

Insert At Tail Operation: →

Step 1: Create the node.

$\text{Node} * \text{newNode} = \text{new Node}();$

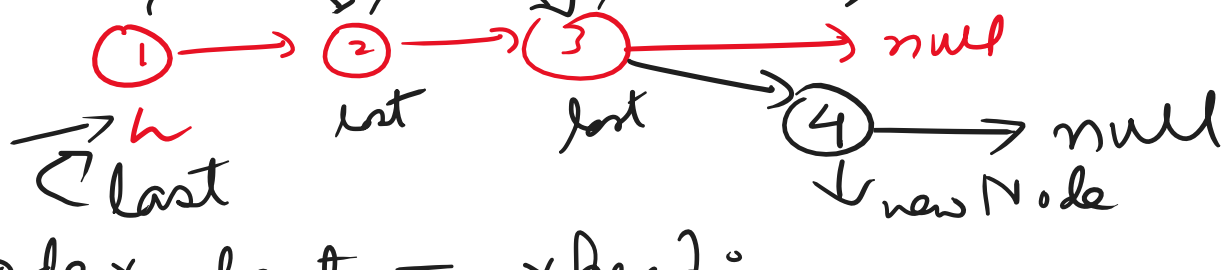
$\text{newNode} \rightarrow \text{data} = \text{newValue};$

Step 2: $\text{newNode} \rightarrow \text{next} = \text{nullptr};$

$\text{tail} \rightarrow \text{null}$

empty? $\text{if}(*\text{head} == \text{nullptr})$

$\text{head} \rightarrow \text{null}$



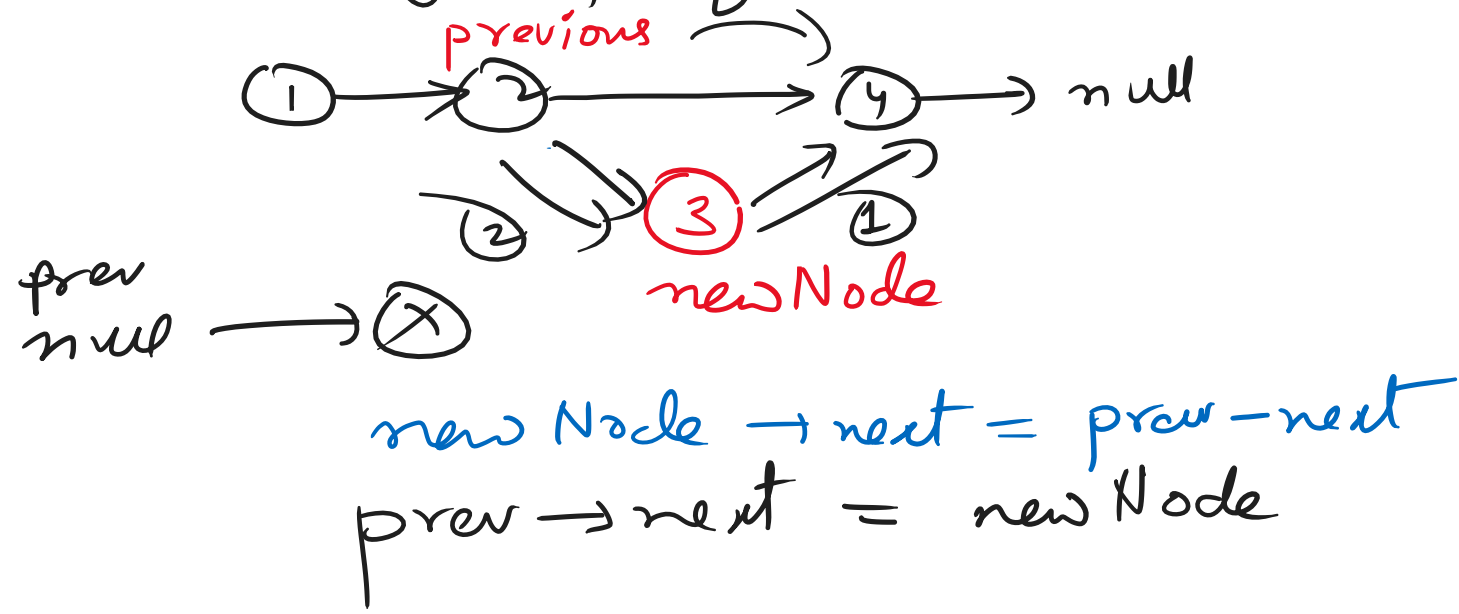
$\text{Node} * \text{last} = * \text{head};$

