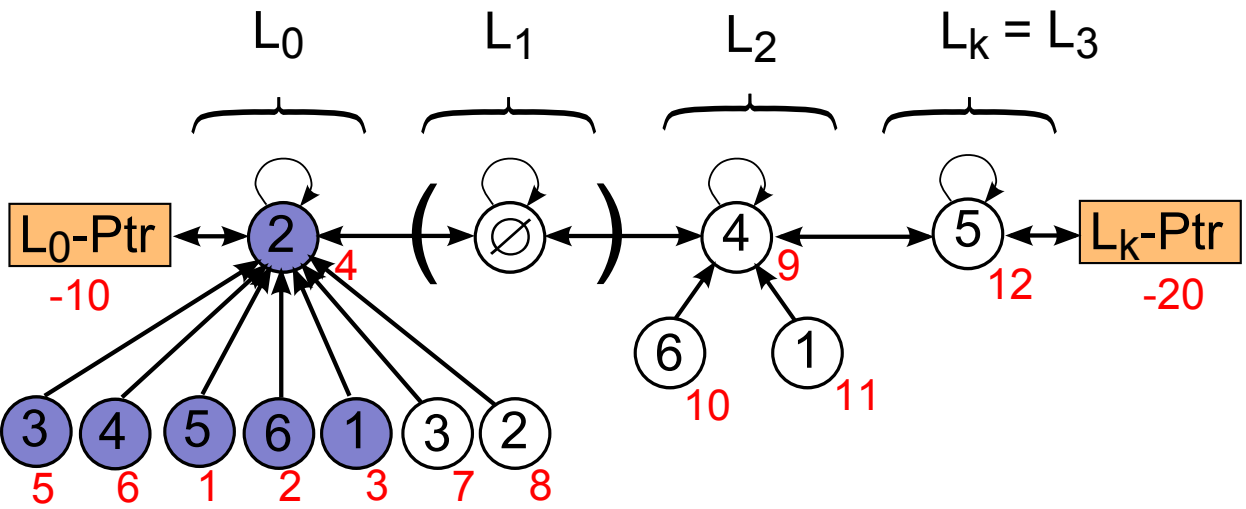
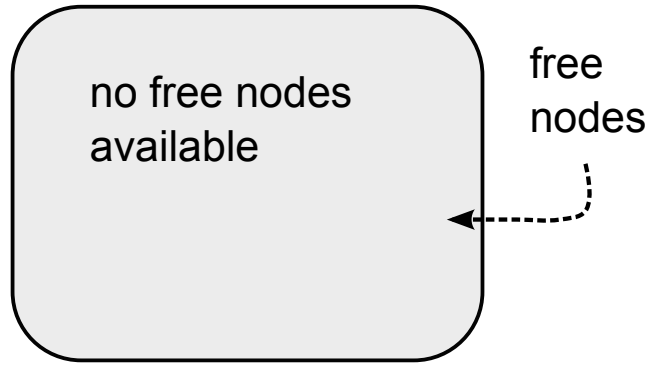
Cleanup procedure:

Step 1: Apply a find operation with path compression to all 2m=12 nodes.
This creates trees with height of at most 1.





address array

page value	1	2	3	4	5	6
node id	11	8	7	9	12	10

The queue is empty:
Q = [ ]

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

The variables L0-Ptr and Lk-Ptr:

L0-Ptr = 4
Lk-Ptr = 12

The rank value of nodes 1 and 4 are updated due to path compression:
rank[1] = 0
rank[4] = 1

The parent array shows that nodes 2,3,7,8 are now directly linked to node 4 due to path compression.