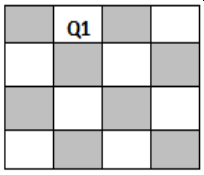
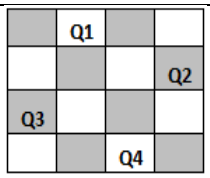
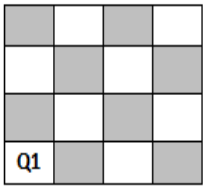
3460:460/560 AI, Project 1 – Constrained N-Queens problem

Problem Description: The N-queens is the problem of placing N chess queens on an N×N chessboard so that no two queens attack each other. Wiki has detailed description of the problem and the history of the problem. https://en.wikipedia.org/wiki/Eight_queens_puzzle

The objective of this project is to implement **a backtracking algorithm** to solve the N-queens problem. To make your project more interesting, a constraint (the 1st Queen's position) will be specified. You are to solve the problem and obtain a feasible solution that conforms to the constraint. No need to find all feasible solutions. Report "No solution" if there is no compatible solution. For example:

Input (initial chessboard)	Solution
	
	No solution

You are required to complete the project in Python. Use the project template.

Specific requirements:

1. Your program solves N-queens with specified position for the 1st Queen.
2. Download my grading program & grade your solutions for different Ns. For example, N=4, 8, 16, 20.

Submission instructions:

Submit an electronic copy of the program using project1 dropbox at Brightplace. Be sure to submit your working solution before the due date! Do not submit non-working programs. The submission time will be used to assess late penalties.