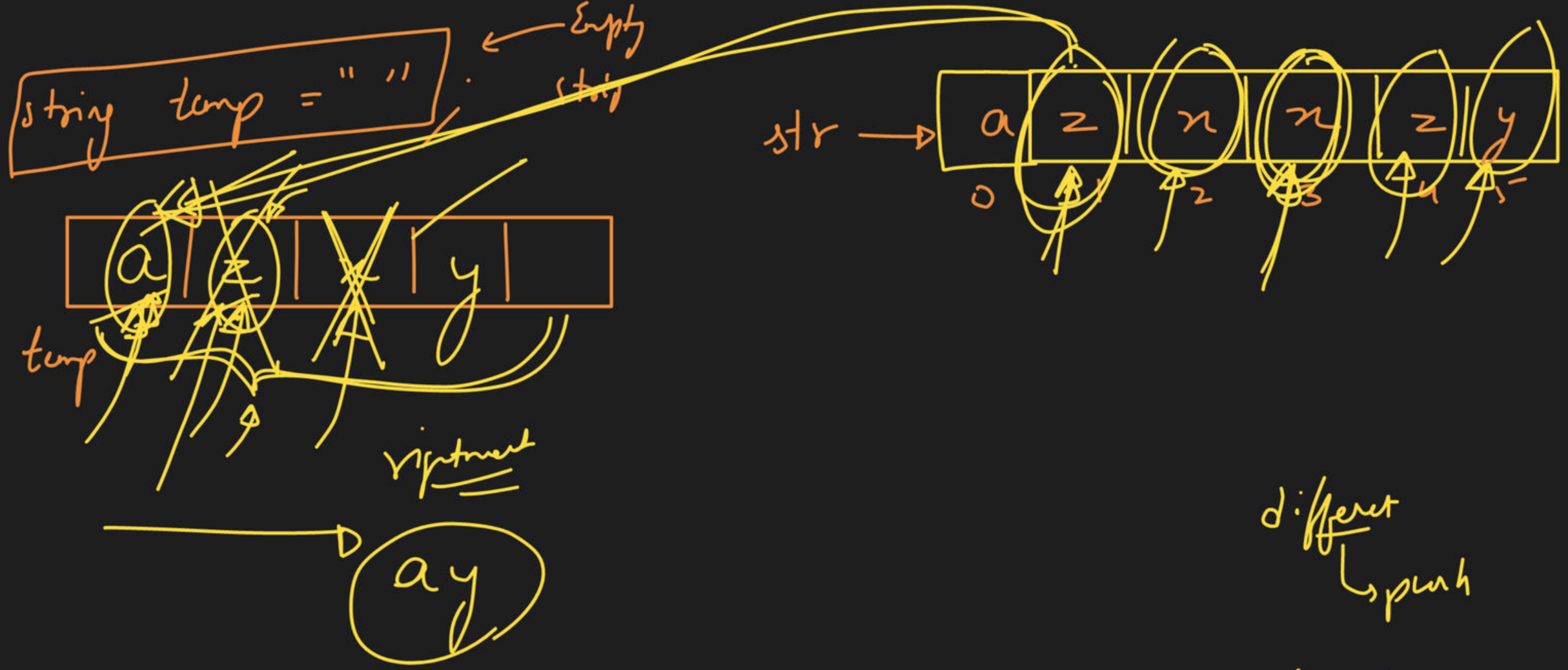
Approach

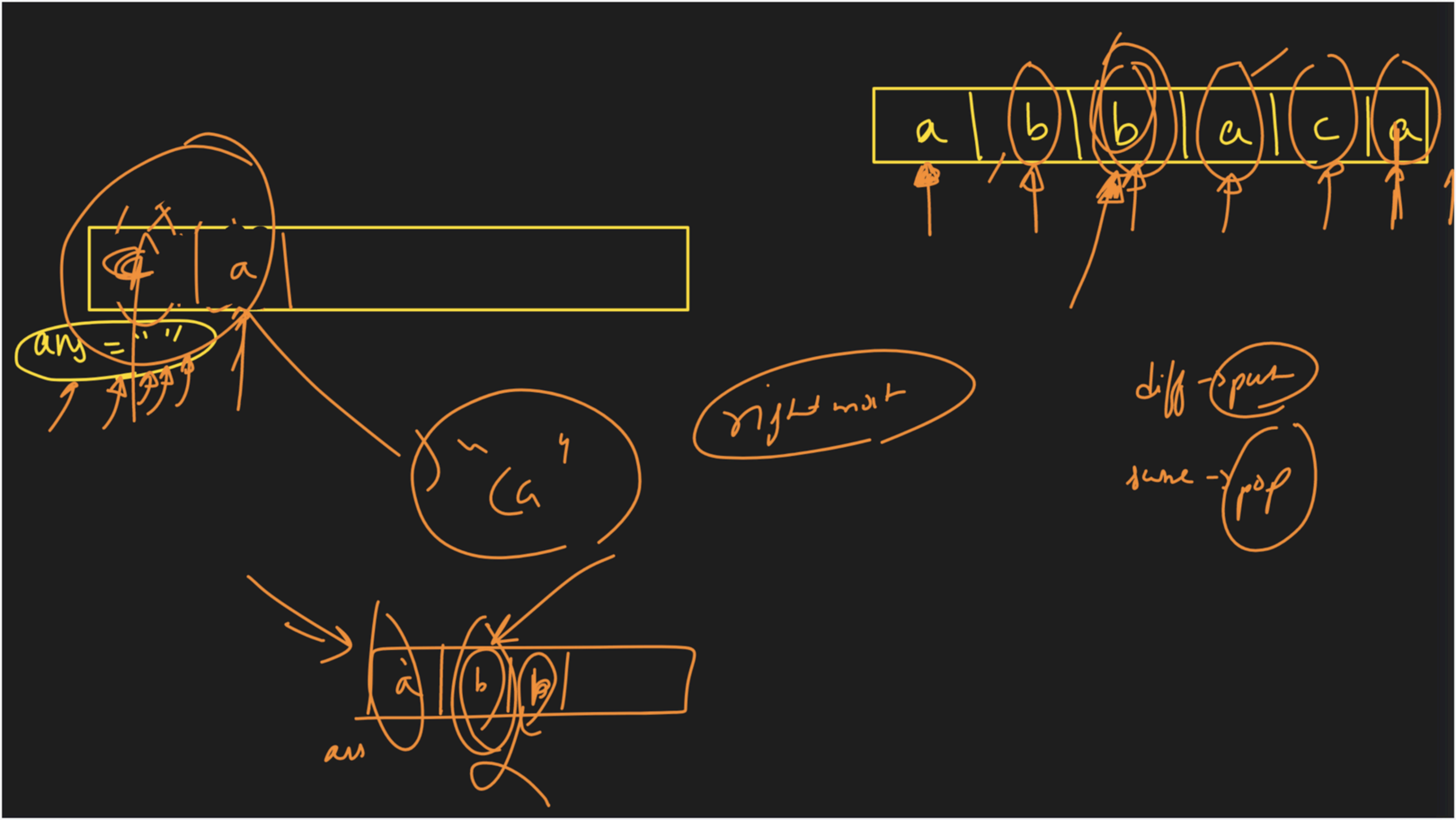
new string

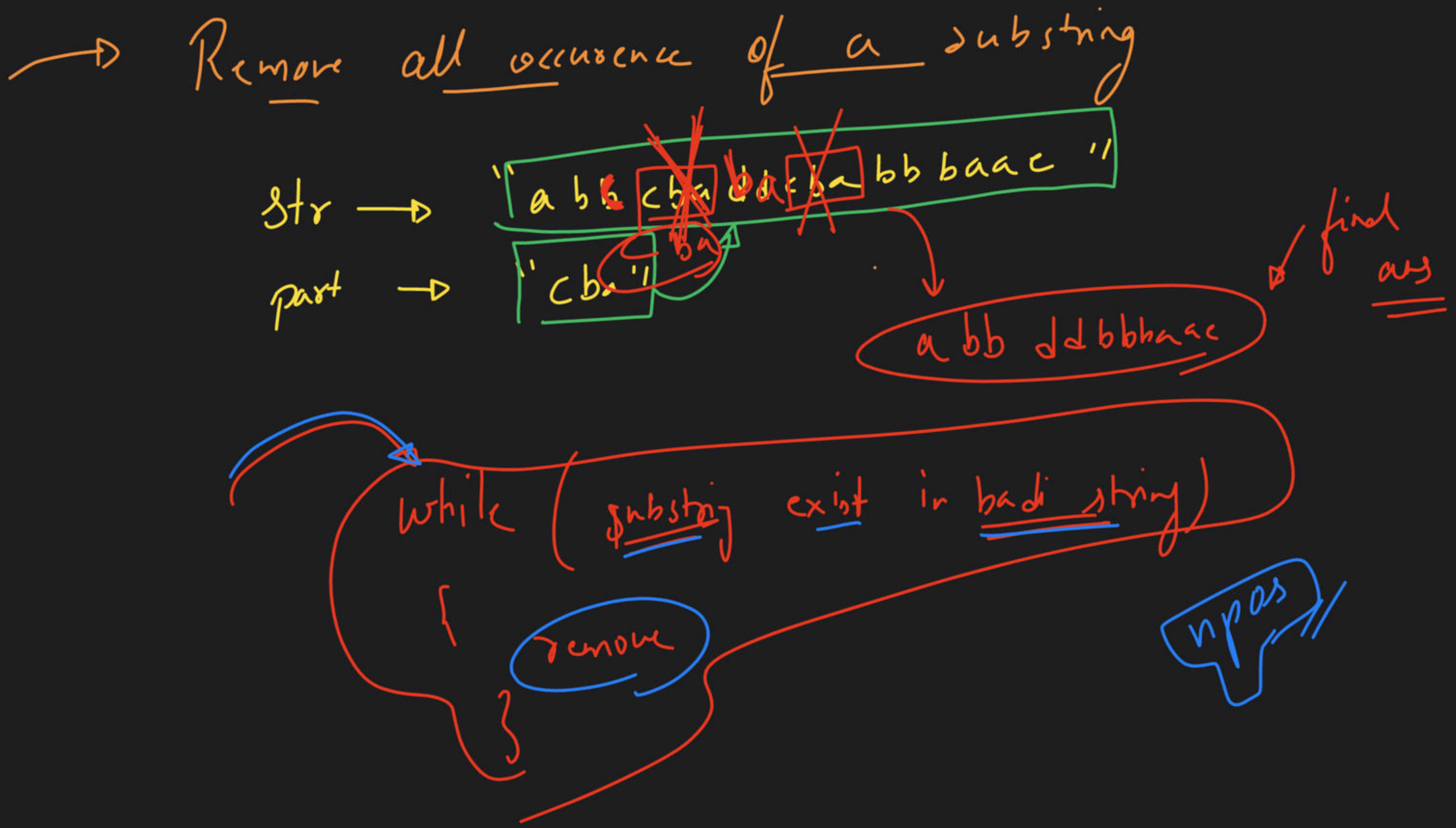
new Empty String

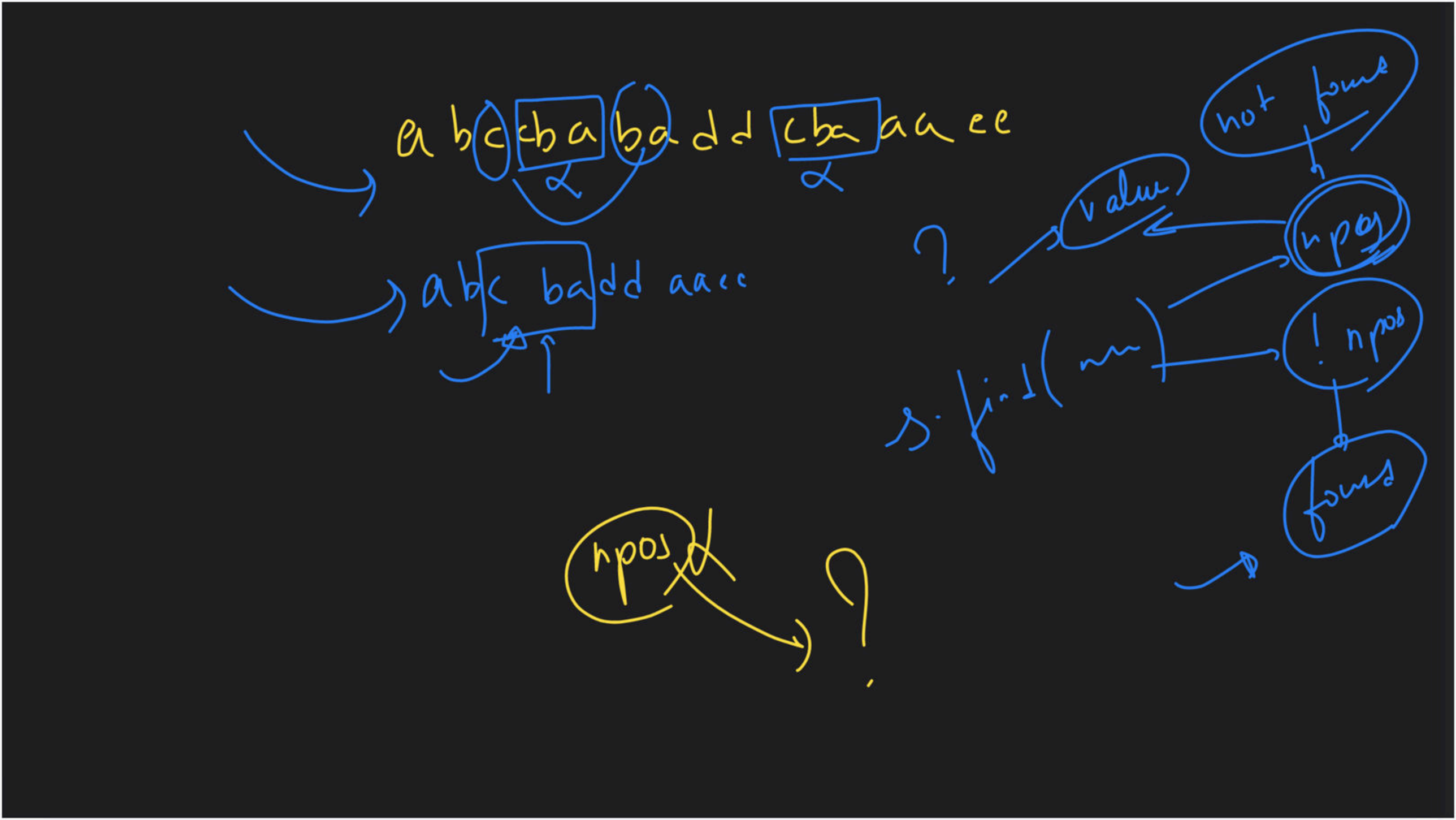


