Linked List:-

Below are the List of questions for LL assignment:

- Merge 2 Sorted Linked List
- Clone a Linked List with Random Pointer
- Merge Sort in Linked list
- Flatten a Linked List
- Print kth node from end of Linked List
- Intersection point of 2 Linked list
- Rotate List (Leetcode)
- Delete n nodes after m nodes (Leetcode)
- Find min/max number between critical points (Leetcode)
- Merge Node in between zeroes (Leetcode)

Stack :-

Below you can find the list of Homework questions :

- Minimum Bracket Reversal
- Remove All Adjacent Duplicates In String
- Celebrity Problem
- Next greater element in Linked List [leetcode]
- N Stacks in an Array
- Online Stock Span [Leetcode]
- Check If Word Is Valid After Substitutions [Leetcode]
- Decode Strings [Leetcode]
- Car Fleet - I [Leetcode]
- Car Fleet - II [Leetcode]
- Simplify Path [Leetcode]
- Max rectangle in Binary Matrix with all 1s

Queue:-

PFA the list of Queue Assignment Questions:

- Implement Queue using Stack
- Implement Stacks using Queue
- Implement "K" queues in an array
- Sum of min/max element of all subarray of size "k" [Similar: LC-239. Sliding Window Maximum]

Tree:-

PFA the list of Tree Homework questions:

1. Fast way to find Diameter of a tree
2. Fast way to determine that the Binary tree is balanced or not
3. Check 2 trees are identical or not
4. Check 2 trees are mirror of each other or not.
5. Zig-Zag traversal of a binary tree
6. Transform to Sum tree.
7. Diagonal traversal of a binary tree
8. Vertical traversal of a binary tree
9. Morris traversal of a binary tree
10. Sum of longest bloodline of a tree
11. K-sum path in a binary tree
12. Max sum of non-adjacent nodes in binary tree
13. Max time to burn a binary tree
14. Flatten a Binary tree into Linked List
15. Check if a Binary Tree contains duplicate subtrees of size 2 or more

BST:-

PFA the list of BST Homework questions:

1. Find inorder successor and inorder predecessor in a BST
2. Construct BST from preorder traversal
3. Convert a normal BST into a Balanced BST
4. Merge two BST
5. Count pairs from 2 BST whose sum is equal to given value "X"
6. Find the median of BST in O(n) time and O(1) space
7. Count BST nodes that lie in a given range
8. Replace every element with the least greater element on its right
9. Check preorder is valid or not
10. Check whether BST contains Dead end:
11. Flatten BST to sorted list

HEAP:-

PFA the list of Heaps Homework questions:

1. Check if tree is a heap
2. Merge 2 Max Heaps
3. K Closest Point to Origin
4. Get Biggest three rhombus sums in a grid
5. Sliding Window Maximum
6. Min Diff in Sum after element removal
7. Min number of refuelling stops

HashMap and Tries:-

Homework Questions of Maps and Tries are listed below:

- Valid Anagram - [ALREADY COVERED in String Week Assignment]
- Find Whether Array is a subset of another array
- Find Union and Intersection of 2 Linked list
- Find 4 elements a,b,c,d in an array such that a+b = c + d
- Find length of largest subarray with 0 sum
- Largest subarray with equal no. of Zeroes and Ones.
- Replace Word Leetcode
- Top "k" frequent words Leetcode
- Palindrome Pairs Leetcode
- Camel Case Matching Leetcode

DP:-

- Linear DP
  - Perfect Squares Leetcode
  - Min Cost for Tickets Leetcode
- DP on Strings
  - Longest Palindromic SubString Leetcode
  - Distinct Subsequences Leetcode
  - Min ASCII Delete Sum for 2 Strings Leetcode
  - Word Break 1 and 2 Leetcode
- DP on Trees
  - House Robber iii Leetcode
  - Unique BST ii Leetcode
- DP on Intervals
  - Stone Games Leetcode
  - Burst balloons Leetcode
- LIS / LCS Variants
  - Intervleaving Strings Leetcode
  - Min Insertion steps to make a string palindrome Leetcode
  - Russian Dolls Envelopes Leetcode
  - Min Number of Removals to make Mountain Array Leetcode
  - Make Array Strictly increasing Leetcode
- Buy & Sell Stocks Variants [all 5 variants] Leetcode
  - 1st Variant [121. Best Time to Buy and Sell Stock] - **Already Covered** in Recursion Week HomeWork.
- Knapsack DP
  - Target Sum Leetcode
  - Min Swaps to make Sequences increasing Leetcode
  - Reducing Dishes Leetcode
  - Ones and Zeroes Leetcode
- MinMax DP
  - Predict the Winner Leetcode

