**Prelab-Week-11**

**Prelab Questions:**

1. Compare Explicit and Implicit constraints of a Backtracking solution.
2. Draw the state space tree to show a solution for 4-Queens problem.
3. Write the steps to solve Knapsack problem by using Backtracking. Give an example
4. Compare brute force approach with backtracking.

**Prelab Programs:**

1. Implement Hamiltonian cycle by using Backtracking.
2. Implement Sum of Subsets problem by using Backtracking.

**Prelab-Week-12**

**Prelab Questions:**

1. What is the difference between Branch & Bound and Backtracking
2. What is the significance of upper and lower bounds in exploring a node in BB?
3. Find the solution for the following 0/1 Knapsack problem by using branch & bound

|  |  |  |
| --- | --- | --- |
| **Item** | **Weight** | **Value** |
| 1 | 2 | 3 |
| 2 | 3 | 4 |
| 3 | 4 | 5 |
| 4 | 5 | 6 |

1. Find the solution for TSP using branch & bound

A picture containing circle, diagram, line, design

Description automatically generated

**Prelab Programs:**

1. Implement TSP by branch and bound
2. Implement 0/1 knapsack by branch and bound