



Algorithms in C: Concepts, Examples and Code for Students

Course Curriculum & Upcoming Topics

1. Curriculum

These topics are already available to students as part of this course.

S.No	Section	Lecture Topic	Status
1	Introduction	Course Intro & Author Bio	Available
2	Brute Force Approach	Selection Sort	Available
3		Bubble Sort	Available
4		Sequential Search	Available
5		Brute Force String Matching	Available
6	Divide and Conquer Approach	Merge Sort	Available
7		Quick Sort	Available
8	Decrease and Conquer Approach	Binary Search	Available
9		Insertion Sort	Available
10		Depth First Search	Available
11		Breadth First Search	Available
12	Transform and Conquer Approach	Heaps	Available
13		Heap construction	Available
14		Heapsort Algorithm	Available
15	Dynamic Programming	Warshall's Algorithm	Available
16		Floyd's Algorithm	Available



S.No	Section	Lecture Topic	Status
17	Greedy Technique	Prim's Algorithm	Available
18		Kruskal's Algorithm	Available
19	Number Theoretic Algorithms	Euclid's Algorithm	Available
20		Extended Euclidean Algorithm	Available
21		RSA Algorithm	Available
22	Time Complexity	Introduction to Analysis of Algorithms	Available
23		Asymptotic Notations	Available
24		Selection Sort	Available
25		Bubble Sort	Available
26		Sequential Search	Available
27		Brute Force String Matching	Available
28		Insertion Sort	Available
29		Warshall's Algorithm	Available
30		Floyd's Algorithm	Available
31		Master Theorem	Available
32		Merge Sort	Available

2. Upcoming Topics

Based on student requests, we are planning to add some or all of the following topics to our course. However, these topics will be added at convenience of the instructor and we cannot provide a time frame for creation of these lectures.

S.No	Section	Lecture Topic	Status
1	Brute Force Approach	Traveling Salesman Problem	Upcoming
2		Knapsack Problem	Upcoming
3		Assignment Problem	Upcoming
4	Decrease and Conquer Approach	Topological Sorting	Upcoming
5	Dynamic Programming	Knapsack Problem	Upcoming
6	Greedy Technique	Dijkstra's Algorithm	Upcoming
7		Huffman tree	Upcoming
8	Time Complexity	Quick Sort	Upcoming
9		Binary Search	Upcoming
10		Depth First Search	Upcoming
11		Breadth First Search	Upcoming
12		Substitution Method	Upcoming
13		Prim's Algorithm	Upcoming
14		Kruskal's Algorithm	Upcoming
15		Dijkstra's Algorithm	Upcoming
16	Amortized Analysis	Aggregate Analysis	Upcoming



S.No	Section	Lecture Topic	Status
17	Amortized Analysis	Accounting Method	Upcoming
18		Potential Method	Upcoming
19	Number Theoretic Algorithms	Linear Equation Solver	Upcoming

