

### 3. Longest Substring Without Repeating Characters

a b c a b c b b

If we know the LSWRC that terminates at  $s[i-1]$

We can calculate LSWRC that terminates at  $s[i]$  by

adding it to the string and moving  $l$  to the right until the window is still valid.

① We can use a hashset to manage all members of the window.