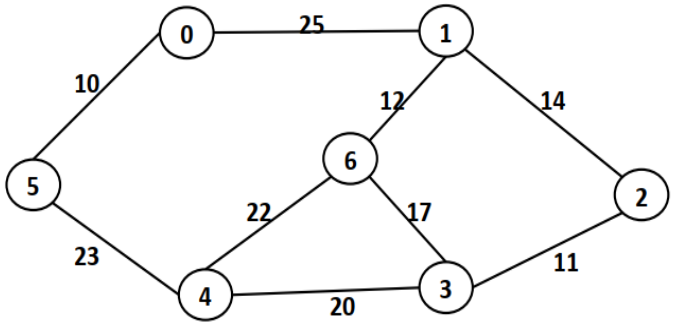
INDEX

SN	Problem Description
1.	Write a program to insert an element into a linear array.
2.	Write a program to delete an element from a linear array.
3.	Write a program to sort an array using bubble sort algorithm.
4.	Write a program to sort an array using marge sort algorithm.
5.	Write a program to insert a node into a linked list.
6.	Write a program to delete a node form a linked list.
7.	Write a program to find an element using binary search algorithm.
8.	Write a program to solve the following 0/1 knapsack problem using dynamic programming approach, profits P = (11, 21, 31, 33), weight W = (2, 11, 22, 15), knapsack capacity C = 40 and no. of items n = 4.
9.	Job sequencing with deadlines problem follow the following rules to obtain the feasible solution: • Each job takes one unit of time. • If job starts before or at its deadline, profit is obtained, otherwise no profit. • Goal is schedule jobs to maximize the total profit. Write a program using greedy method to solve this problem when no. of jobs n = 7, profits ($P1$, $P2$, $P3$, … . , $P7$) = (3, 5, 20, 18, 1, 6, 30) and deadlines ($d1$, $d2$, $d3$, … . , $d7$) = (1, 3, 4, 3, 2, 1, 2)
10.	Kruskal's algorithm is a greedy algorithm in graph theory that finds a minimum spanning tree for a connected weighted graph. Implement Kruskal's algorithm and find the minimum spanning tree for the following graph. 
11.	Write a program to find the shortest path from a directed weighted multistage graph using dynamic Algorithm.
12.	Write a program to find the all pair shortest path from a graph using Floyd Warshall's Algorithm.
13.	The eight queen's puzzle is the problem of placing eight chess queens on an 8 × 8 chessboard so that no two queens attack each other. Thus, a solution requires that no two queens share the same row, column, or diagonal. The eight queen's puzzle is an example of the more general n-queens problem of placing n queens on an n × n chessboard, where solutions exist for all natural numbers n with the exception of 2 and 3. Write a program to solve the n-queens problem.