**DSA Module 3 Practice Set**

1. Write a C program for implementation of searching in the skip list.
2. Write a C program for implementation of insertion of a key in the skip list.
3. Write a C program for implementation for deleting a key from the skip list.
4. Write a C program for implementation of pattern matching in a text using Naïve approach.
5. Write a C program for implementation of pattern matching in a text using KMP algorithm.
6. Implement how to determine the occurrences of pattern P in the text T by examining the prefix function for the string PT (the string of length m+n that is the concatenation of P and T).

**DSA Module 4 Practice Set**

1. Write a C program to determine whether the graph is connected or not using BFS traversals.
2. Write a C program to determine whether the graph is connected or not using DFS traversals.
3. Write a C program to list all the paths from source to destination in a digraph.
4. Write a C program to implement topological sort for a directed acyclic graph.
5. Write a C program for implementation of single source shortest path algorithm and demonstrate the bottleneck of this algorithm in the presence of negative length edge.
6. Write a C program for implementation of Prims’s algorithm for the computation of minimum cost spanning tree for an undirected graph. What will happen when the graph is not connected?
7. Write a C program for implementation of Kruskal’s algorithm for the computation of minimum cost spanning tree for an undirected graph. What will happen when the graph is not connected?
8. Write a C program for implementation of Huffman coding Algorithm for the variable length encoding of characters.
9. Write a C program for the implementation of all pair shortest path algorithm.