Graph:-

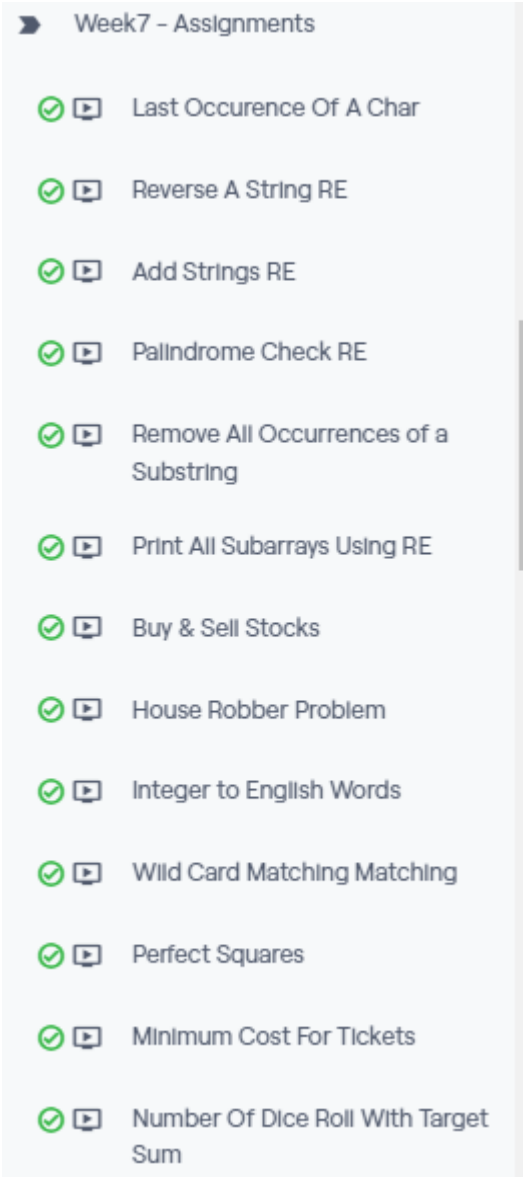
1. Prim's Algorithm
2. Kruskal's Algorithm
3. Eventual Safe States
4. Word Ladder-2
5. Minimum Multiplications to reach End
6. Number of Operations to Make Network Connected
7. Find the City With the Smallest Number of Neighbours at a Threshold Distance
8. Accounts Merge

DNC:-

D&C | Backtracking - Assignments

- Count Inversions
- In-Place Merge Sort
- Max Sub Array Sum
- Quick Sort [End Element as Pivot] - By Lakshay Bhaiya
- Combination Sum
- Combination Sum - II
- Permutation - II
- Beautiful Arrangement
- Distribute Repeating Integers

Recursion and Backtracking


Week7 - Assignments
Last Occurence Of A Char
Reverse A String RE
Add Strings RE
Palindrome Check RE
Remove All Occurrences of a Substring
Print All Subarrays Using RE
Buy & Sell Stocks
House Robber Problem
Integer to English Words
Wild Card Matching Matching
Perfect Squares
Minimum Cost For Tickets
Number Of Dice Roll With Target Sum

STRINGS :-

Week5 - Assignments

- Valid Anagram
- Reverse Only Letters
- Longest Common Prefix
- Reverse Vowels Of A String
- Isomorphic Strings
- Reorganise String
- Group Anagrams
- Longest Palindromic Substring
- Find The Index Of First Occurence in a String
- String To Integer (atoi)
- String Compression
- Integer To Romans
- Zig-Zag Conversion
- Largest Number