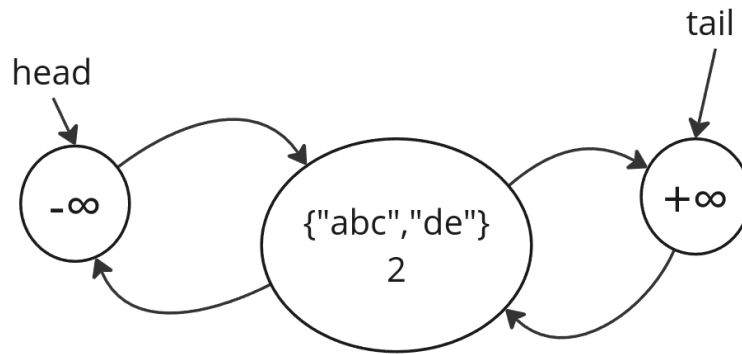


Let's say that we have this list, and we'd like to insert "de":

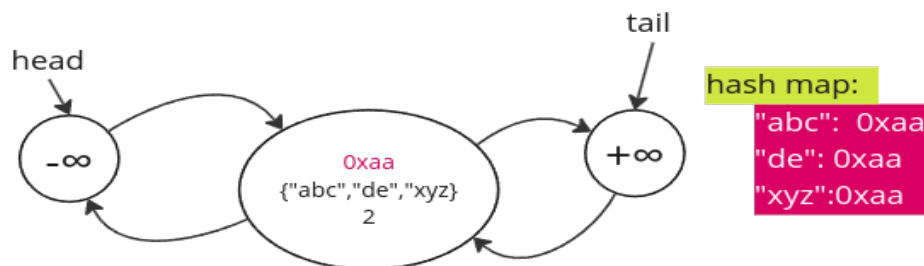


"de " exists in the list, we need to get its node.

miro

How do we know that "de" exists in the list?:

- traverse the list until find it: not an option, because the interviewer reclaim an O(1) function.
- store the node of each string in a hashmap: this way it become easy to lookup:

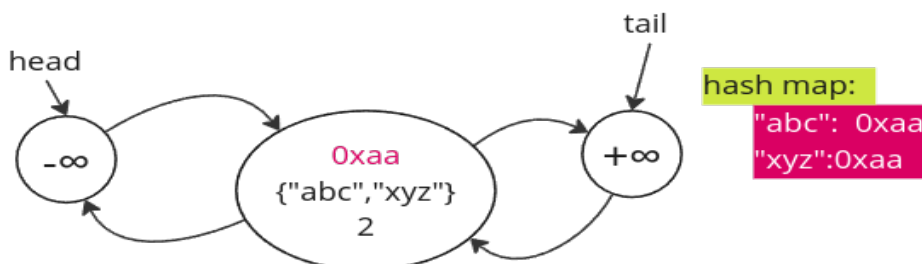


"de" is in the list @ 0xaa:

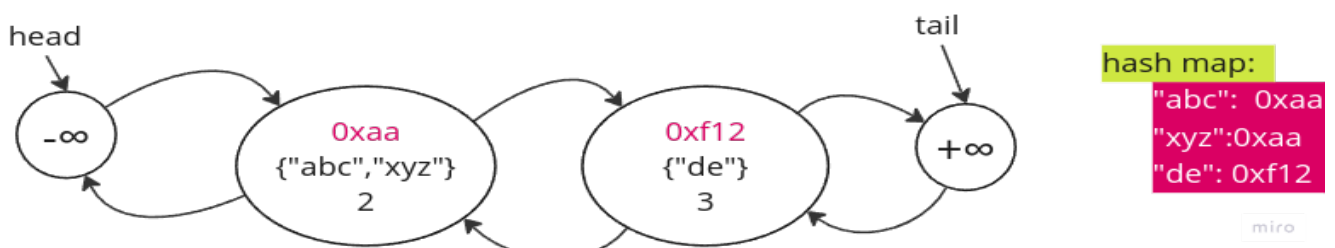
get the next node of 0xaa, in this case, the next node is the tail.