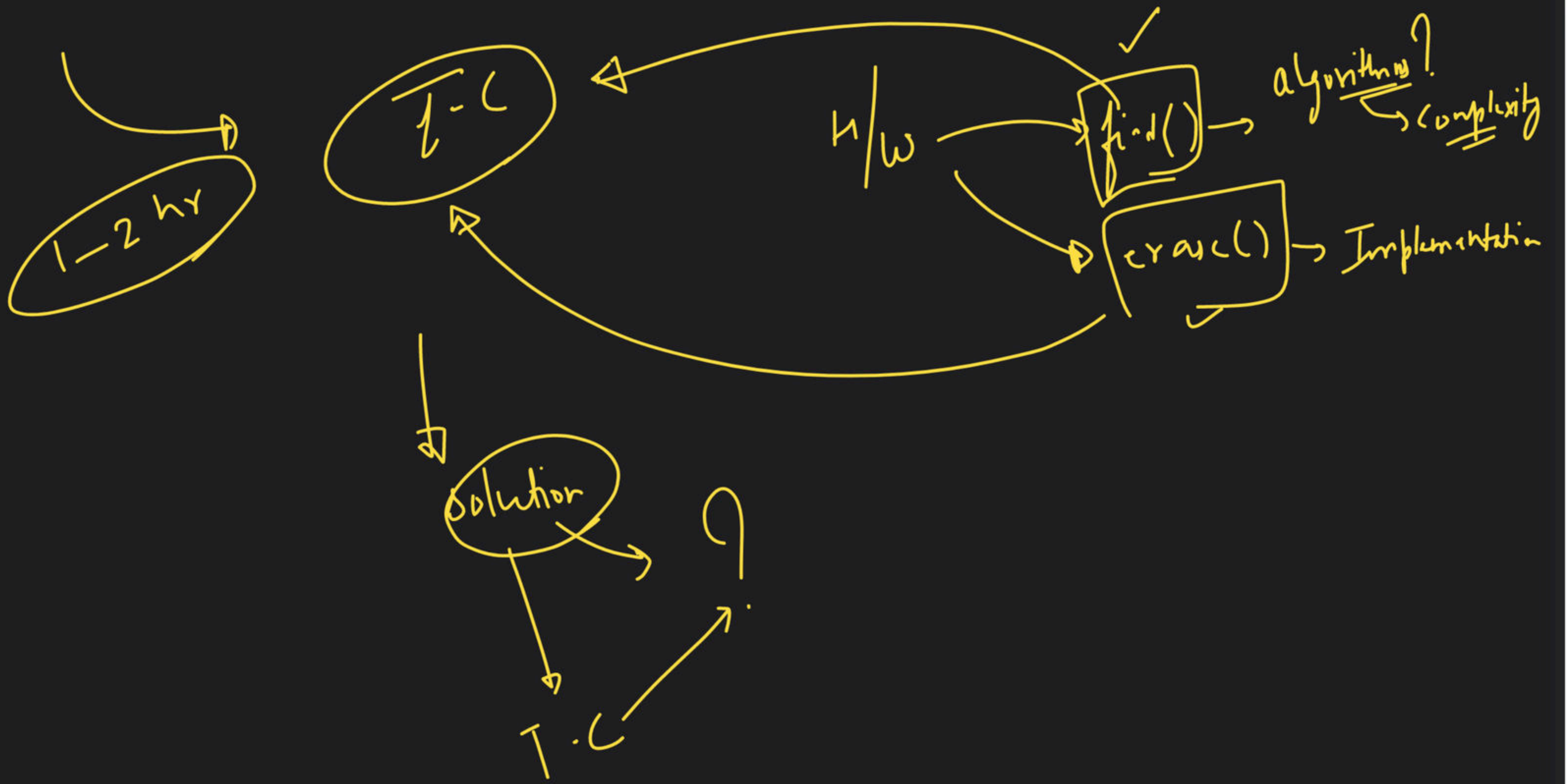
final Answer

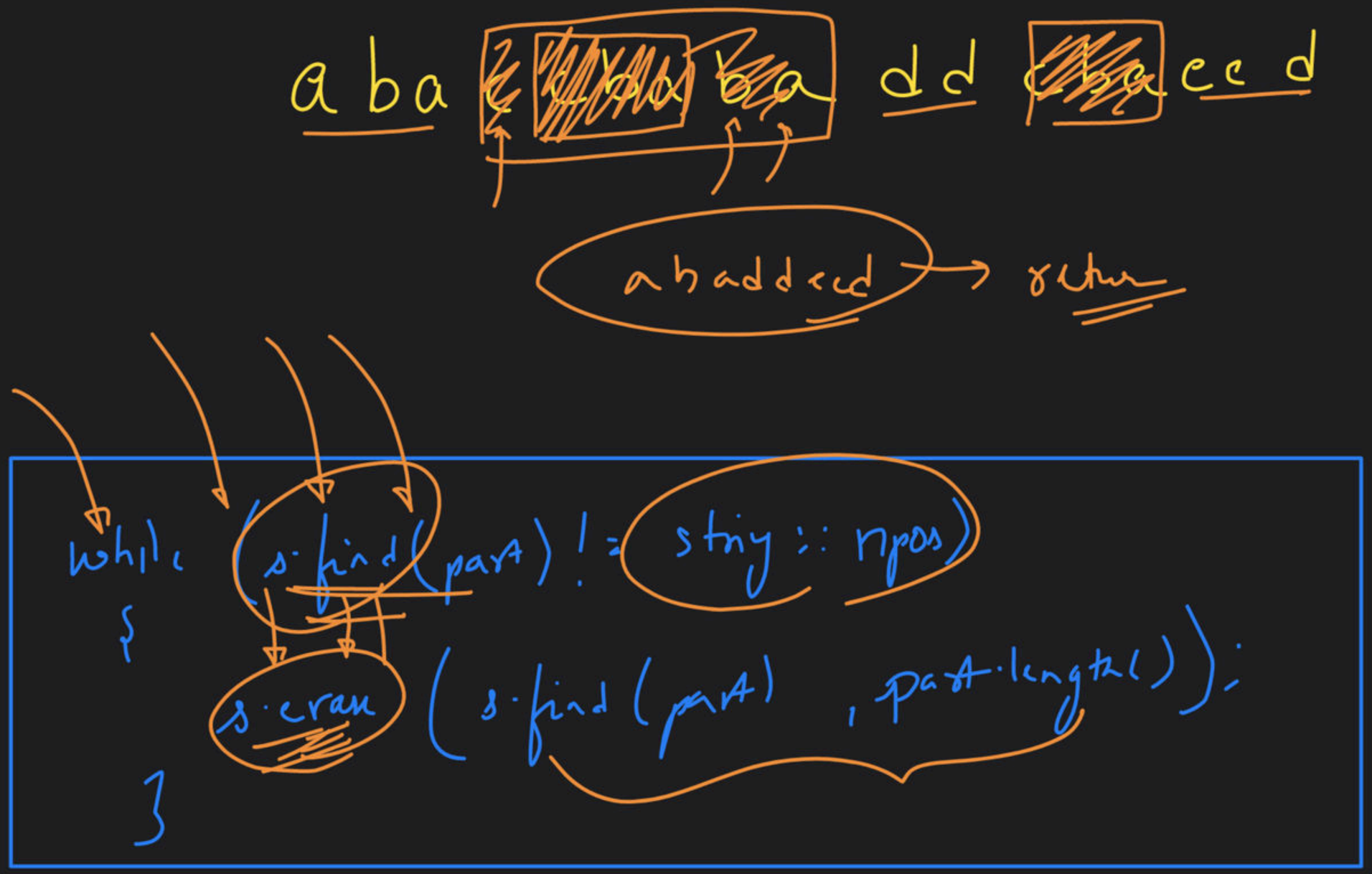

string temp = " "
Empty string
str
a z x x z y
0 1 2 3 4 5
a y
temp
i
j
different
push
same
pop

