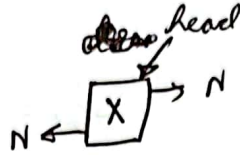


# create LL!

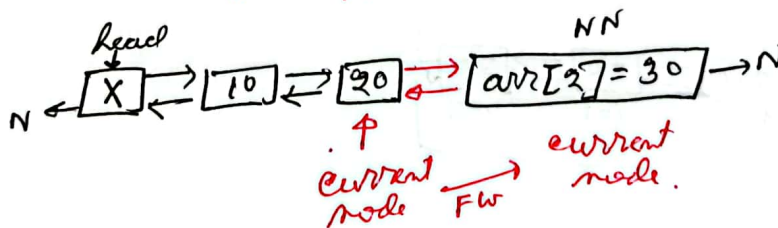
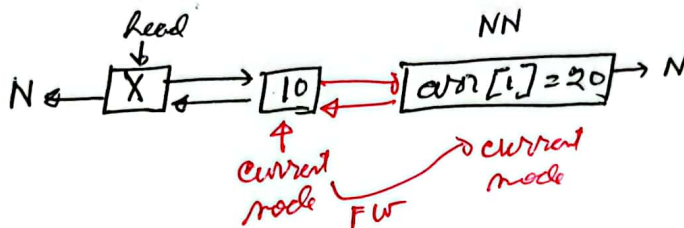
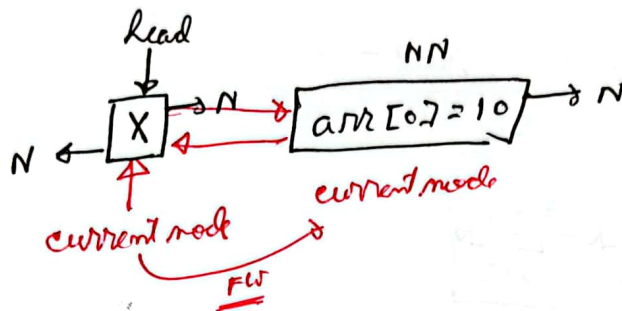
arr

10	20	30
0	1	2

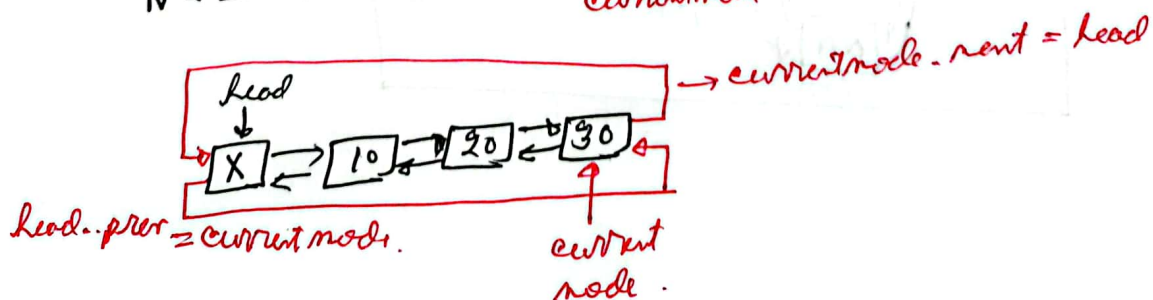
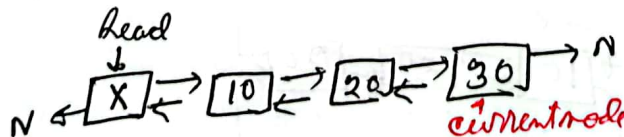
① step 1: create dummy head



