

Advanced C Programming

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Introduction

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Data Structure and Algorithms

Syllabus

Analysis of Algorithms

Analysis of Algorithms

College Courses

These videos will try to cover few college courses. Namely those are Data Structures and Algorithms, OS or System Programming, Network Programming, Multithreaded Programming and Inter-Process Communication.

Source of these slides can be found at
<https://github.com/shivshankardayal/Cpp-Code-Slides>

Syllabus

- ▶ Analysis of algorithms.
- ▶ Recursion
- ▶ Stack
- ▶ Linked List
- ▶ Queue
- ▶ Doubly Linked List
- ▶ Circular Linked Lists
- ▶ Binary Search Tree
- ▶ Threaded Binary Tree
- ▶ Bubble Sort
- ▶ Selection Sort
- ▶ Insertion Sort
- ▶ Quick Sort
- ▶ Merge Sort
- ▶ Searching using Hashmap
- ▶ Graphs

Analysis of Algorithms

These will be done for individual data structures and algorithms. We are concerned with best-case, average case and worst case time and space complexities.

Usually when you try to optimize then you will find that space and time complexities are a trade-off and you can improve both only by changing entire data structure or algorithm, for the problem in concern, entirely.

I have already uploaded analysis of Algorithm video.