

## Removing Nodes :

→ start

→ end

→ Middle

### Delete at the beginning :

① First, check whether Linked List is empty or not

if empty : ( head  $\rightarrow$  None )

Print ( "Linked List is empty, element can't be deleted" )

else :

delete the First node

( Point head to 2<sup>nd</sup> node of linked list )

### delete at the end :

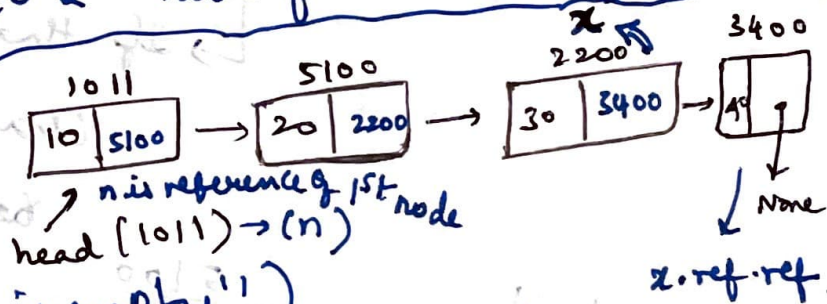
If empty :

Print ( "L.L is empty" )

not empty :

Go to 2<sup>nd</sup> last node

change ref to None



Note :

x.data = 30  
x.ref = 3400  
x.ref.ref = None  
x.ref.data = 40  
Last Node

## ① delete Any node by value in Linked List

① when need to check if Linked List is empty or not

Linked List  $\rightarrow$  empty

Print msg.

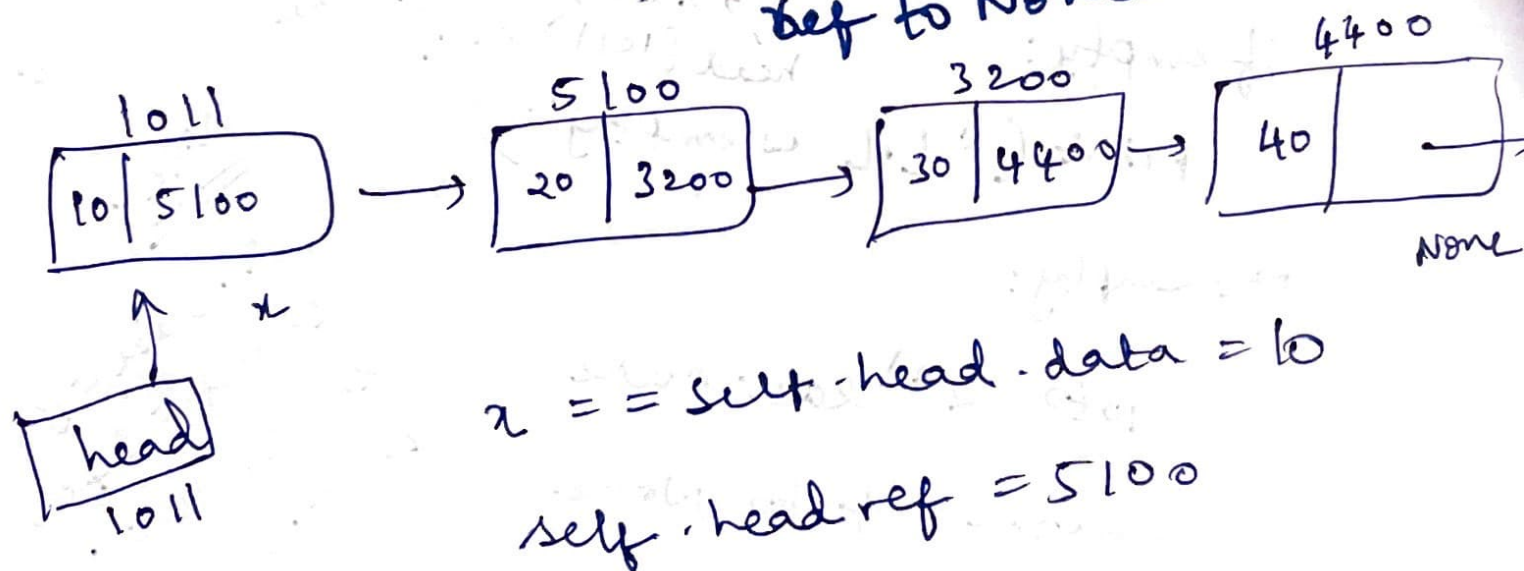
is not empty  $\rightarrow$  then perform deletion

(i) check given <sup>(x)</sup> node  $\rightarrow$  First node or not  
to delete

$\hookrightarrow$  If that is the case, then point  
head  $\rightarrow$  2<sup>nd</sup> node

(ii) if it is not first node  $\rightarrow$  Goto previous node  
of the given node to delete.

$\hookrightarrow$  If that is the case, then  
change the Prev. node  
ref to None



$x == \text{self.head.data} = 10$   
 $\text{self.head.ref} = 5100$