**📝 Infinite Champions Programme – Day 8 (Assignment Sheet)**

**📌 Instructions  
• Deadline: Submit your solutions by 6th October, 2025, EOD.  
• Platform: Test your solutions on LeetCode  
• Collaboration: Discussing concepts is encouraged, but all code must be your own.**

1. [**Evaluate Reverse Polish Notation (150)**](https://leetcode.com/problems/evaluate-reverse-polish-notation/)  
   • **Problem:** You are given an array of strings tokens representing an arithmetic expression in Reverse Polish Notation. Evaluate the expression and return an integer result.  
   • **Objective:** Use a **stack** to process operands and operators, evaluating expressions in postfix order.  
   • **YouTube Solution (Java):** [Evaluate Reverse Polish Notation – Java Solution](https://www.youtube.com/watch?v=iu0082c4HDE)
2. [**Online Stock Span (901)**](https://leetcode.com/problems/online-stock-span/)  
   • **Problem:** Design a class StockSpanner that collects daily stock prices and returns the **span** of each day’s price — the number of consecutive days where the price was less than or equal to today’s price.  
   • **Objective:** Use a **monotonic stack** to keep track of price-span pairs and calculate spans efficiently.  
   • **YouTube Solution (Java):** [Online Stock Span – Java Solution](https://www.youtube.com/watch?v=slYhJvWwDEU)
3. [**Simplify Path (71)**](https://leetcode.com/problems/simplify-path/)  
   • **Problem:** Given a string path representing an absolute path in a Unix-style file system, simplify it and return the canonical path.  
   • **Objective:** Use a **stack** to handle directories, .., and . to simplify the file system path.  
   • **YouTube Solution (Java):** [Simplify Path – Java Solution](https://www.youtube.com/watch?v=qYlHrAKJfyA)

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