Cleanup procedure:

Step 2: Remove marked nodes.
For all nodes u:

Case 1: If u is a root node, do nothing.

Case 2: If u is a child:

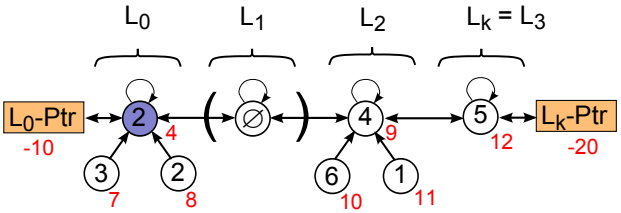
2a) if u is marked as deleted, then remove the node (and put it in the queue).

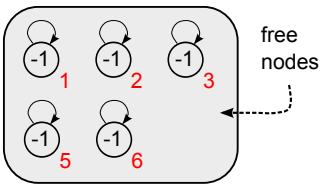
2b) if u is not marked as deleted:

if parent (root) of u is not marked as deleted, then do nothing.

if parent (root) of u is marked as deleted, then replace root by u.

before 2b)

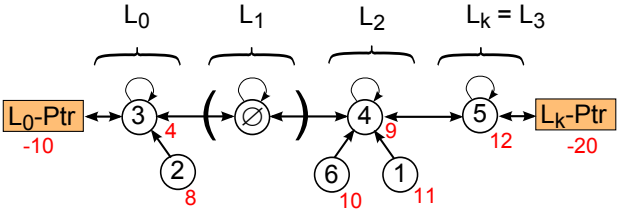


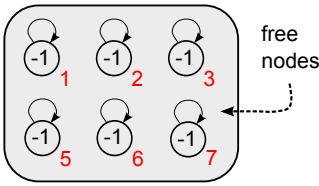


Instead of replacing node 4 by its child node 7, it suffices to replace the page value:

- The page value of node 4 is replaced by the page value of node 7. Afterwards node 4 is unmarked.
- Then node 7 is removed and put into the queue.

after 2b)





Page value 3 is now in node 4.
address[3]=4

address array

page value	1	2	3	4	5	6
node id	11	8	4	9	12	10

Node id 7 is put into the queue:
Q = [1,2,3,5,6,7]

node id	1	2	3	4	5	6	7	8	9	10	11	12
page value	-1	-1	-1	3	-1	-1	-1	2	4	6	1	5
parent	-1	-1	-1	4	-1	-1	-1	4	9	9	9	12
left	-1	-1	-1	-10	-1	-1	-1	-1	4	-1	-1	9
right	-1	-1	-1	9	-1	-1	-1	-1	12	-1	-1	-20
count	-1	-1	-1	0	-1	-1	-1	0	1	0	0	0
marked	-1	-1	-1	0	-1	-1	-1	0	0	0	0	0
rank	-1	-1	-1	1	-1	-1	-1	0	1	0	0	0

The variables L0-Ptr and Lk-Ptr:

L0-Ptr = 4
Lk-Ptr = 12

Node 7 is removed from the linked trees and put into the queue. See column 7 for which the array values have been set to -1.