

Leetcode

$O(n^2) \rightarrow \text{Time}$   
 $O(1) \rightarrow \text{Space}$

## 234. Palindrome Linked List

/\* ALGORITHM \*/

ex  
4  $\rightarrow$  3  $\rightarrow$  2  $\rightarrow$  3  $\rightarrow$  3  $\rightarrow$  2  $\rightarrow$  3  $\rightarrow$  4  
↑  
iterator  
↑  
symmetry

# Start iterating from Node 1 (iterator)

Send an iterator (symmetry) to the  
symmetry of this node

IF SAME

Keep iteration

UNTILL

For even  
numbered LL :

iterator ==

where we left

EXIT

✓ palindrome

or

For odd  
numbered LL :

iterator  $\rightarrow$  Next ==

where we left

✓ palindrome

EXIT

ELSE

return false ;

Not palindrome

How do we know where is  
symmetry?

# We save where we left

symmetry  $\Rightarrow$  previous of  
where we left