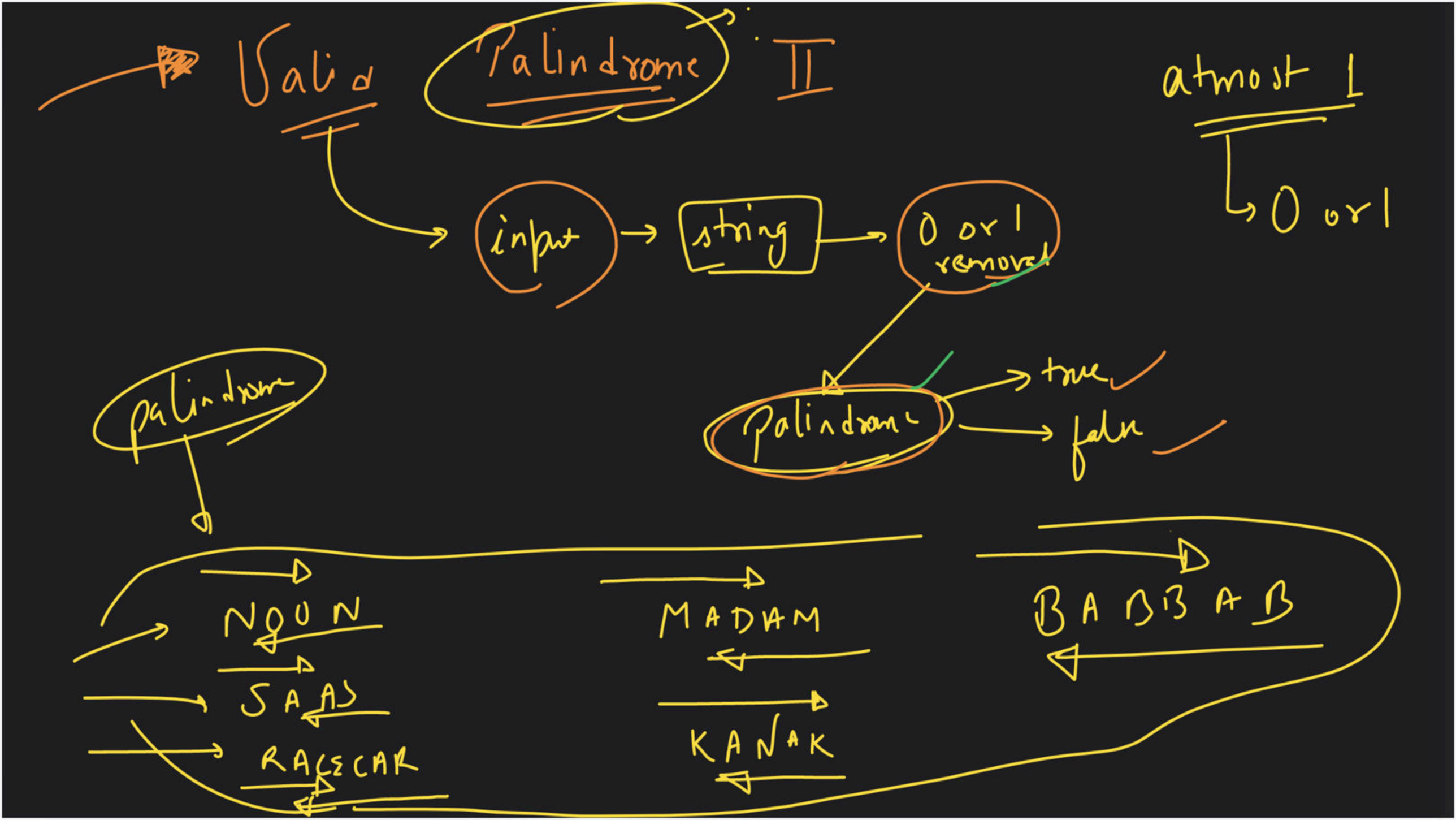

a
b
b
a
c
a
a
any = ''
G
right most
diff - spush
same - pop
a
b
b

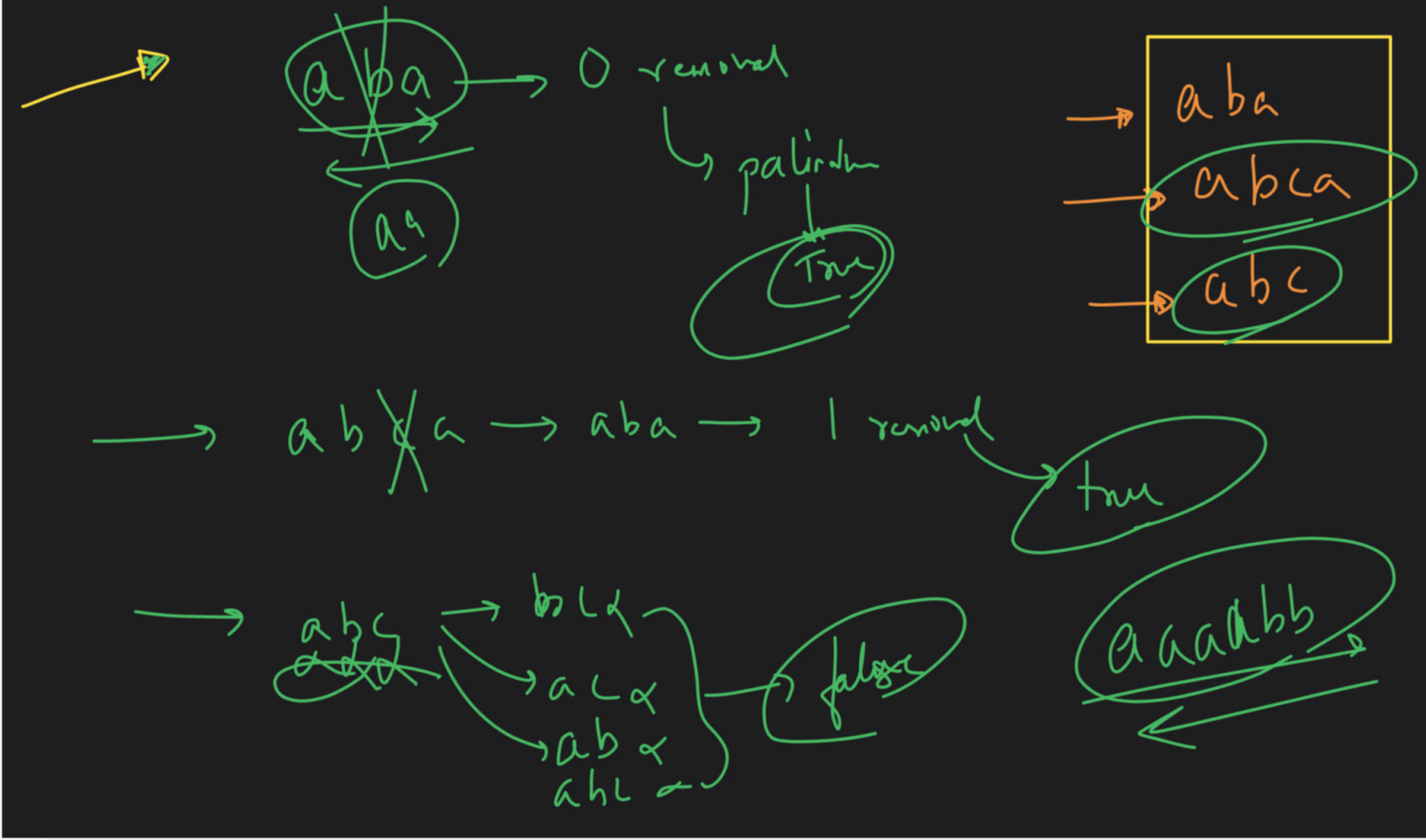

Remove all occurence of a substring
Str
part
"abbcbabcbabbbaac"
"cba"
abbddbbbaac
find
ans
while (substring exist in badi string)
{
remove
}
npas

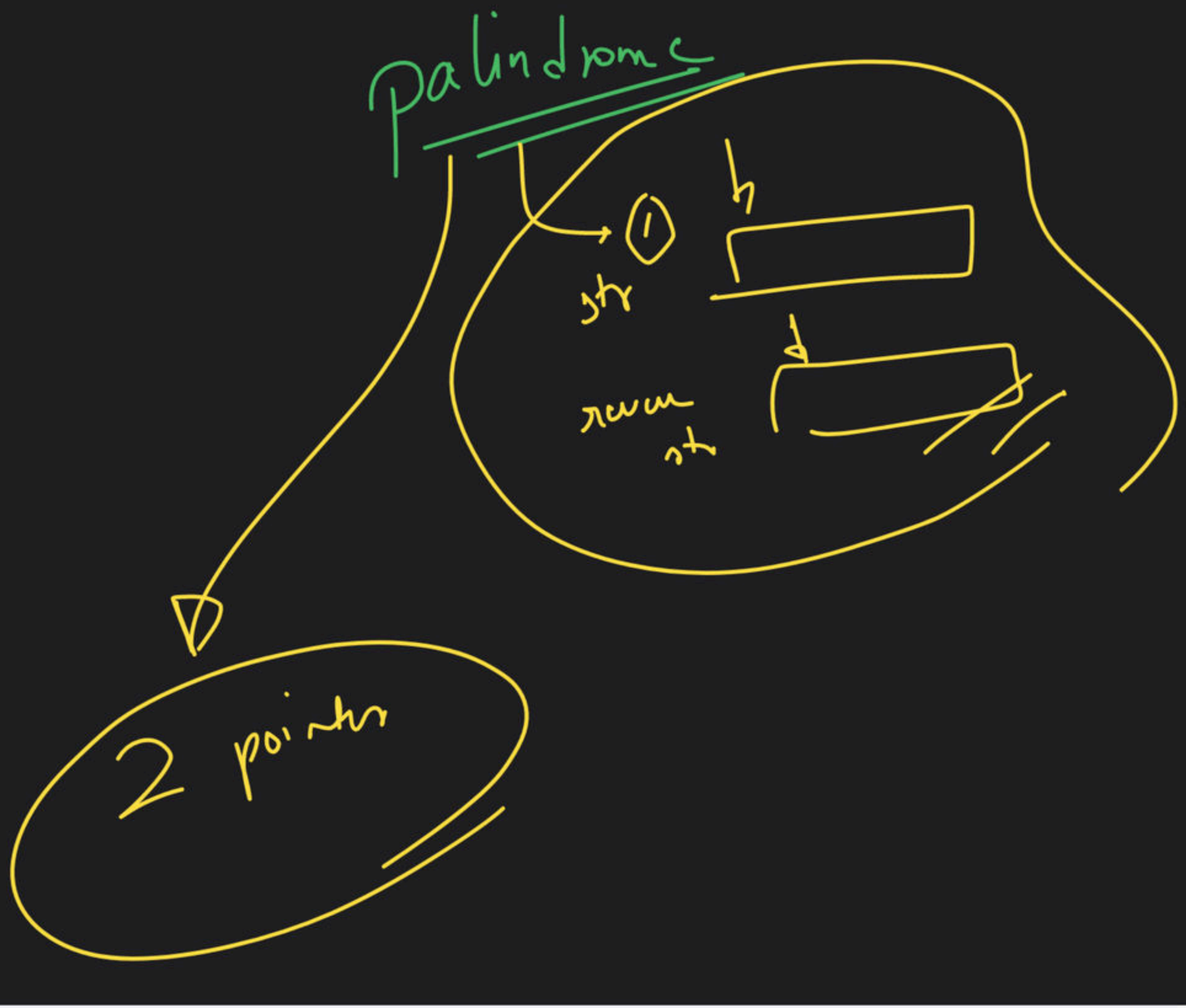

a b c cb a b a d d cba a a e e
a b c b a d d a a c c
?
s.find( )
value
npos
not found
npos
found
npos
?

