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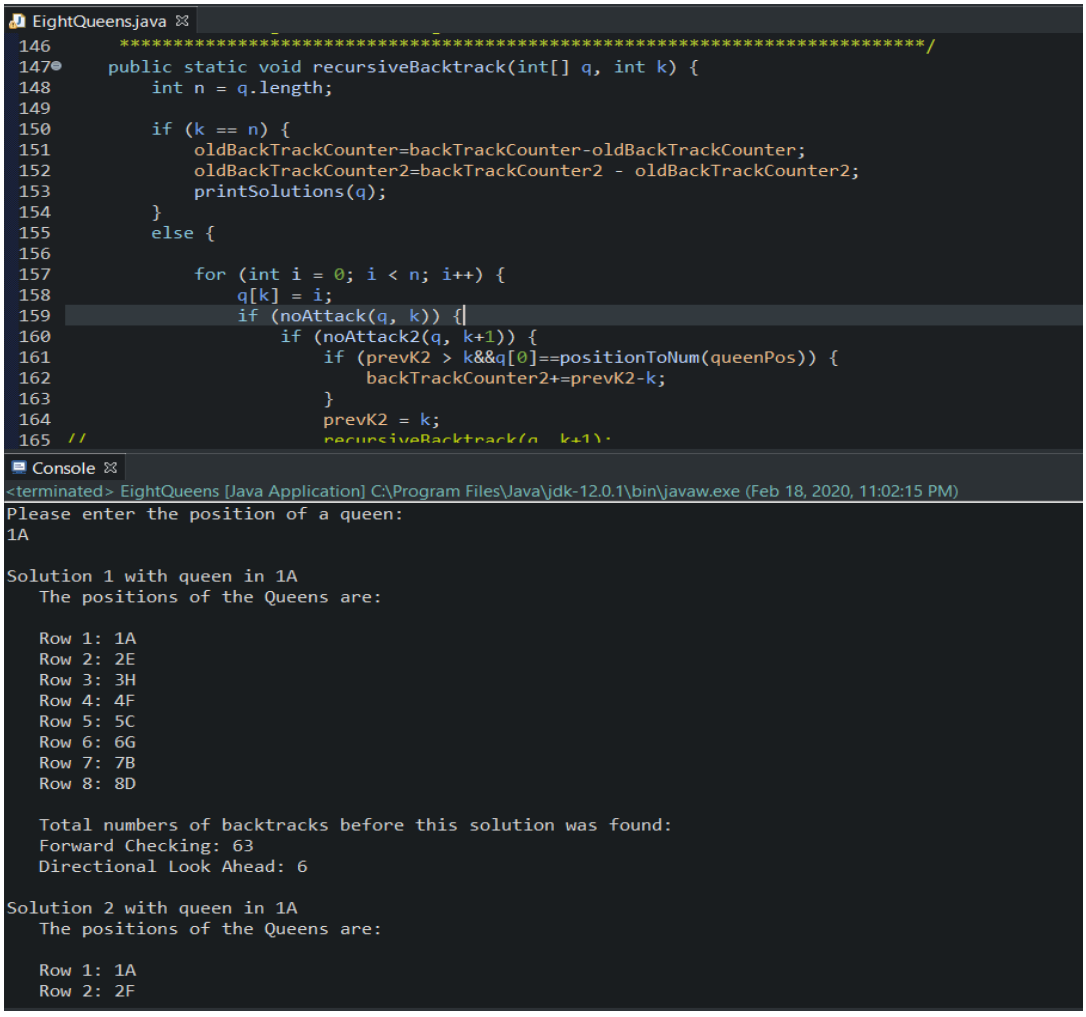
README: 8-QUEENS PROBLEM

This program gives all the solutions for the 8-queens problem. It will display the placement (row x column) of the 8-queens and the number of backtracks of taken to find the solution. To run this program:

1. Right-click the EightQueens.java.
2. Select Run As > Java Application.
3. A prompt will display in the console asking for the placement of the first Queen on the first row.
4. Enter the placement of the first Queen.
5. The solution for the first Queen's problem will display to the console.

Below is the sample output when running the program, given 1A as the placement of the first Queen:



The program has 2 functions that checks for the problem constraints, noAttacks (used for Directional Arc Lookahead) and noAttacks2 (Forward Checking). The positionToNum function converts the user input to an int (Queen placement by column number). The printSolutions function prints the solutions to the Queens' placements and the backtracking counter for both forward checking and the directional arc lookahead. The recursiveBacktrack function is the main recursive function that implements backtracking algorithm. Inside this function, we implemented the forward checking and directional arc lookahead. The counter for backtracks is also implemented inside the recursive function.