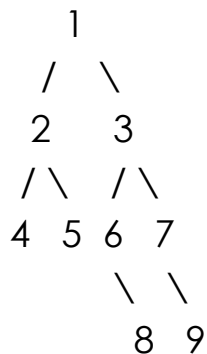


1. Implement generic unordered set and unordered map using vector to store data & Quadratic Probing for collision handling strategy.
2. Print a Binary Tree in Vertical Order



The output of print this tree vertically will be:

```

4
2
1 5 6
3 8
7
9
  
```

3. Find union and intersection of two linked list
4. Given a linked list where each node stores two address , one address of next node and a random address of any node of the list. You need to create a copy of this linked list. [ Using Hash Table as discussed in class ]
5. Given two arrays: arr1 [0..m-1] and arr2[0..n-1]. Find whether arr2[] is a subset of arr1 [] or not. Both the arrays are not in sorted order
6. Implement Graph Class for unweighted, undirected Graph with Adjacency Matrix with following functions
  - a. Add Edge
  - b. Delete Edge
  - c. BFS
  - d. DFS
  - e. printShortestPath(int src, int dest)
  - f. findAllConnectedComponents()
  - g. isConnected()
  - h. printMinimumSpanningTreeEdges()
  - i. isCyclePresent()

7. Given a snake and ladder board, find the minimum number of dice throws required to reach the destination or last cell from source or 1st cell
8. Given a binary matrix[all elements either 0 or 1], print all unique rows of the given matrix
9. Given two strings S and T. Write a function that returns the minimum length substring in S which contains all characters in T.
10. Write a function that takes a string S, and an integer value N, and returns whether or not the string S contains at most N different characters i.e. total N or less distinct characters. The character comparison should be case insensitive i.e. you should ignore their case.

Example:

Input –

S = "HelloWorld"

N = 6

Output = false (string contains 7 different character which is > 6)

Input –

S = "abbcdbbbcddee"

N = 7

Output = true (string contains 5 different character which <= 7)