**Roll no: 1801135 Date: 03-2-2020**

***Assignment – 1***

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

**Initial State:**

No queens are on the board

**States:**

A state is any arrangement of 0 to 8 queens on the board. We can even have a state where any arrangement of 0-8 queens is done with no queen under attack.

**Actions:**

The operators add queens 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.