Because the next node is the tail

- we need to remove "de" from the 0xaa node's list:

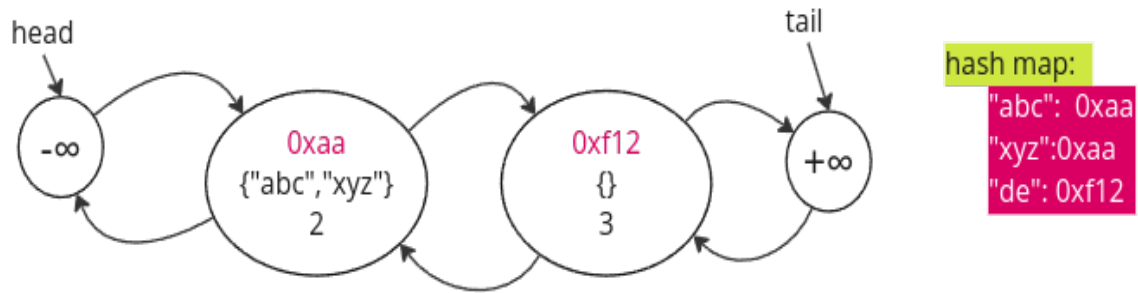


and, add a new node just after 0xaa node, with {"de"} as list, and 3 as frequency.

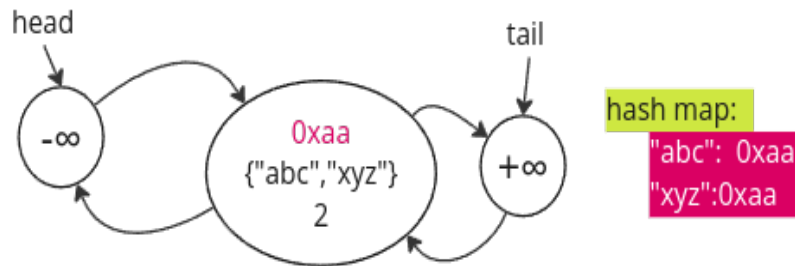


miro

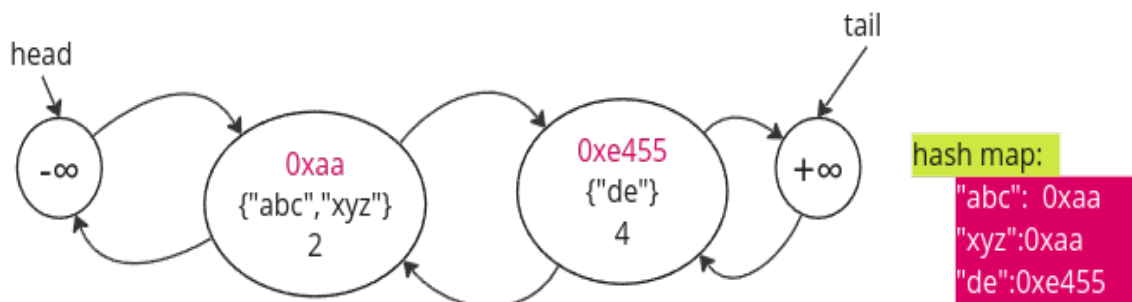
Insert "de" one more time:



0xf12 is empty, so remove it:



next node is the tail, so insert a new node with {de} as list and 4 as frequency":

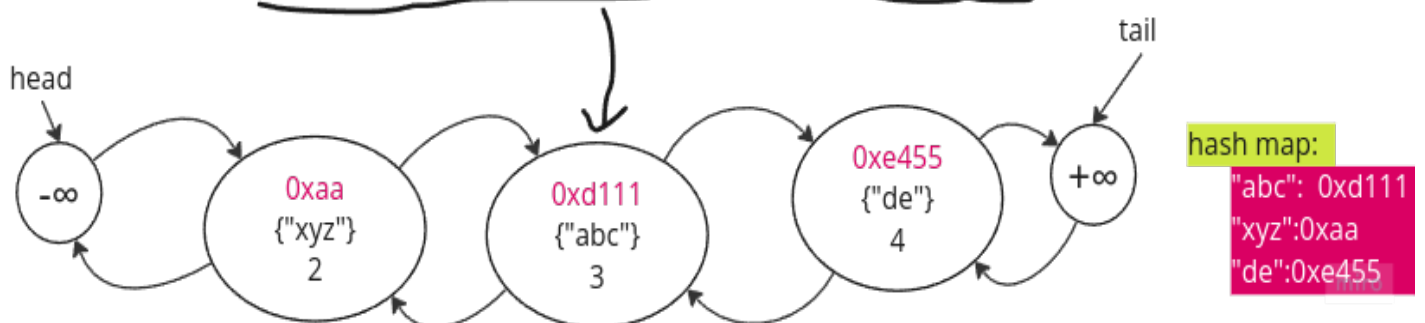


Insert "abc":