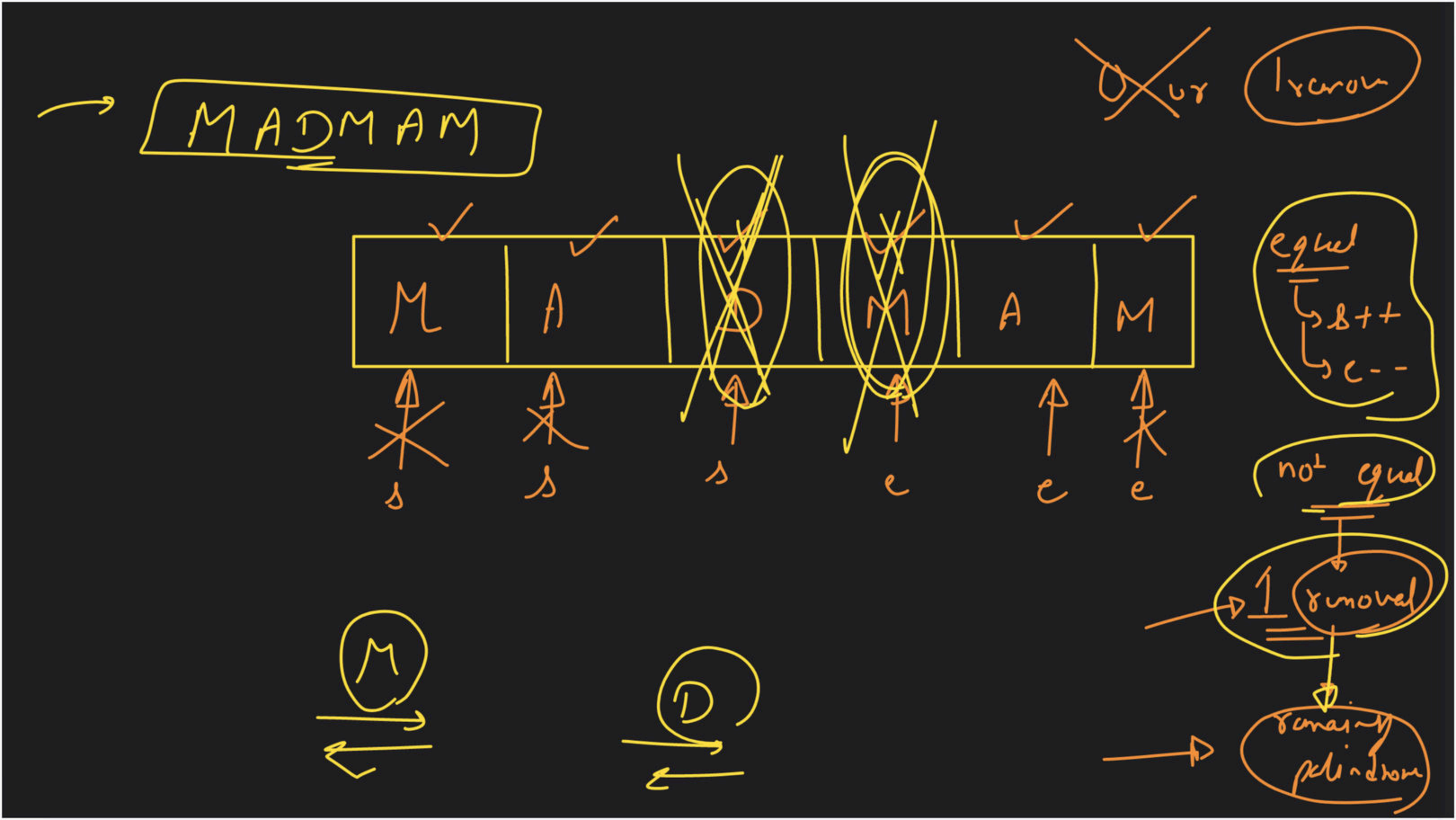

1-2 hr
T-C
H/W
find()
algorithms?
complexity
erase()
Implementation
Solution
?
T.C

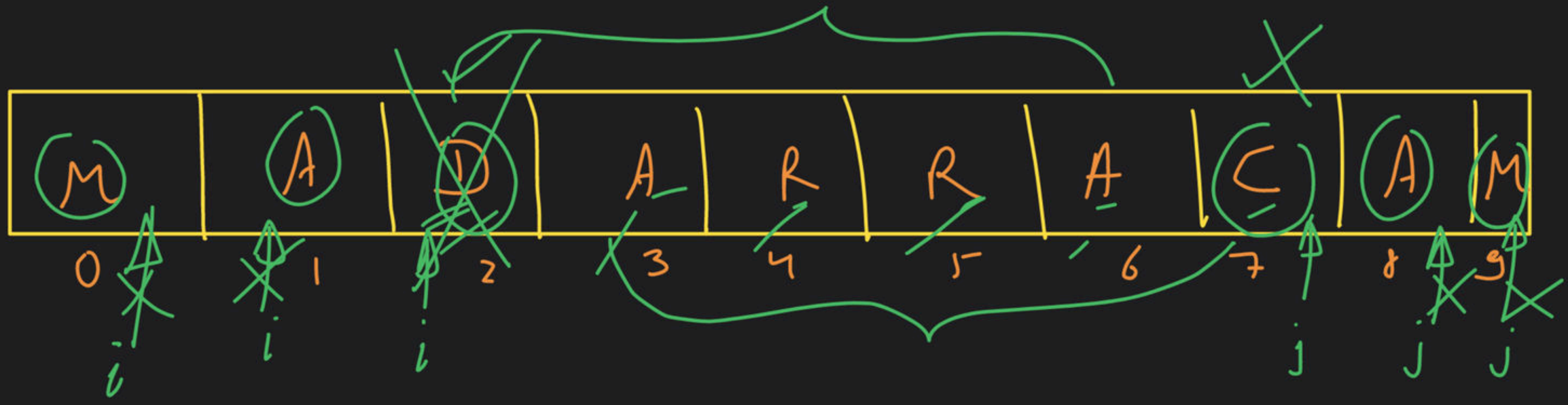

a b a
d d
c c d
para = che
abaddccd
return
while
{
}
s.find(para) != string::npos
s.erase
s.find(para , para.length());


Valid
Palindrome II
atmost 1
0 or 1
input
string
0 or 1 removed
Palindrome
true
false
palindrome
NOON
SAAS
RACECAR
MADAM
KANAK
BABBAB


aba
0 removal
palindrom
True
aa
aba
abca
abc
ab✗✗a → aba → 1 removal
true
abc
bc ∉
ac ∉
ab ∉
ab ∉
false
aaaabb


palindrome
1
str
reverse
str
2 pointers


MADMAM
M A D M A M
s s s e e e
equal
s++
e--
not equal
1
removal
remaining palindrom



s[0] == s[j] → true → i++ , j--

s[1] == s[8] → true → i++ , j--

Overall answer False

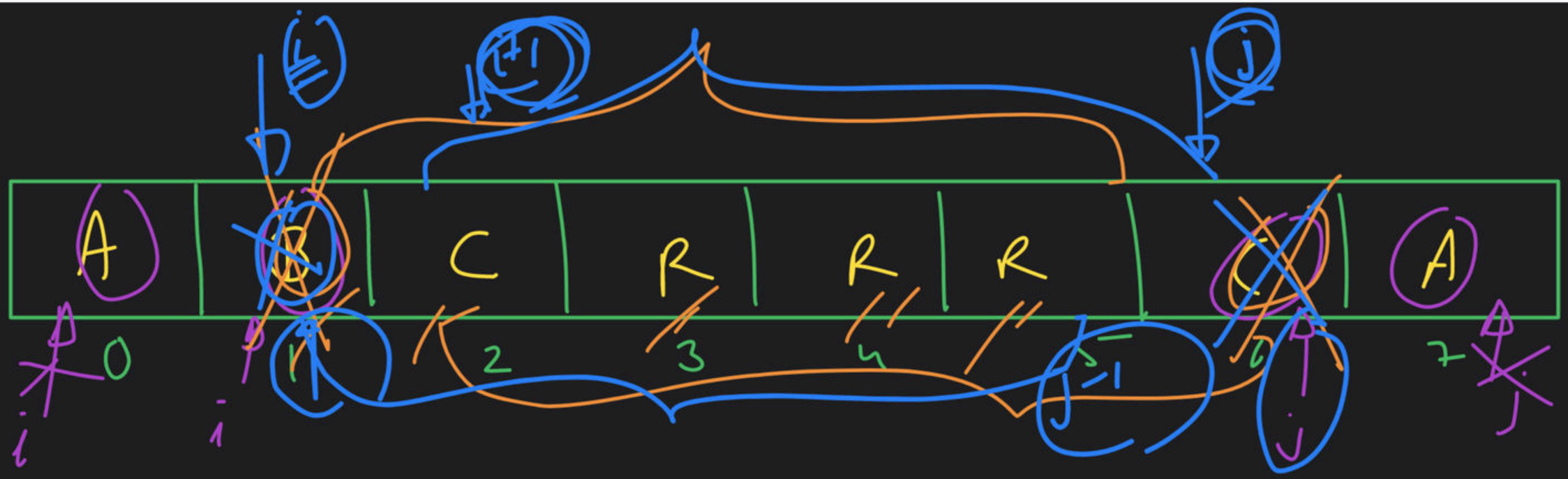
s[2] == s(7) → false → 1 removal → kyunki removal kam