$\text{while}(\text{last} \rightarrow \text{next} != \text{nullptr})$

$\{ \text{last} = \text{last} \rightarrow \text{next};$

$\} \text{last} \rightarrow \text{next} = \text{newNode};$

Insert After Specific:



$\text{new Node} \rightarrow \text{next} = \text{prev} \rightarrow \text{next}$

$\text{prev} \rightarrow \text{next} = \text{new Node}$

* Delete Operations: →

Delete Front Node →

Delete End Node →

Delete Node With Specific Target.

Empty! $\text{temp} \rightarrow \text{head} \rightarrow \text{head} \rightarrow \text{null}$

$\text{Node} * \text{temp} = * \text{head};$

$* \text{head} = (* \text{head}) \rightarrow \text{next};$

$\text{delete temp};$

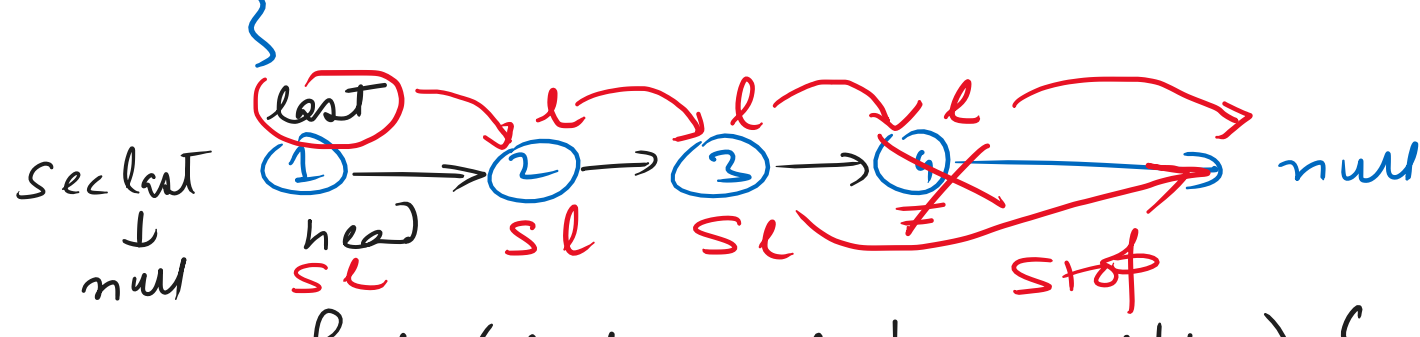
Delete end node: →

① Empty list can't delete.

② Single node in the list.