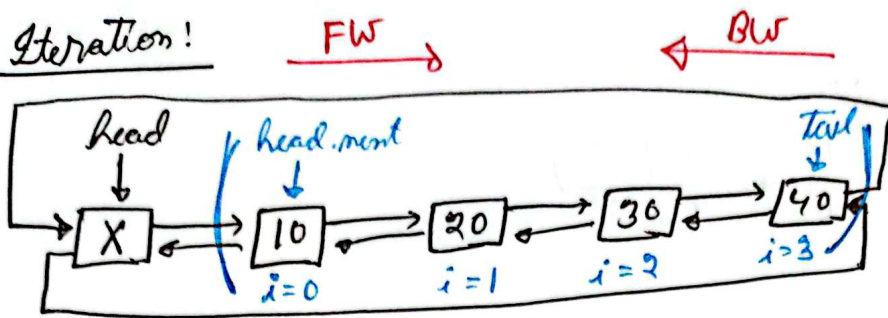
② step 2: In loop add elements after dummy head. [current node / tail]



③ step 3: make it circular



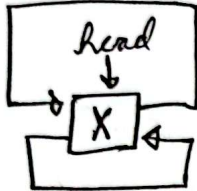
# Iteration!



FW!  
 From head.next  
 to until not head

size = 4

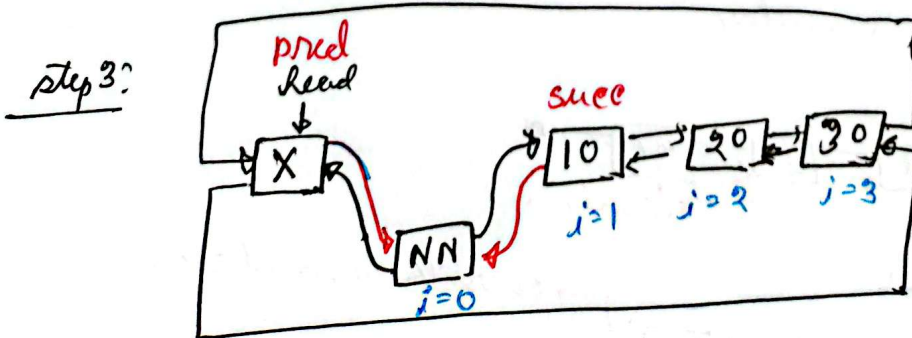
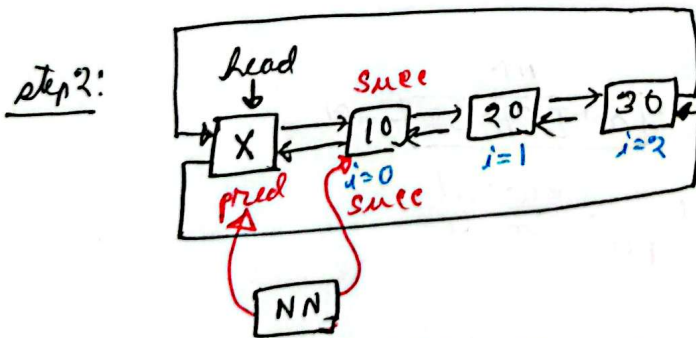
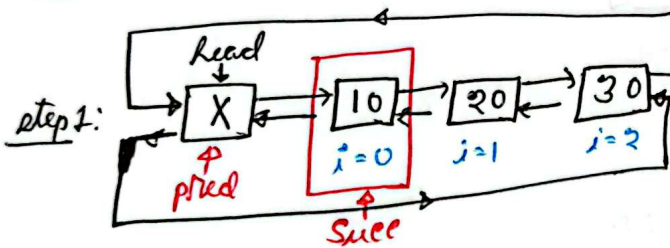
Tail = head.prev



empty dummy headed  
 doubly circular.