→ D removal

→ ARRAC

→ C removal

→ DARRA → d



s[0] == s[7] → true → i++ j--

s[1] == s[6] → false → B remove

B remove → true

OR → CRRRC

C remove → false

BCRRR

final Ans

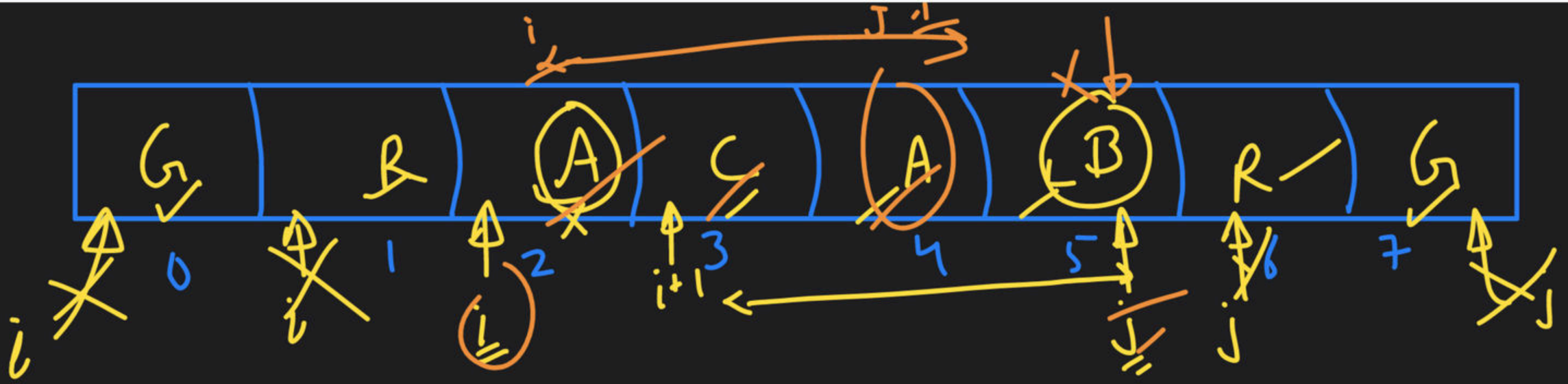
OR

0 0 → 0

0 1 → T

1 0 → T

1 1 → T



s[0] == s[7] → true → i++ , j--

s[1] == s[6] → true → i++ , j--

s[2] == s[5] → false → 1 removal

i^th character (false)
↳ remaining str (i+1, j)

j^th character (true)
↳ remaining str (i, j-1)

checkP (1 → n-2) ⟶ len - (n-2) → O(n-2)

check (2 → n-1) ⟶ len - n-2 → O(n-2)

+

O(n-2)

while (i < j)

i <= j

O(2(n-2/2))

O(n)

Palindromic Substring :-

Count
Substring → palindrome

i/p → "aba"

Substring

a ✓
aba ✓
ab ✗
ba ✗
a ✓
b ✓

} → 3 ④

aa

ab
ab
ba

Approach :-

→ Brute Force

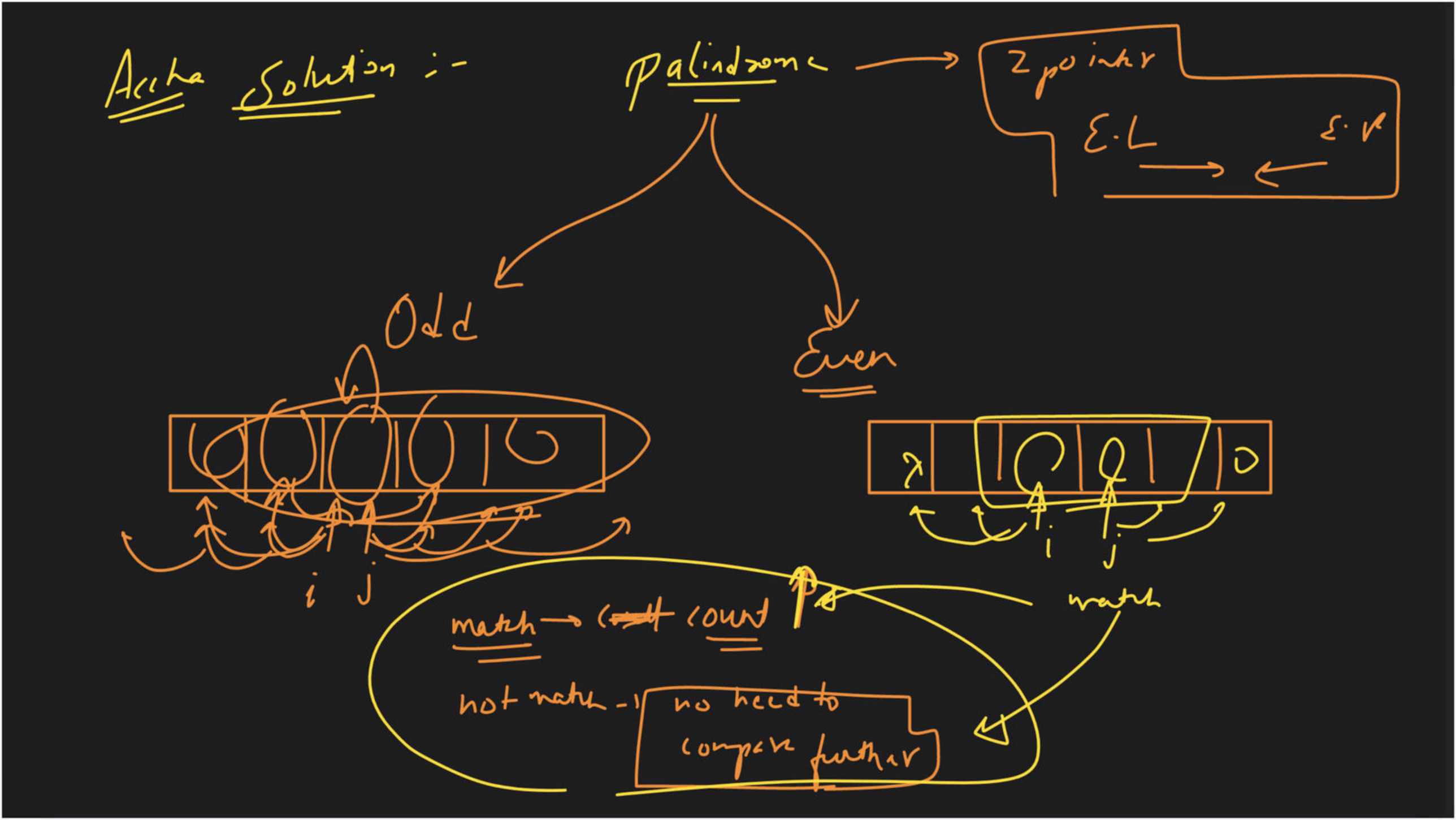
→ find all Substring → $O(n^2)$

→ check valid → $O(n)$

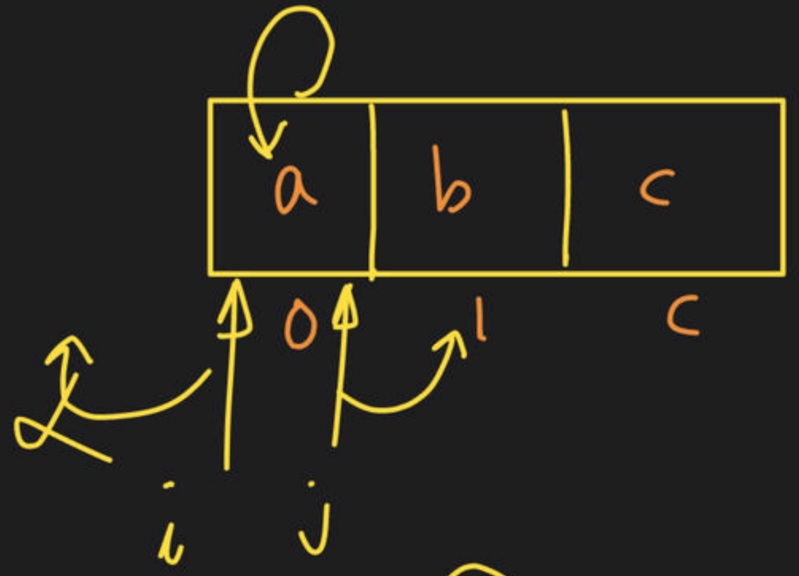
→ count

aa

↳ a

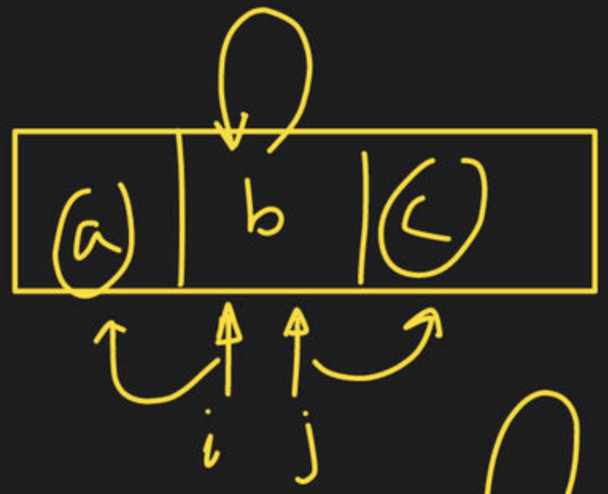

Acha Solution :-
Palindrome
2 pointer
E.L
E.R
Odd
Even
i
j
0
i
j
match
count
not match -1
no need to compare further

