**Infinite Champions Programme – Day 5 (Assignment Sheet)**

**Instructions  
• Deadline: Submit your solutions by 1st October, 2025, EOD.  
• Platform: Test your solutions on LeetCode  
• Collaboration: Discussing concepts is encouraged, but all code must be your own.**

1. [**Minimum Number of Arrows to Burst Balloons (452)**](https://leetcode.com/problems/minimum-number-of-arrows-to-burst-balloons/)  
   • Problem: You are given a number of spherical balloons spread in a 2D space. For each balloon, input is the start and end coordinates of the horizontal diameter. Return the minimum number of arrows required to burst all balloons.  
   • Objective: Use sorting and greedy choice to minimize the number of arrows.  
   • YouTube Solution (Java): [Minimum Number of Arrows to Burst Balloons – Java Solution](https://www.youtube.com/watch?v=Z9wX3N9x2rA)
2. [**Non-overlapping Intervals (435)**](https://leetcode.com/problems/non-overlapping-intervals/)  
   • Problem: Given a collection of intervals, find the minimum number of intervals you need to remove to make the rest non-overlapping.  
   • Objective: Apply greedy interval scheduling by sorting intervals by end time.  
   • YouTube Solution (Java): [Non-overlapping Intervals – Java Solution](https://www.youtube.com/watch?v=BTObFnHbD4U)
3. [**Queue Reconstruction by Height (406)**](https://leetcode.com/problems/queue-reconstruction-by-height/)  
   • Problem: You are given an array of people represented by pairs (h, k), where h is the height and k is the number of people in front of this person with height greater or equal to h. Reconstruct the queue.  
   • Objective: Use greedy sorting by height and insert people into the correct positions.  
   • YouTube Solution (Java): [Queue Reconstruction by Height – Java Solution](https://www.youtube.com/watch?v=qUL3gj0QjIU)
4. [**Lemonade Change (860)**](https://leetcode.com/problems/lemonade-change/)  
   • Problem: At a lemonade stand, each lemonade costs $5. Customers pay with $5, $10, or $20 bills. Determine if you can provide correct change to every customer.  
   • Objective: Use greedy coin change strategy to handle payments.  
   • YouTube Solution (Java): [Lemonade Change – Java Solution](https://www.youtube.com/watch?v=0yGf7mS9iQ0)
5. [**Boats to Save People (881)**](https://leetcode.com/problems/boats-to-save-people/)  
   • Problem: You are given an array people where people[i] is the weight of the ith person, and each boat can carry at most two people with a weight limit. Return the minimum number of boats required.  
   • Objective: Use two pointers and greedy pairing to minimize boats.  
   • YouTube Solution (Java): [Boats to Save People – Java Solution](https://www.youtube.com/watch?v=3VdgjTUdUuA)

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