

Longest Substring Without Repeating Characters

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String S = "a b a b c"

↓
First = 0
a b a b c
↑
Second = 0

vector<bool> count(256, 0)

0	1	2	---	97	98	99	----	255
0	0	0	0	0	0	0	0	0

length = 0

→ a b a b c
97 98 99
[1 | 0 | 0] length = 1

First
Second
→ a b a b c
[1 | 1 | 0] length = 2

First
Second
→ a b a b c → Here repeat a
then remove count from start the previous
char that currently repeat. ~~start~~

a b a b c
97 98 99
[1 | 1 | 0] length = 2

\rightarrow ababu

\rightarrow repeat (then remove previous character count from start to previous character that currently repeat.)

ababu
119899
1110

length = 2

\rightarrow ababu

97 98 99

1111

length = 3

\rightarrow abab'¹ \rightarrow no ~~other~~ character exist so it stop.

and

return length = 3

Other Example

String S = "ababcdbcbcadff"

\rightarrow ababcdbcbcadff

repeat c character

length = 5

one by one count \rightarrow 0 from start to previous char

ab u de u be a d f

ab u de u de a d f

ab u de u de a d f

ab u de u de a d f

Direct visual

ab u de u be a d f



ab u de u be a d f

\rightarrow Increase length again

ab u de u de a d f
repeated

length = 5 ✓

ab u de u de a d f

\rightarrow ab u de u de a d f
repeat e



ab u de u de a d f



ab u de u de a d f

length = 6