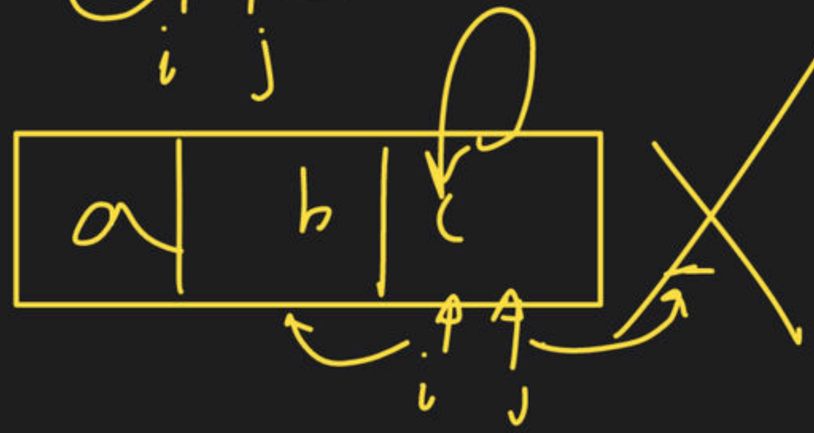
odd



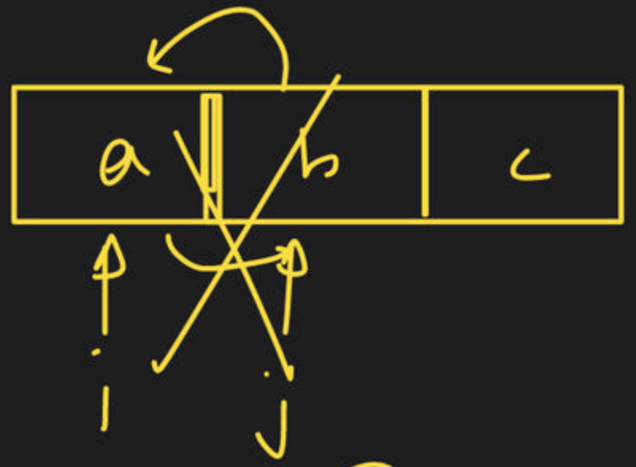
count = 1 + 1 + 1

Count = 3

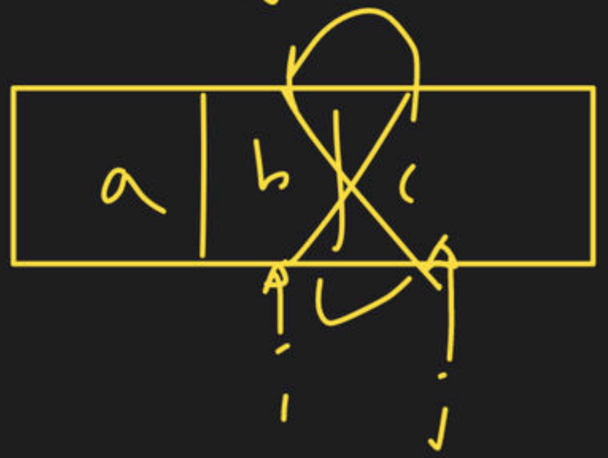




Even

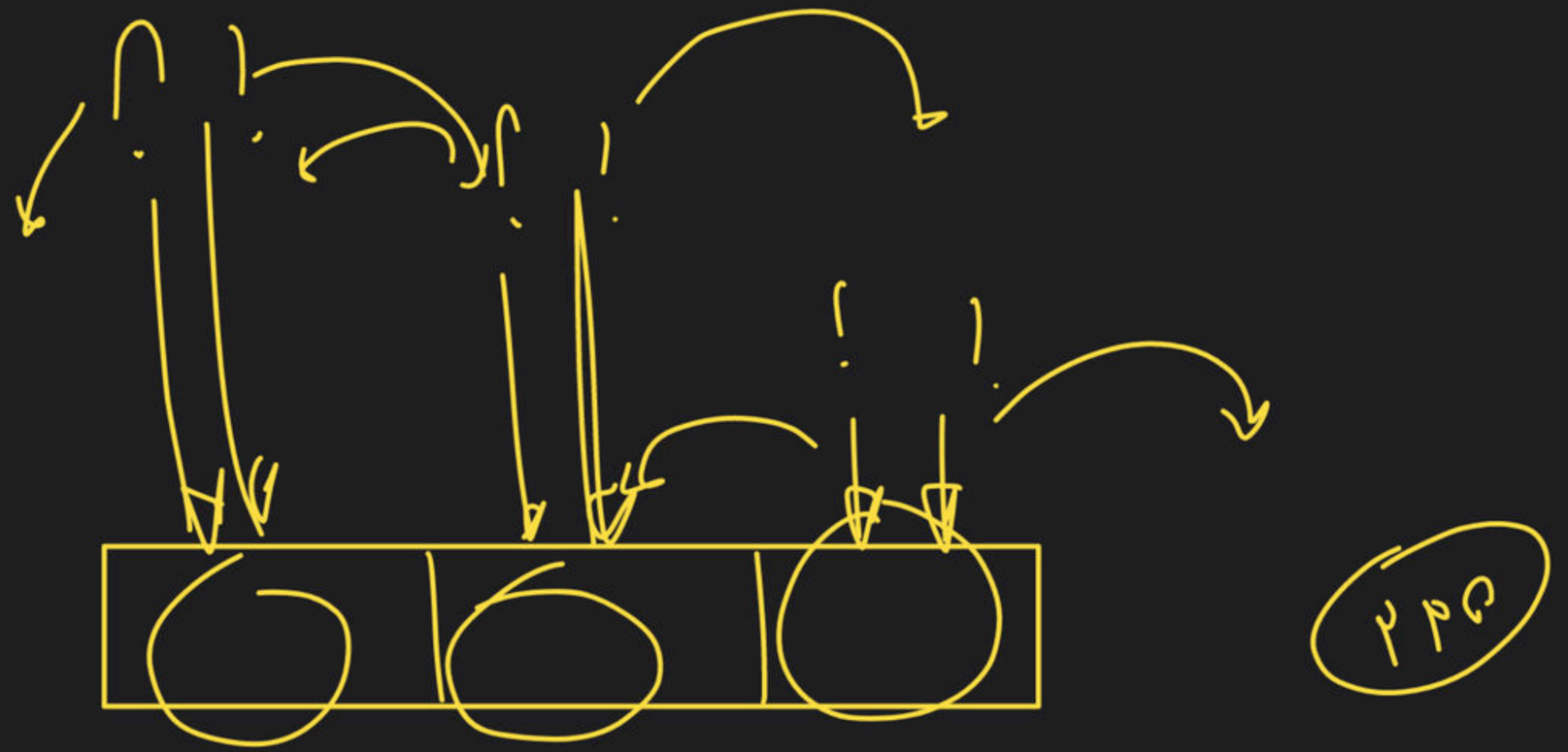


cout = 0

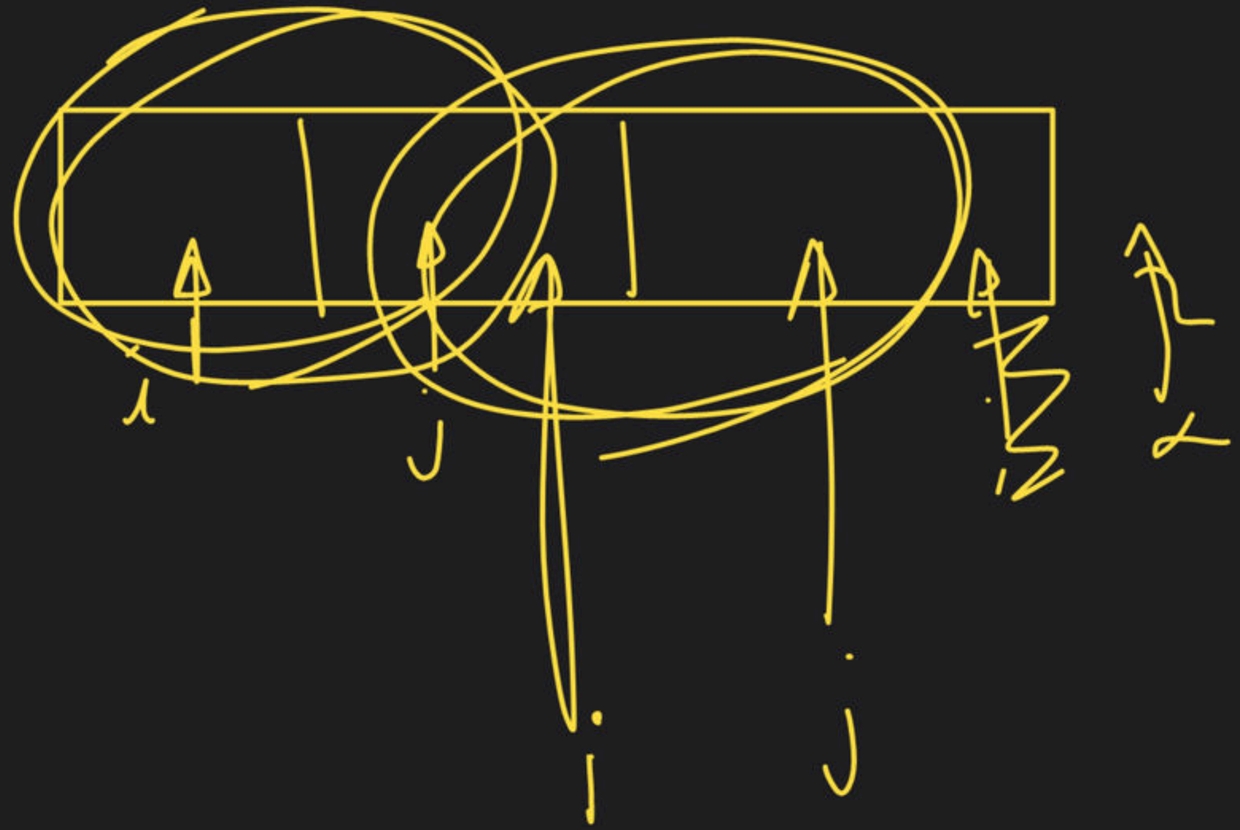


Total cout → 3 + 0

= 3

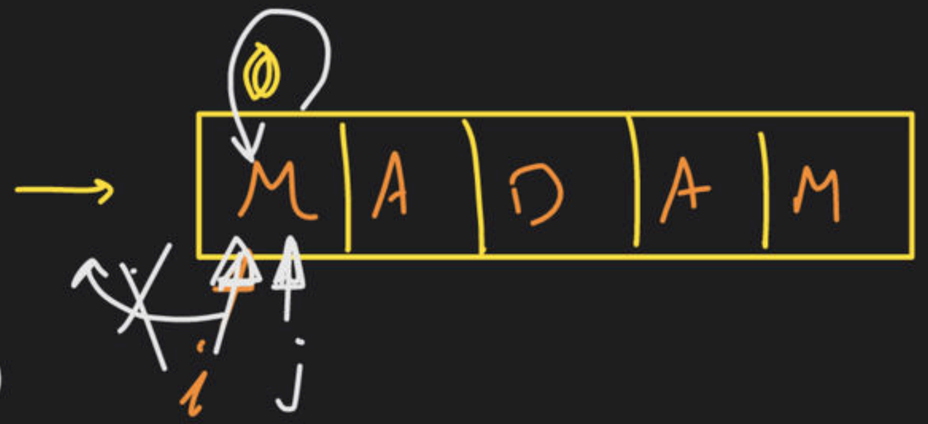

