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Computer Science (CS2)

17 Jan 2014

8 Queens Solution

The purpose of this program is to be able to find a solution to the 8 Queens problem, which requires one to place eight queens total on an eight by eight board but there must not be more than one queen in each individual row, column, or diagonal. The 8 Queens problem can be solved in various different methods, however, the method that I used was the Brute Force method. The program begins with a clear eight by eight board, where zero represents an empty square. Then, the program randomly chooses a row in each of the eight columns and places a queen there, which is represented by one. If there is more than one queen in a row, column, or diagonal, then the program clears the board until there is only one queen in each row, column, or diagonal and a total of eight queens placed on the board. To do this task, the program goes through each row and counts the total number of queens in each row, if there is more than one, then it clears the entire board. Same thing goes for the columns and diagonal. The program adds up the number of queens in each column or diagonal, then it clears the board if there is more than one in each column or diagonal. This process keeps going on until a working solution is found. If a working solution is found, then the board prints the solution out. It keeps resetting the program, until we get a working solution, where the total count of queens in only one in each row, column, and diagonal. The program also makes sure that each queen is within the parameters of the eight by eight board and does not go out of them.