"abc" is at 0xaa, with frequency 2

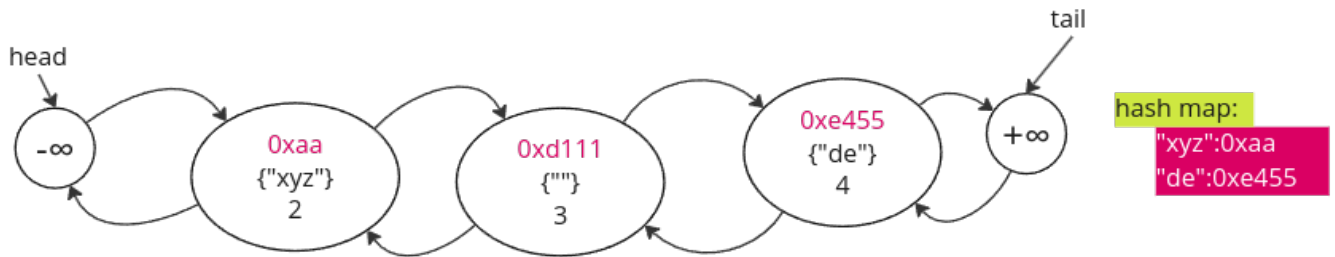
the next node is 0xe455, but with frequency of 4

so, we need a new node, just after 0xaa, with {"abc"} as a list and 3 as frequency:

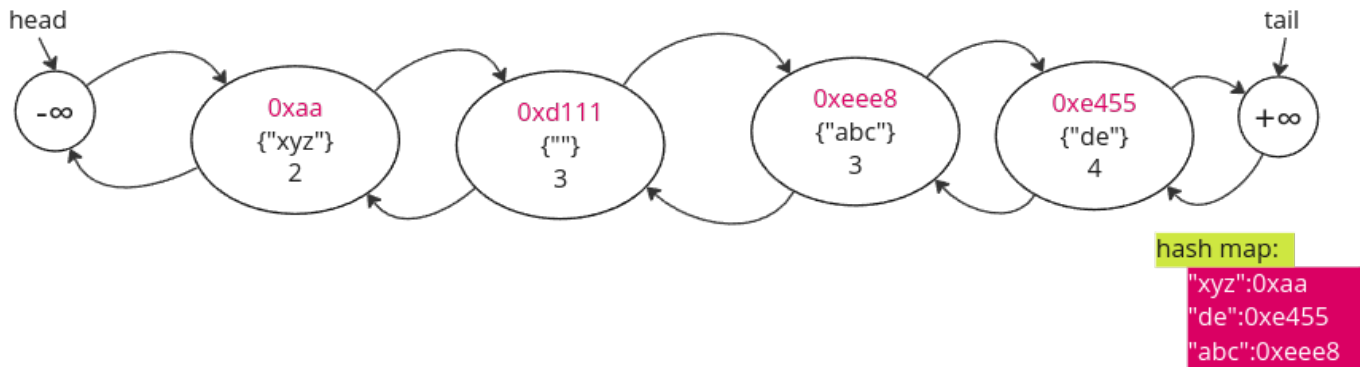


### Insert "abc" one more time:

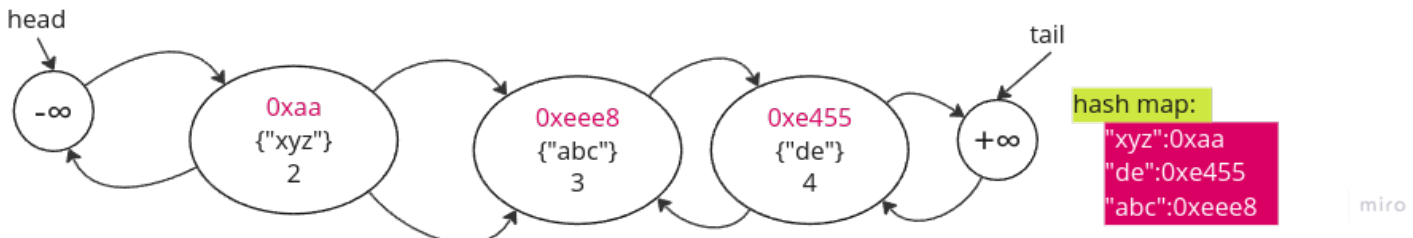
"abc" is at 0xd111, next node is 0xe455, its frequency is 4, so just remove "abc" from 0xd111's list:



insert a new node just after 0xd111:



0xd111' list is empty, so remove the whole node:



### Insert "azerty"

"azerty" does not exist in the list, so look, next node after the head the next node after the head is with frequency of 2: insert a new for "azerty" with frequency of 1

