SPC - DSA Upskilling Series
Linked Lists

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Introduction

This document introduces Linked Lists, a foundational data structure where elements are stored in a linear sequence but connected by pointers. Linked Lists rely heavily on pointer concepts, so having a strong understanding of pointers is essential. All operations in Linked Lists are pointer-based, and most problems are solved using multiple pointers and additional helper variables. This pointer-centric approach is central to effectively managing and navigating Linked Lists.

Understanding Pointers

To understand the core idea of pointers, refer to this video: Pointer Concepts in C
Note that the syntax in this video is based on C language and differs from Python.
For syntax in Python, you may refer to the following resource: Using Pointers in Python with ctypes.

Problem Set and Resources

Problems to Understand

- **Problem:** Delete Node in a Linked List
  Video Explanation: YouTube
- **Problem:** Intersection of Two Linked Lists
  Video Explanation: YouTube

Problems to Solve

- **Problem:** Linked List Cycle

- **Problem:** Linked List Cycle II

  Video Explanation: YouTube
- **Problem:** Add Two Numbers

  Video Explanation: YouTube
- **Problem:** Remove Duplicates from Sorted List II

  Video Explanation: YouTube

Playlist

For comprehensive insights into Linked Lists, refer to this playlist that covers fundamental concepts essential for problem-solving: YouTube Playlist