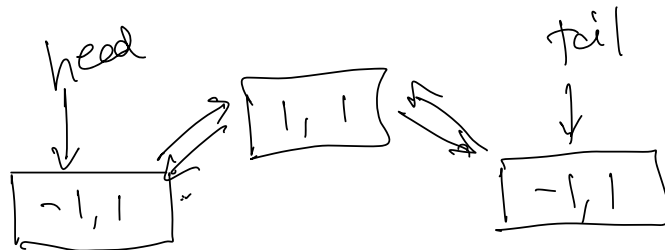


["LRU Cache: 2", "put: 1, 1", "put: 2, 2",  
 "get: 1", "put: 3, 3", "get: 2", "put: 4, 4",  
 Output: ["NA", NA, NA, 1, NA, 1,

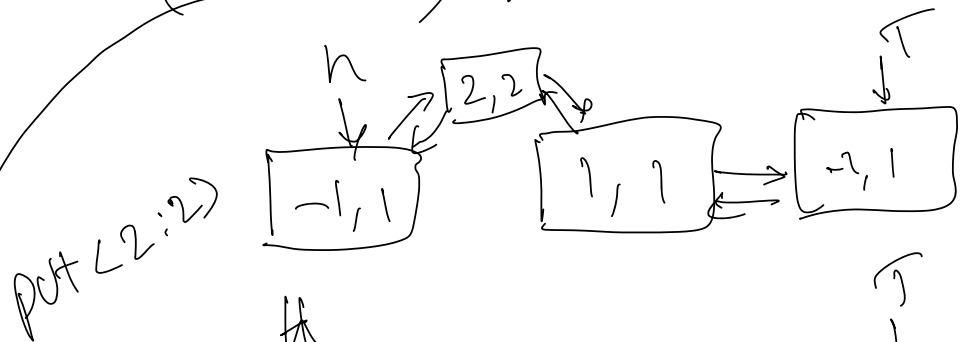
1: <1, 1> \* 40  
 2: <2, 2> \* 80  
 1

Capacity = 2

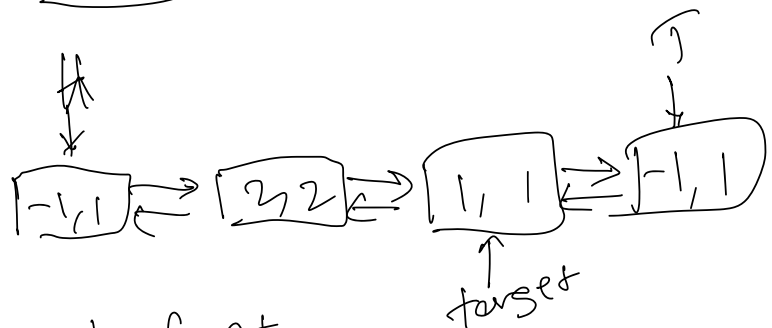


"Put new  
 node  
 (capacity not  
 full)"

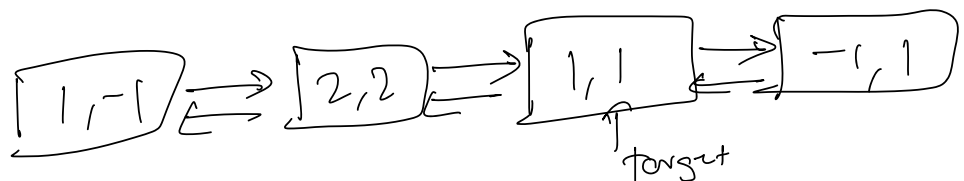
head.next = Node <1, 1>  
 node.prev = head  
 node.next = head.next.next  
 node.next.prev = node



get <1>



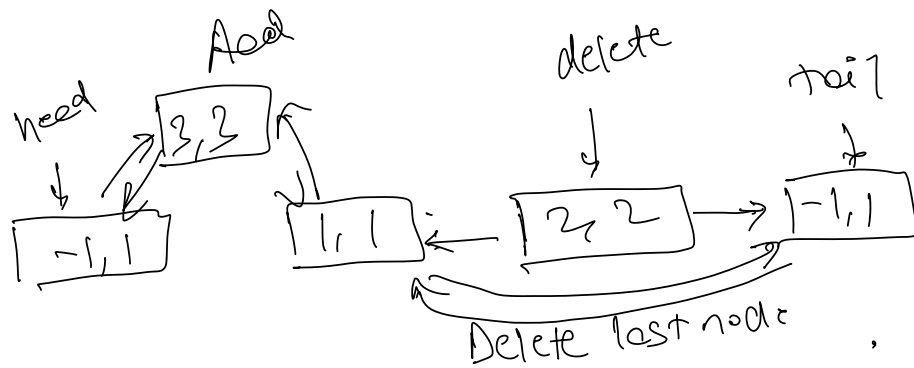
Move target to front



Unlinking  
Target  
to its  
neighbors

$\left. \begin{array}{l} \text{target.prev.next} = \text{target.next} \\ \text{target.next.prev} = \text{target.prev} \end{array} \right\}$

Moving  
target  
to  
front



"put new  
node"  
(capacity full)

$\text{del hashmap}[\text{tail.prev}]$   
 $\text{hashmap}[3: [3, 2]]$

$\text{if (current capacity} = \text{capacity)}$   
 $\text{tail.prev.prev.next} = \text{tail}$   
 $\text{tail.prev} = \text{tail.prev.prev}$