٢٢٥

Even →

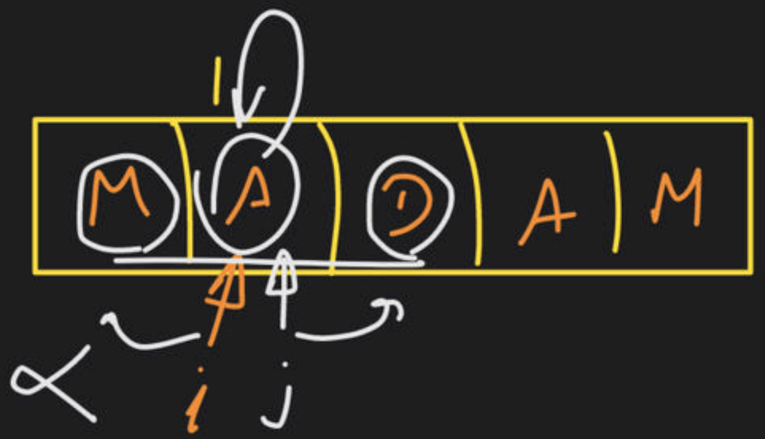


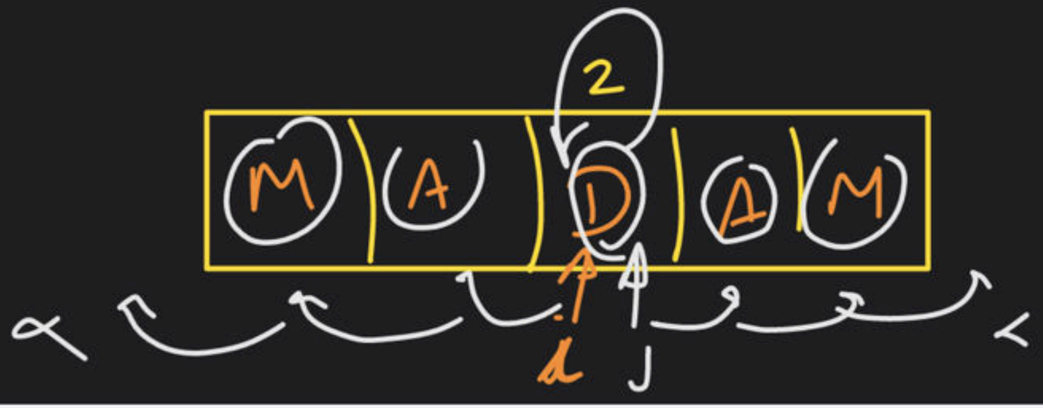

min
Water
Boeal

Odd



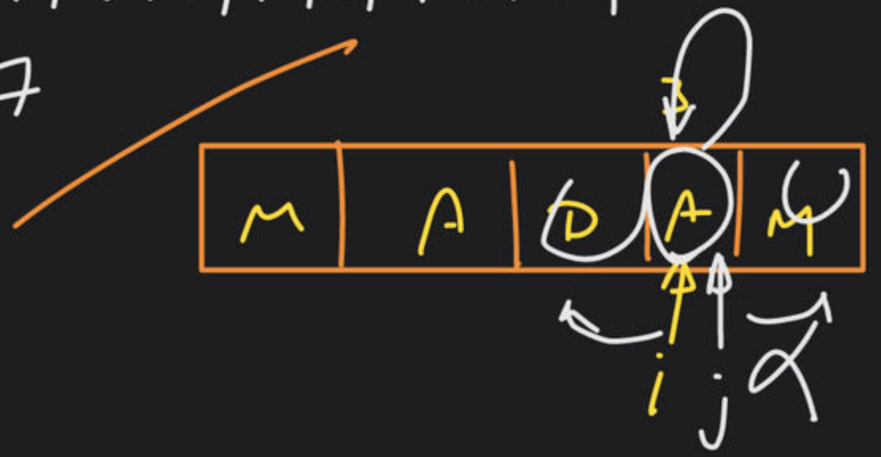
M
A
D
ADA
MADAM
A
M

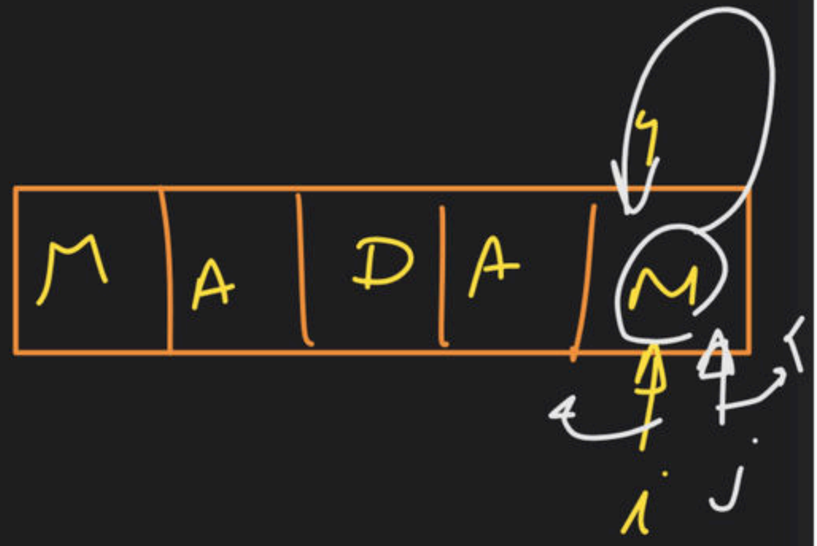




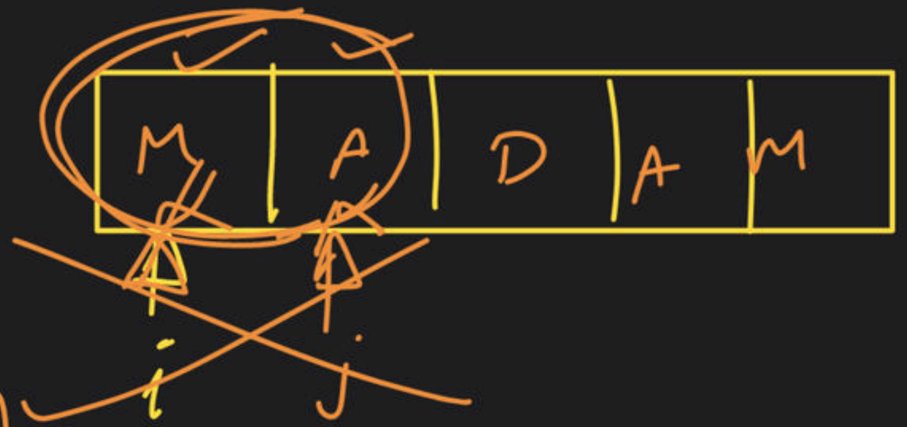
(out = 0 + 1 + 1 + 1 + 1 + 1 + 1)