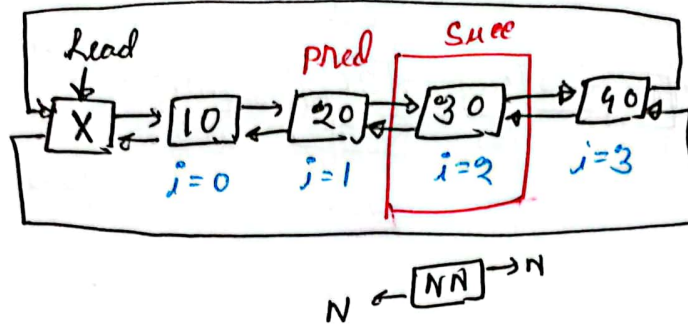
BW:  
 From Tail to  
 until not head

# Insert at  $idx=0$  (After head,  $pred = head$ )

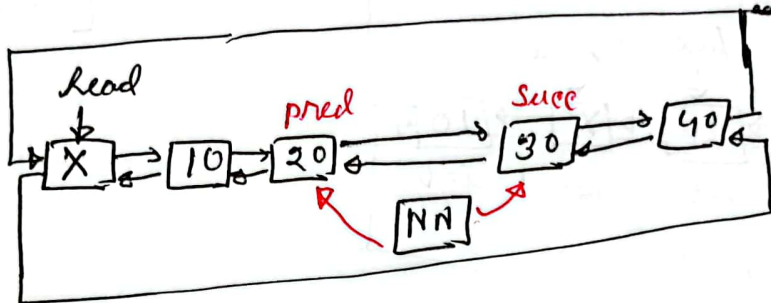


## # Insert at index 2 (middle)

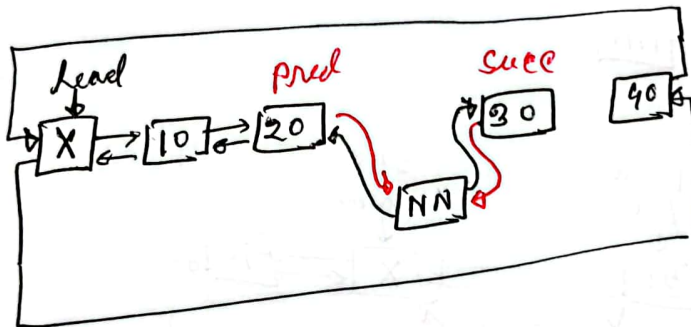
step 1:



step 2:



step 3:



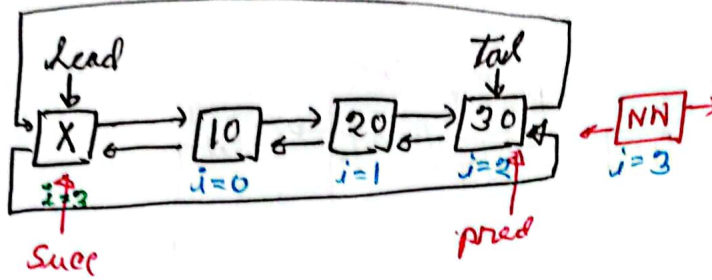
# Insert after Tail (size) (idx=3) [no special case]

Succ is the index where I am inserting, so, in this case head.

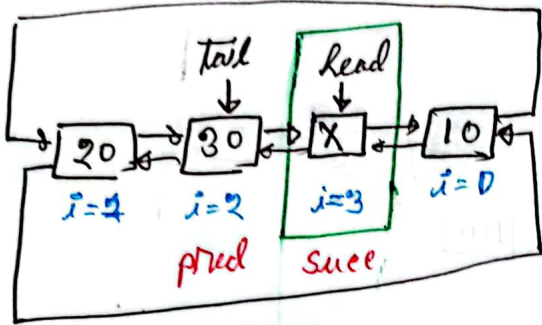
[The node after Tail is head]

[the node after pred is succ]

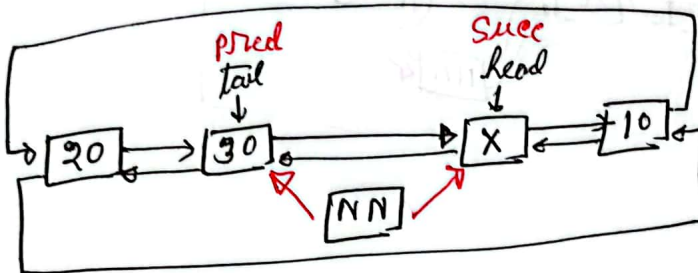
step 1:



same  
re-ordered  
nodes

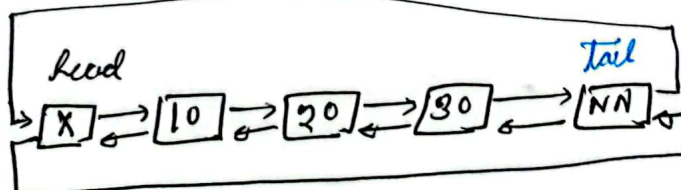
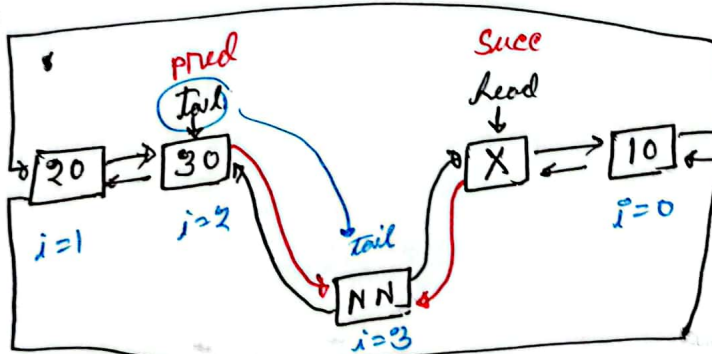


step 2:



step 3:

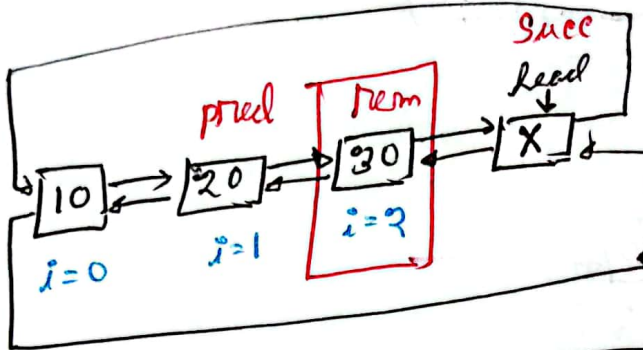
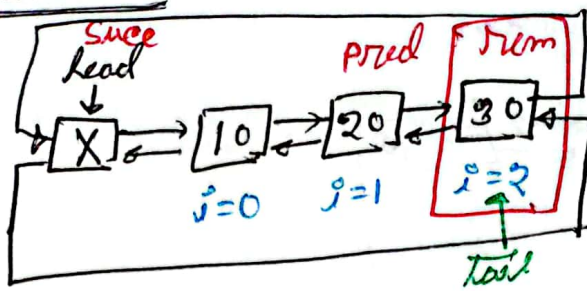
same  
re-ordered  
nodes





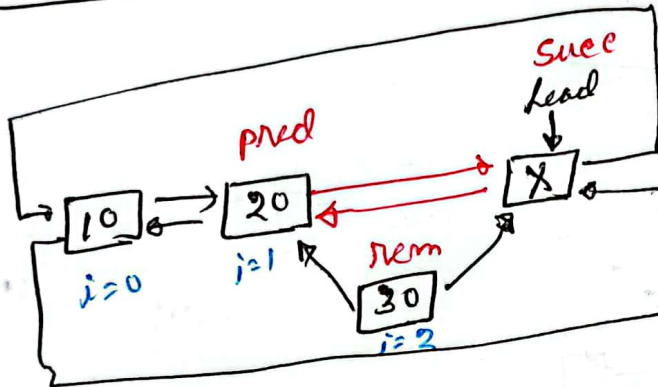
# Remove Tail:  $rem(index = 2)$

step 1:

