

# Linked List

九章算法IT求职面试培训课程 第4章

[www.ninechapter.com](http://www.ninechapter.com)

# Outline

1. Introduce Dummy Node in Linked List
2. Basic skills in Linked List you should know
3. Fast Slow Pointers

# Remove Duplicates from Sorted List

<http://www.lintcode.com/zh-cn/problem/remove-duplicates-from-sorted-list/>

<http://www.ninechapter.com/solutions/remove-duplicates-from-sorted-list/>

# Remove Duplicates from Sorted List II

<http://www.lintcode.com/zh-cn/problem/remove-duplicates-from-sorted-list-ii/>

<http://www.ninechapter.com/solutions/remove-duplicates-from-sorted-list-ii/>

# Reverse Linked List

<http://www.lintcode.com/zh-cn/problem/reverse-linked-list/>

<http://www.ninechapter.com/solutions/reverse-linked-list/>

# Reverse Linked List II

<http://www.lintcode.com/zh-cn/problem/reverse-linked-list-ii/>

<http://www.ninechapter.com/solutions/reverse-linked-list-ii/>

# Dummy Node

**Scenario: When the head is not determined**

1. Remove Duplicates from Sorted List II
2. Reverse Linked List II
3. Merge Two Sorted Lists
4. Partition List
- ...

# Partition List

<http://www.lintcode.com/zh-cn/problem/partition-list/>

<http://www.ninechapter.com/solutions/partition-list/>



# Basic Skills

1. Insert a Node in Sorted List
2. Remove a Node from Linked List
3. Reverse a Linked List
4. Merge Two Linked Lists
5. Find the Middle of a Linked List

# Sort List

<http://www.lintcode.com/zh-cn/problem/sort-list/>  
<http://www.ninechapter.com/solutions/sort-list/>

# Reorder List

<http://www.lintcode.com/zh-cn/problem/reorder-list/>

<http://www.ninechapter.com/solutions/reorder-list/>

**Break 5 minutes**

# Fast Slow Pointers

1. Find the Middle of Linked List
  2. Remove Nth Node From End of List
  3. Linked List Cycle I, II
- ...

# Linked List Cycle

<http://www.lintcode.com/zh-cn/problem/linked-list-cycle/>

<http://www.ninechapter.com/solutions/linked-list-cycle/>

# Merge k Sorted Lists

<http://www.lintcode.com/zh-cn/problem/merge-k-sorted-lists/>

<http://www.ninechapter.com/solutions/merge-k-sorted-lists/>

# Copy List with Random Pointer

<http://www.lintcode.com/zh-cn/problem/copy-list-with-random-pointer/>

<http://www.ninechapter.com/solutions/copy-list-with-random-pointer/>



# Convert Sorted List to Balanced Binary Search Tree

<http://www.lintcode.com/zh-cn/problem/convert-sorted-list-to-binary-search-tree/>

<http://www.ninechapter.com/solutions/convert-sorted-list-to-binary-search-tree/>