**Roll no: 1801097 Due Date: 20-1-2020**

**Artificial Intelligence Assignment – 1**

**Solving 8-Queens problem using Uniform Cost Search**

**Initial State:**

No queens on the board

**States:**

1. Any arrangement of n<=8 queens
2. Or Any arrangement of n<=8 queens in leftmost n columns, 1 per column such that no queen attacks any other.

**Actions:**

Add queen to any empty square or add queen to leftmost empty square such that it is not attacked by other queens.

**Path cost:**

1 per every move

**Goal state:**

Arranging 8 queens on the board such that no one is under attack by any other queen.

Uniform Cost search is basically Breadth first search if the path cost is same for every move.