# COMP 2019 Workbook Exercises Week 4 – Constraint Satisfaction Search

The *4-Queens Problem* consists in placing four queens on a 4 x 4 chessboard so that no two queens can capture each other. That is, no two queens can be placed on the same row, the same column, or the same diagonal.

(a) Identify variables, domains, and constraints that characterise precisely the solutions to this problem.

(b) Solve the model created in step (a) using backtracking search with arc consistency propagation. Show the assignment and backtracking steps performed during search.

Select variables with the fewest remaining values first, break ties in alphabetical order. Select values in ascending order.