Algorithms Assignment 6

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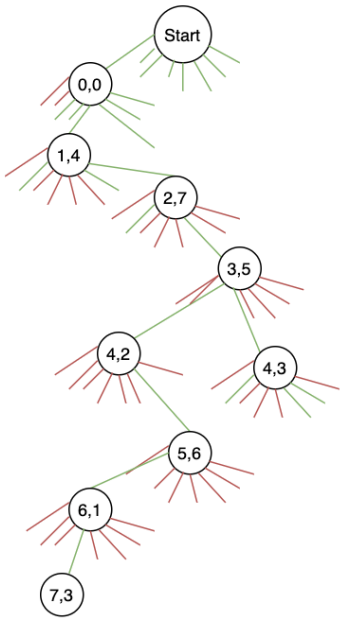
The pruned tree below shows an outline of the steps to finding the first solution to the 8-Queens backtracking problem. The red edges are the non-promising ones and the green edges are the promising ones. The edges to the left of the final solution: $[0, 4, 7, 5, 2, 6, 1, 3]$ would be checked until unpromising nodes are met prior to finding a solution. (Since we are checking in Pre-order fashion) Nodes are deemed unpromising in our algorithm if the are in the same column or diagonal of one of the queens placed above them.



6 Implementation: assign6.py
n = 4, output screenshot:

```
[1, 3, 0, 2]
[2, 0, 3, 1]
# Solutions:  2
```

n = 8
# Solutions: 92

n = 10
# Solutions: 724

n = 12
# Solutions: 14200