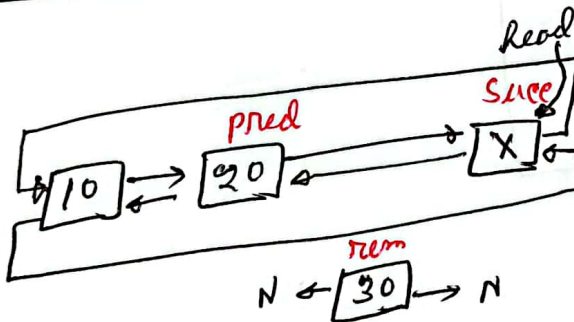


same

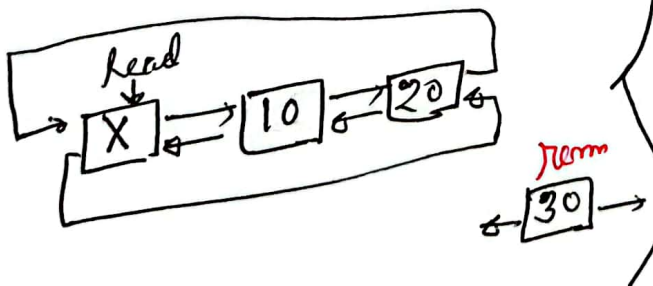
step 2:



step 3:

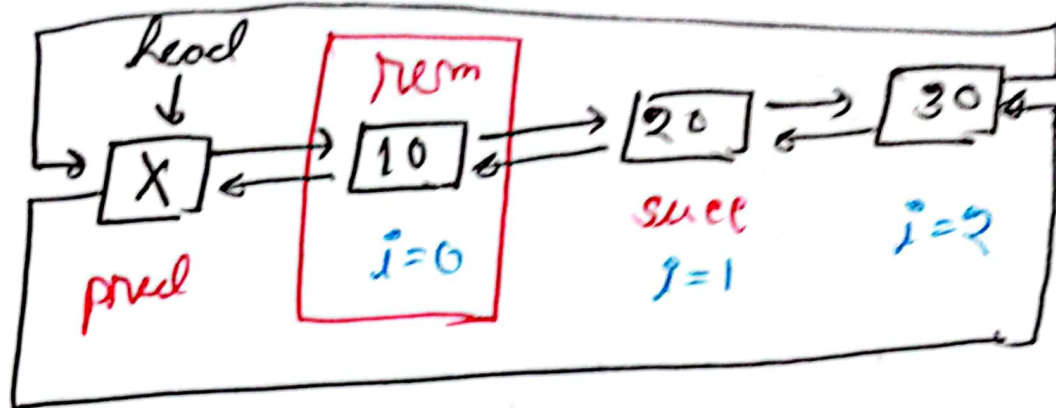


same

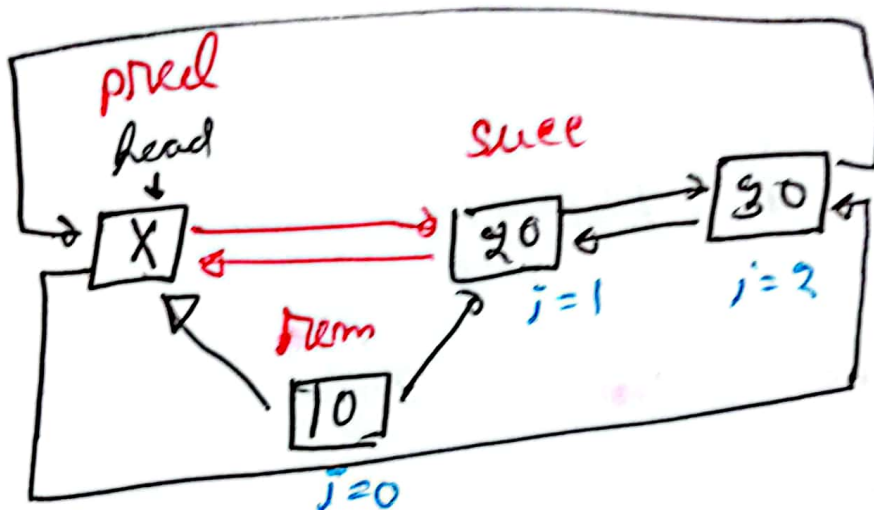


# Remove after head ( $idx = 0$ )

step 1:



step 2:



step 3:

