



Course Curriculum

Basics of Programming

1. Development Environment Setup, Fundamentals of java
2. Control Structures and Loops
3. Loops
4. Functions
5. Objected Oriented Programming
6. 1-D Array
7. 1-D Array continued
8. 2-D Matrix
9. 2-D Matrix
10. Functions & Recursion
11. Recursion
12. Time and space Complexity

Searching Sorting & Time complexity

1. Time and space Complexity
2. Linear Search and Binary Search
3. Binary Search
4. Two Pointers
5. Bit Manipulation
6. Simple Array Sorting and its implementation
7. Sorting using Divide and Conquer and implementation
8. Sorting using Divide and Conquer and implementation
9. Sorting using Divide and Conquer and implementation

Advanced-Data types and Intro to Basic Data Structures

1. Strings
2. Strings Contd.
3. STL - 1
4. STL - 2
5. STL - 3
6. ArrayList and Linked List - 1
7. Linked-List - 2
8. Linked-List - 3
9. Stack
10. Applications of Stack
11. Queue
12. Applications of Queues

Advance Data Structure and Analysis of Algorithm - Advance

1. Greedy
2. Tree -1 (Traversals)
3. Tree - 2 (Construction of tree from traversals, height of tree, mirror of tree)
4. Tree - 3 (LCA, Diameter)
5. BST
6. Heaps
7. Dynamic Programming
8. Graph - 1 (BFS, DFS)
9. Graph - 2 (Cycles in Graph)
10. Graph - 3 (DFS, BFS on matrix)
11. Graph - 4 ([Dijkstra Algorithm, Flood Fill Algorithm])
12. Graph - 5 [Minimum Spanning Tree, Floyd Warshall, TopologicalSorting]

Html and CSS

1. Introduction to HTML and Web
2. HTML Layout Tags, and lists and media
3. HTML tables and Forms
4. Forms Continued
5. Forms in Details
6. Intro To Styling
7. Deep Dive to CSS styling
8. More into CSS
9. CSS Flexbox
10. Responsive CSS
11. Responsive CSS-3

12. Responsive CSS-4

13. Introduction to GIT

JavaScript

1. Intro To JS
2. JS control flow
3. JS Array
4. JS Object -1
5. JS Object - 2
6. JS Object - 3
7. Functions deep dive and new control flow
8. JS Prototypes,Prototype Inheritance
9. DOM
10. DOM -2
11. Operators and Intro to ES6
12. Deep Dive to ES6
13. Async JS-Sending and recieving data

React

1. React setup and Intro
2. React Basics
3. React State
4. React events & forms
5. Lists and Conditional Rendering
6. React Handling side effects
7. Working with APIs(Functional only)
8. useReducer Hook
9. Context API -1

10. Context API - 2
11. Advanced React -1
12. React optimization
13. React optimization-2
14. Class-Based Components
15. Building custom React Hook
16. React Router
17. Auth and deployment
18. Redux
19. Redux async

Node

1. Core Node
2. Core Node -2
3. Express -1
4. Express -2
5. Express - 3
6. Mongo Intro
7. Mongoose
8. Express auth
9. Express auth-2
10. Testing

Database

1. More Mongo
2. SQL
3. SQL-2
4. SQL-3

5. Node and SQL
6. System Design Components