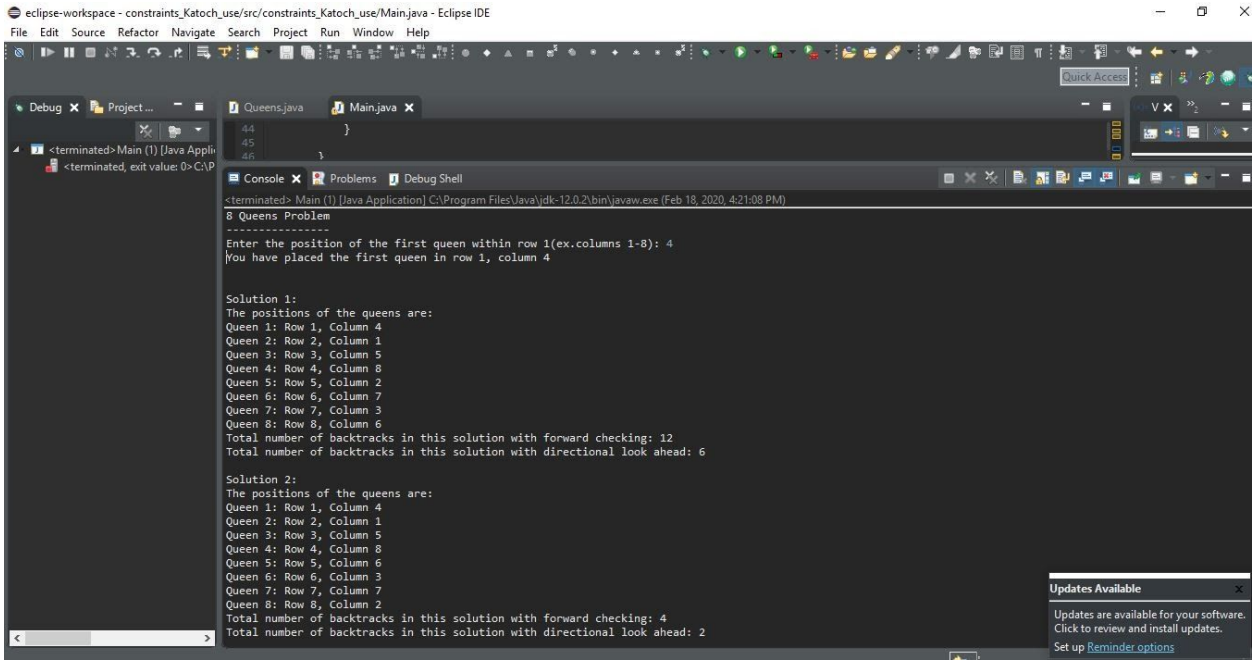
Ajay Katoch

README File

This document is supposed to instruct and aid in how the program for homework “8 Queens” should run. Here is a list of steps on how to run the program.

1. Select the file Main.java within the Eclipse IDE
2. Navigate to Run>Run As>Java Application
3. Once this is done, a prompt in the console will appear asking for placement of the 1st queen within row 1
4. Enter in the desired column number to place the first queen in the first row
5. Once complete hit enter, this will initiate the functions and the solutions, queen placements and backtracks will all be displayed in order

Next I will show how the program runs on my machine along with how the program works. The program works recursively by taking user input and consistently updating an imaginary board with queen coordinates and placing their attacks on the board. When the next queen is being placed it can reference the previous queen placements and attacks and take a backtrack to place the piece in a proper place. Then once this process occurs the backtrack counter increments. Here is an example test run.



This example run shows the user input of the first queen in row 1 and column 4 and then the solutions for the other queens and backtracks are generated. As you will see the recursive nature of this program allows most of the functionality to take control within the recursive function. This test shows that the program works well, as it takes in the 1st queen like asked, and then produces all the other solutions and backtracks within the console.