**📝 Infinite Champions Programme – Day 9 (Assignment Sheet)**

**📌 Instructions  
• Deadline: Submit your solutions by 7th October, 2025, EOD.  
• Platform: Test your solutions on LeetCode  
• Collaboration: Discussing concepts is encouraged, but all code must be your own.**

1. [**Remove Duplicates from Sorted List (LeetCode #83)**](https://leetcode.com/problems/remove-duplicates-from-sorted-list/)  
   • **Problem:** Given the head of a sorted linked list, delete all duplicates such that each element appears only once.  
   • **Objective:** Traverse and adjust next pointers to skip duplicates.  
   • **YouTube Solution (Java):** [Remove Duplicates from Sorted List – Java Solution](https://www.youtube.com/watch?v=Rt4k6L1X5pU)
2. [**Palindrome Linked List (LeetCode #234)**](https://leetcode.com/problems/palindrome-linked-list/)  
   • **Problem:** Given the head of a singly linked list, determine if it is a palindrome.  
   • **Objective:** Use slow-fast pointers, reverse second half, and compare both halves.  
   • **YouTube Solution (Java):** [Palindrome Linked List – Java Solution](https://www.youtube.com/watch?v=yOzXms1J6Nk)
3. [**Reorder List (LeetCode #143)**](https://leetcode.com/problems/reorder-list/)  
   • **Problem:** Reorder a linked list from L0 → L1 → … → Ln-1 → Ln into L0 → Ln → L1 → Ln-1 → L2 → Ln-2 → …  
   • **Objective:** Find middle, reverse second half, then merge alternately.  
   • **YouTube Solution (Java):** [Reorder List – Java Solution](https://www.youtube.com/watch?v=S5bfdUTrKLM)

**📚 Submission Checklist  
• Time and space complexity analysis for each solution.  
• Test cases demonstrating the correctness of your solutions.**