Q3 Longest Substring without reapting characters

Solution ① standard approach

sliding window $O(n)$ time

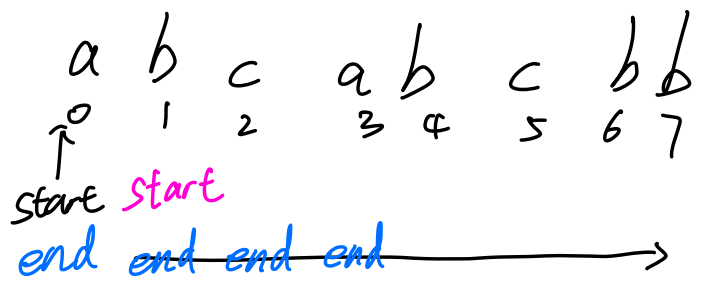two - pointer $O(\min(m,n))$ space

② two pointers (start end)

use map track the indices

③ end forward , add characters
to current window

④ If exist , move start until
the substring no longer contains
repeated character

⑤ keep track the maximum length

Example 1

a b c a b c b b
0 1 2 3 4 5 6 7

start start

end end end end →

Hash Map

a   ⓪ +1

b   1

c   2

a   3

So on

maxLength

(0,1) 1

(1,2) 2

(2,3) 3