= 7

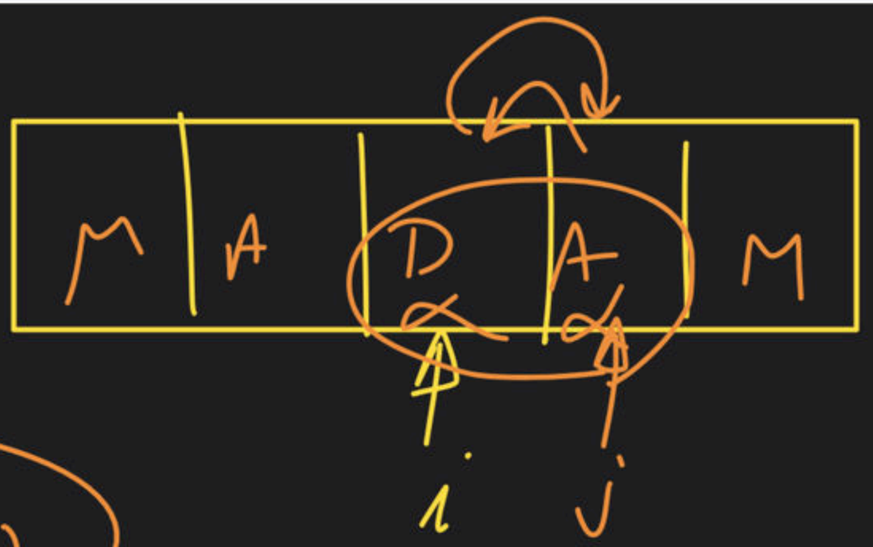




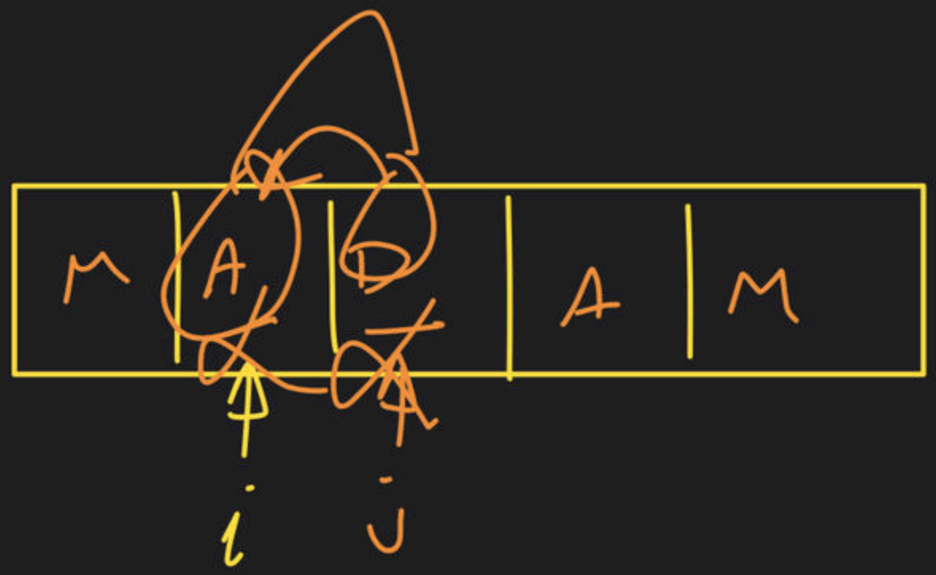
Even

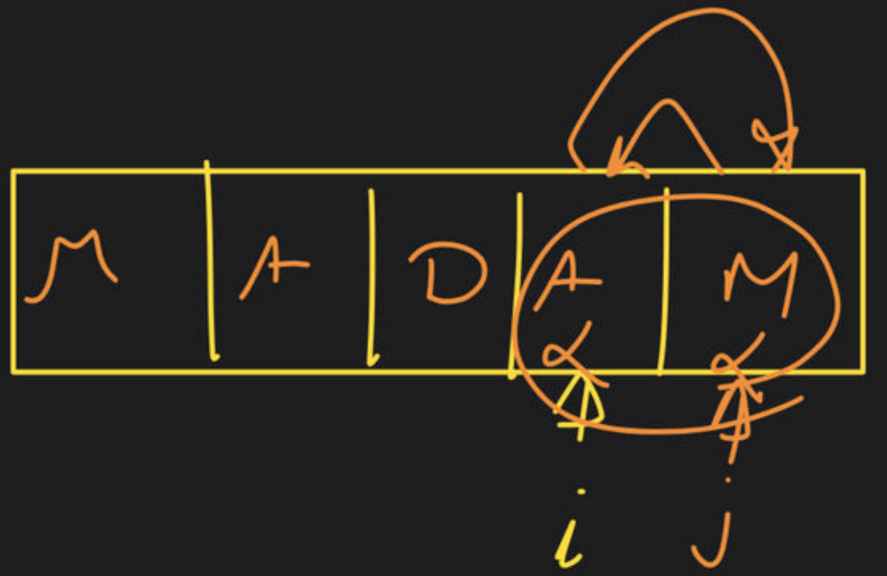


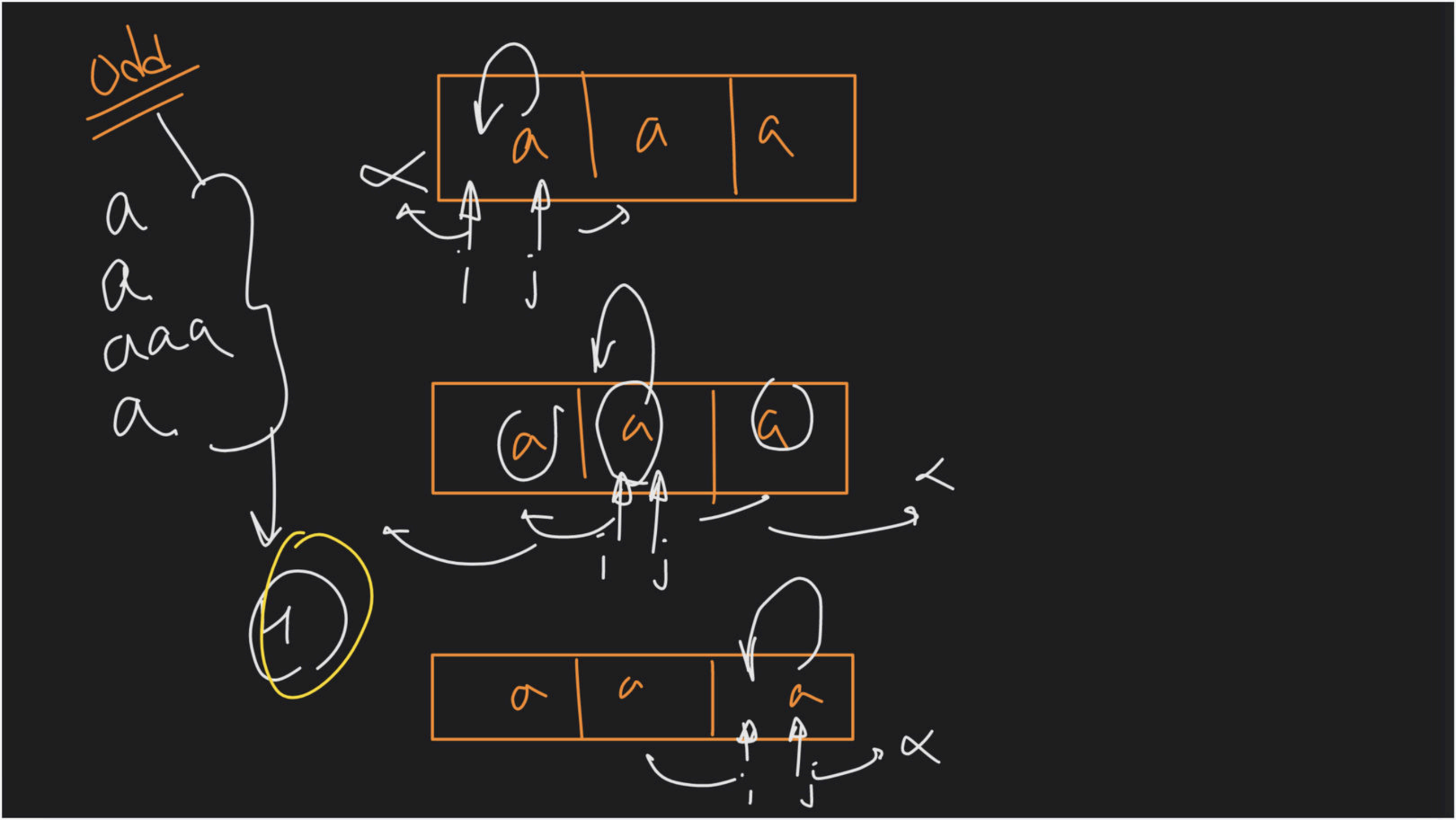
$M' = A$



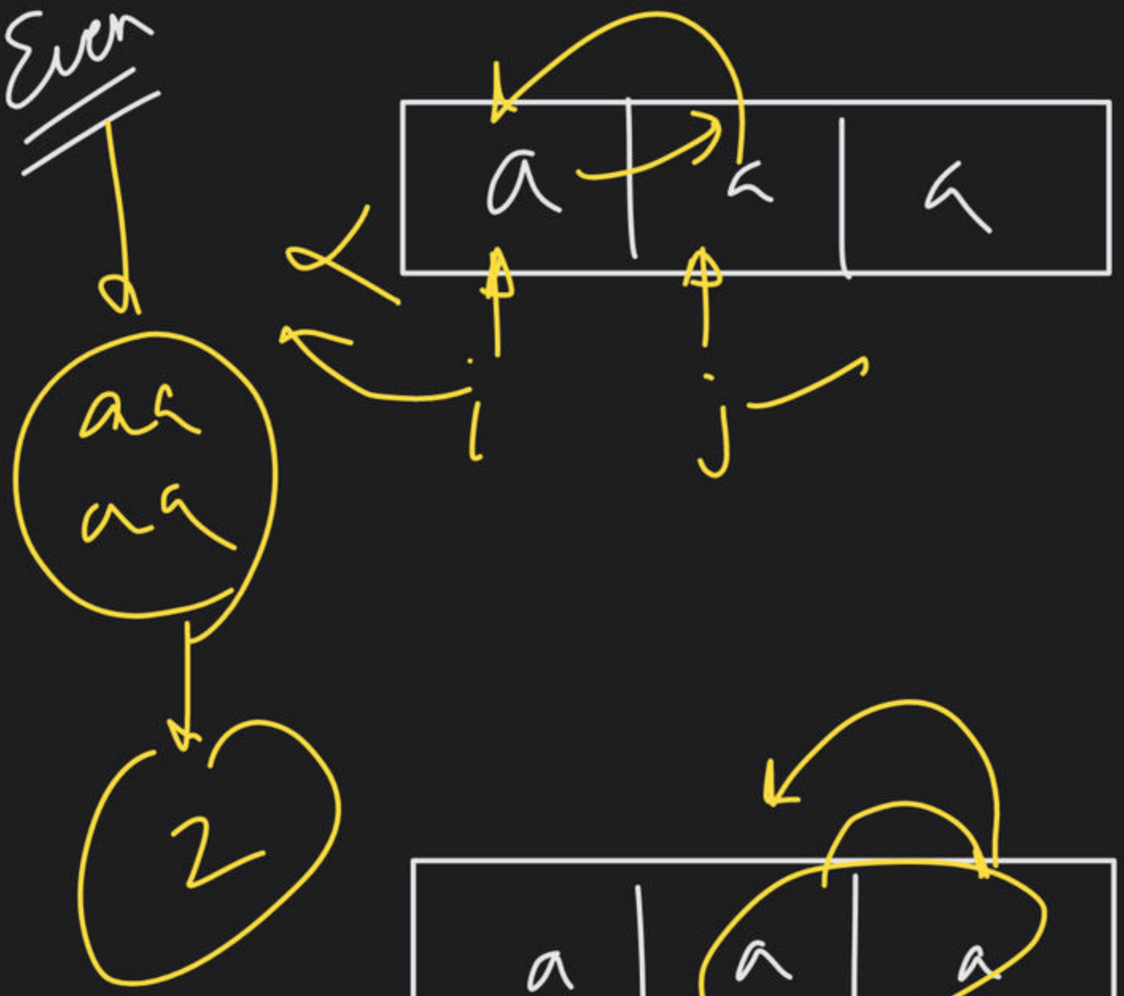
$Z \rightarrow$ Even $\rightarrow$ (out = 0






Odd
a
a
aaa
a
1
a
a
a
i
j
a
a
a
i
j
a
a
a
i
j

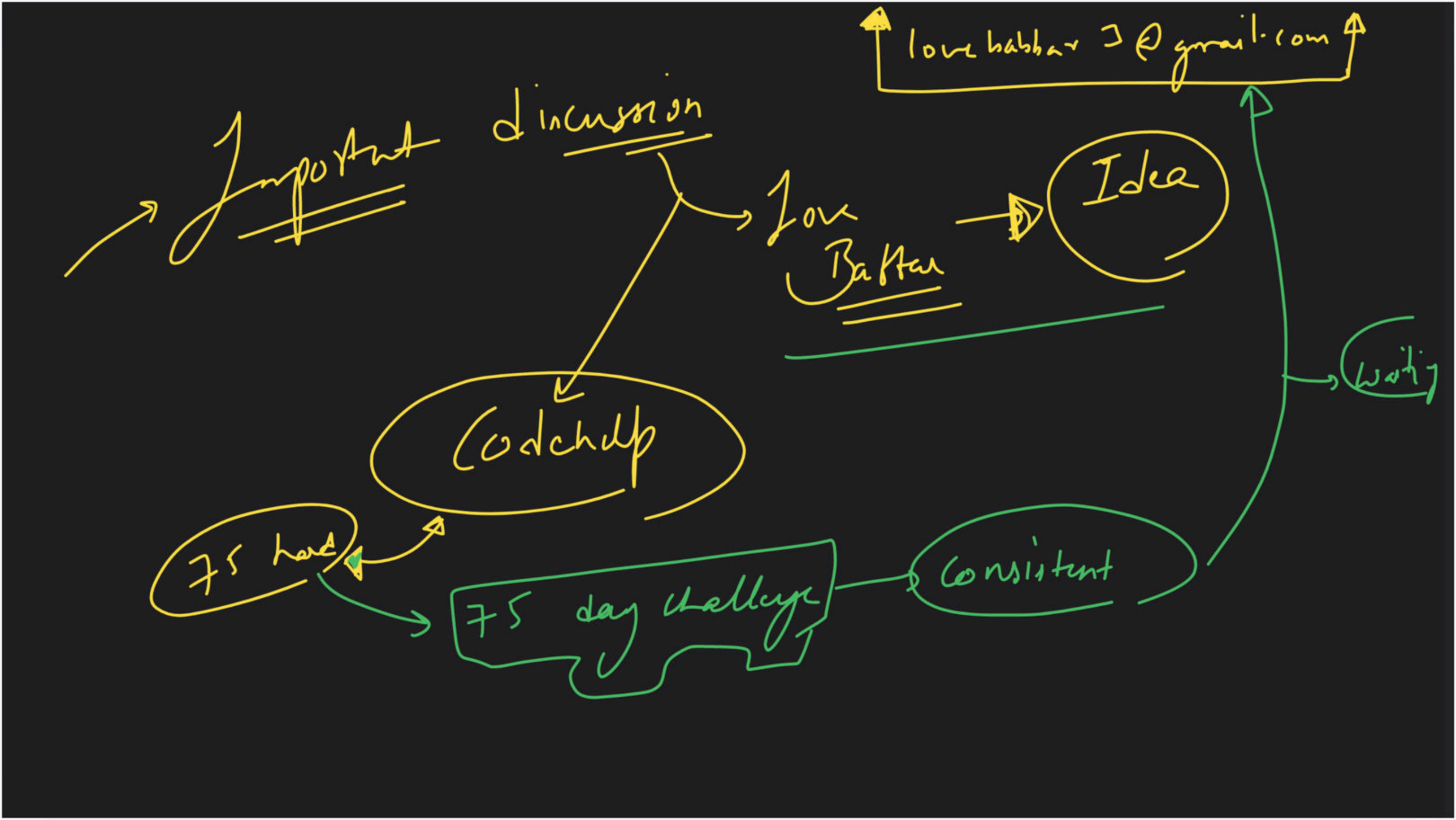
Even



T · A → a

Solution → T · C

S · C


lovebabbar 3@gmail.com
Important
discussion
Love Babbar
Idea
Codehelp
waiting
75 hard
75 day challenge
Consistent