delete head. $\text{head} \rightarrow \text{null}$

$\text{if}((* \text{head}) \rightarrow \text{next} == \text{nullptr})$



$\text{while}(\text{last} \rightarrow \text{next} != \text{nullptr}) \{$

$\text{sec last} = \text{last};$

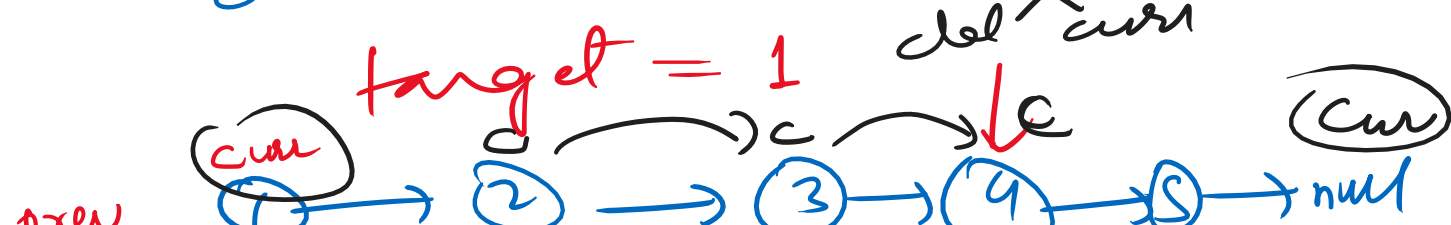
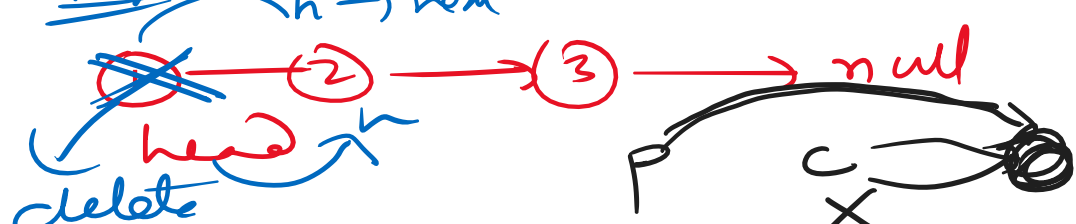
$\text{last} = \text{last} \rightarrow \text{next};$

$\}$

$\text{delete last};$

$\text{sec last} \rightarrow \text{next} = \text{null};$

$\text{temp} \rightarrow \text{h} \rightarrow \text{next}$

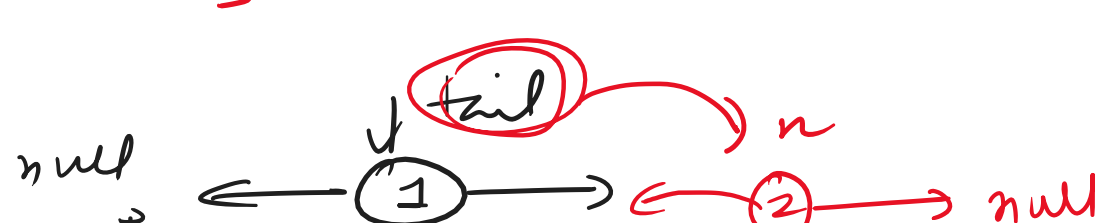


$\text{while}(\text{cur} != \text{null} \ \&\& \ \text{cur} \rightarrow \text{data} != \text{target})$

$\{ \text{prev} = \text{cur}; \text{target} = (* \text{cur}) \rightarrow \text{data};$

$\text{cur} = \text{cur} \rightarrow \text{next};$

$\}$



not null

* Leet Code:

① Merge two sorted Linked Lists

② Check linked List Palindrome

③ Reverse a linked list

④ Swap nodes of a linked list

⑤ Sort a given linked list

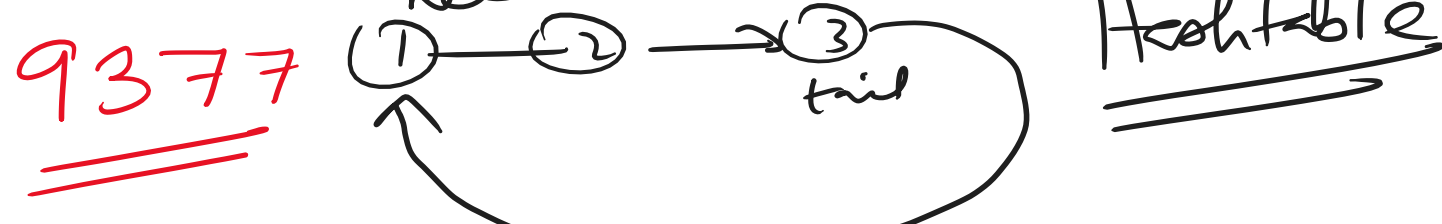
⑥ Middle of a linked list.



#in. <stack>

STL

* Circular linked List: ADP



STL → Standard Template Library

Stack

queue

map

list

sets

Vectors <int>

om → um → hashmap ***

fl → SLL

l → DDL

os → us → hashmap **