Data Structures Placement Material


Chapters Covered

**Chapter 2 - Algorithm Analysis**
2.1 Mathematical Background
2.2 Model
2.3 What to Analyze
2.4 Running Time Calculations

**Chapter 4 - Trees**
4.1 Preliminaries
4.2 Binary Trees
4.3 The Search Tree ADT—Binary Search Trees
4.4 AVL Trees
4.5 Splay Trees
4.6 Tree Traversals (Revisited)
4.7 B-Trees

**Chapter 5 - Hashing**
5.1 General Idea
5.2 Hash Function
5.3 Separate Chaining
5.4 Hash Tables Without Linked Lists
5.5 Rehashing

**Chapter 6 - Priority Queues (Heaps)**
6.1 Model
6.2 Simple Implementations
6.3 Binary Heap
6.4 Applications of Priority Queues
6.5 d-Heaps
6.6 Leftist Heaps
6.7 Skew Heaps
6.8 Binomial Queues

**Chapter 7 - Sorting**
7.1 Preliminaries
7.2 Insertion Sort
7.3 A Lower Bound for Simple Sorting Algorithms
7.4 Shellsort
7.5 Heapsort
7.6 Mergesort
7.7 Quicksort
Chapter 8 - The Disjoint Set Class
8.1 Equivalence Relations
8.2 The Dynamic Equivalence Problem
8.3 Basic Data Structure
8.4 Smart Union Algorithms
8.5 Path Compression
8.6 Worst Case for Union-by-Rank and Path Compression
8.7 An Application

Chapter 9 - Graph Algorithms
9.1 Definitions
9.2 Topological Sort
9.3 Shortest-Path Algorithms
9.4 Network Flow Problems
9.5 Minimum Spanning Tree
9.6 Applications of Depth-First Search

Video's


blog

https://podcasts.usu.edu/groups/cs3000_fall2008/blog/