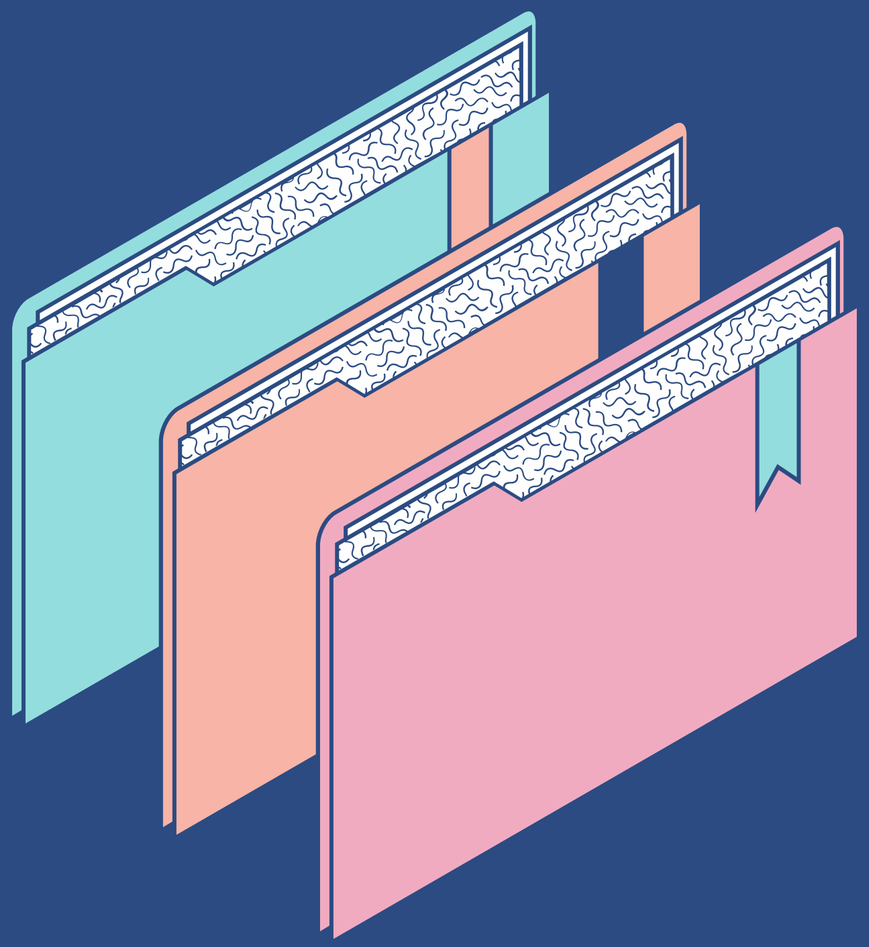
N-queen

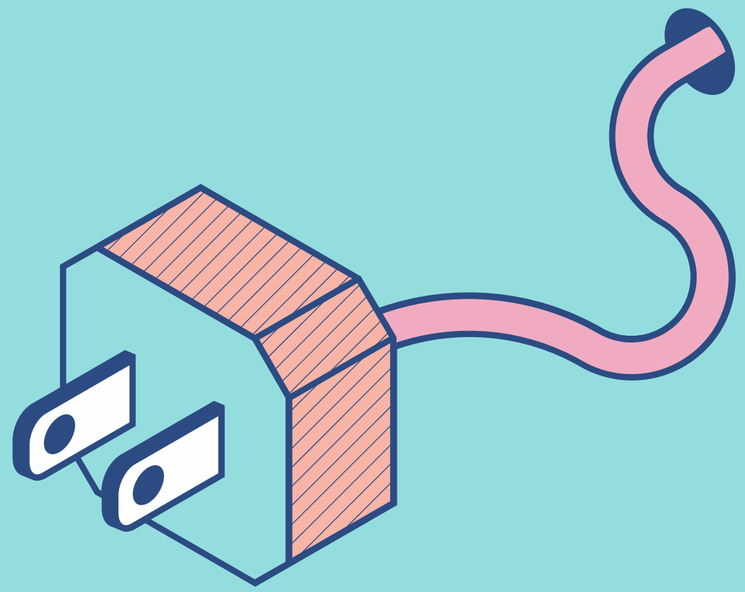


Introduction

Suppose a Sudoku game filled initially with some numbers in some squares, and you want to fill the empty squares with numbers in the range from 1 to 9 which there is no row, column or block has a number repeating itself. This is a simple way to understand the constraint satisfaction problems, as you are supposed to solve a problem with some constraints, then the remaining empty squares which have to be filled called "variables", and the range of numbers (1-9) called a "domain", simply the variables take on values from the domain, the conditions governing how a variable will choose its domain are called "constraints".

N-Queens Problem

N-Queens problem is to place or locate (n) numbers of queens (queen in chessboard) in such a manner on an n x n chessboard that no queen can attack any another queen through being in the same row, column or diagonal.



Arc Consistancy AC-3

- AC-3 algorithm is used as a preprocess step, where AC-3 detects conflicts that you will have in attributions, during the implementation, and deletes them. By cutting the domains of the variables in the CSP. So when two variables share a restriction we say that there's an arc between both.

Backtracking with AC-3

- The main concept of Backtrack algorithm is to solving problems recursively by trying to build a solution incrementally, one piece at a time implementation.

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