Data Structure & Algorithms – Contents (William Fiset)

(01) Introduction
(0:00:00) Abstract data types
(0:04:28) Introduction to Big-O

(02) Array
(0:17:00) Dynamic and Static Arrays
(0:27:40) Dynamic Array Code

(03) Linked List
(0:35:03) Linked Lists Introduction
(0:49:16) Doubly Linked List Code

(04) Stack
(0:58:26) Stack Introduction
(1:09:40) Stack Implementation
(1:12:49) Stack Code

(05) Queue
(1:15:58) Queue Introduction
(1:22:03) Queue Implementation
(1:27:26) Queue Code

(06) Priority Queue
(1:31:32) Priority Queue Introduction
(1:44:16) Priority Queue Min Heaps and Max Heaps
(1:49:55) Priority Queue Inserting Elements
(1:59:27) Priority Queue Removing Elements
(2:13:00) Priority Queue Code

(07) Union
(2:28:26) Union Find Introduction
(2:33:57) Union Find Kruskal's Algorithm
(2:40:04) Union Find - Union and Find Operations
(2:50:30) Union Find Path Compression
(2:56:37) Union Find Code

(08) Binary Search
(3:03:54) Binary Search Tree Introduction
(3:15:57) Binary Search Tree Insertion
(3:21:20) Binary Search Tree Removal
(3:34:47) Binary Search Tree Traversals
(3:46:17) Binary Search Tree Code

(09) Hash Table
(3:59:26) Hash table hash function
(4:16:25) Hash table separate chaining
(4:24:10) Hash table separate chaining source code
(4:35:44) Hash table open addressing
(4:46:36) Hash table linear probing
(5:00:21) Hash table quadratic probing
(5:09:32) Hash table double hashing
(5:23:56) Hash table open addressing removing
(5:31:02) Hash table open addressing code

(10) Fenwick Tree
(5:45:36) Fenwick Tree range queries
(5:58:46) Fenwick Tree point updates
(6:03:09) Fenwick Tree construction
(6:09:21) Fenwick tree source code

(11) Suffix (& Prefix)
(6:14:47) Suffix Array introduction
(6:17:54) Longest Common Prefix (LCP) array
(6:21:07) Suffix array finding unique substrings
(6:25:36) Longest common substring problem suffix array
(6:37:04) Longest common substring problem suffix array part 2
(6:43:41) Longest Repeated Substring suffix array

(12) AVL Tree
(6:48:13) Balanced binary search tree rotations
(6:56:43) AVL tree insertion
(7:05:42) AVL tree removals
(7:14:12) AVL tree source code

(xx) Indexed Priority Queue
(7:30:49) Indexed Priority Queue | Data Structure
(7:55:10) Indexed Priority Queue | Data Structure | Source Code