**Special Topics in Enterprise development**

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**Course Objective**

In this course, the primary objective is to prepare me for the interviews and upgraded my knowledge in the software development field.

1. Get familiarized with Data Structures and Algorithms
2. Practicing Leet Code-Interview Questions

**Course Outline (Completed)**

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| **Sno** | **Parts** | **Date** | **Plan of Study** | **Assignments** | **Date of Submission** |
| 1 | Part 1 | 1/25/23 | Array and string | Assignment 1 1. Notes for each concept- Completed Leetcode Problems:  1. Two Sums 2. Add Two Numbers 3. Reverse Number 4. Roman to Integer | 2/5/23 |
| 2 | 1/28/23 | LinkedList |
| 3 | 2/1/23 | Queue and Stack |
| 4 | 2/4/23 | Matrix/ Grid |
| 5 | Part 2 | 2/8/23 | Why do we use HashMap? | Review of assignment-1  Backlogs from the assignment-  How to implement N-queens, Psuedocode for Nqueens--  N Queens Problem- Completed Why do we use backtracking algorithm and  Assignment 2 1. Notes for each concept- Completed 2. Redoing leetcode problems from assignment 1 | 3/7/23 |
| 6 | 2/11/23 | N-Queen Problems |
| 7 | 2/15/23 | BackTracking Algorithms |
| 8 | 2/18/23 | Tree |
| 9 | 2/22/23 | Hash and Heap |
| 10 | 2/25/23 | Searching Algorithm |
| 11 | 3/1/23 | Sorting Algorithm |
| 12 | Part 3 | 3/8/23 | Divide and Conquer Algorithm | Assignment 3 1. Notes for each concept- Completed Leetcode Problems: 1. N-Queens Problem 2. Word Search 3. Valid Parenthesis 4. Symmetric Tree 5. Maximum Depth of Binary Tree 6. Valid Anagram | 3/31/23 |
| 13 | 3/11/23 | Greedy Methodology |
| 14 | 3/15/23 | Recursion |
| 15 | 3/18/23 | Backtracking Algorithm |
| 16 | 3/22/23 | Depth First Search Algorithm |
| 17 | 3/25/23 | Array and string problems |
| 18 | 3/28/23 | Binary Tree problems |
| 19 | 4/1/23 | Dynamic Programming- Started |
| 20 | Part 4 | 4/5/23 | Dynamic Programming problems | Assignment 4 1. Notes for each concept- Completed Leetcode Problems: 1. Climbing Stairs 2. Longest Common Prefix 4. Implement Stack using Queues 5. Implement Queue using Stacks 6. Find the Index of the First Occurrence in a String | 4/18/23 |
| 21 | 4/8/23 | Pattern Searching |
| 22 | 4/12/23 | Mathematical Algorithms |
| 23 | 4/15/23 | Leetcode Problems |
| 24 | Part 5 | 4/19/23 | Leetcode Problems | Assignment 5  1. First Unique Character in a String 2. Word Pattern 3. Missing Number 4. Plus One 5. Merge Two Sorted Lists 6. Remove Duplicates from Sorted Array | 4/27/23 |
| 25 | 4/22/23 | Leetcode Problems |
| 26 | 4/26/23 | Leetcode Problems |