

Quiz8:

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([Test cases](#) are on the 2nd page.)

Program Description:

I implemented algorithm 5.1 on the text book. There are the variables and functions in my program.

int n; // The number of the queens.

int[] col; // An array of size n, col[i] stands for which column the ith row's queens is on.

int numOfSolutions // The number of the solutions of n queens.

public int abs(int x)

This function is to calculate the absolute value.

Input: int x.

Output: the absolute value of x.

public boolean promising(int i)

The promising function.

Input: the index of row: i.

Output: whether the candidate sub-solution on ith row is promising.

public void queens(int v)

The core function that implement algorithm 5.1. The top-level call should be queens(0).

public void reset()

This function is to reset the numOfSolutions back to 0 when we change the number of the queens.

Test Case:

```
"C:\Program Files\Java\jdk-15.0.2\bin\java.exe" "-ja
When we have 4 queens, there are 2 solutions.

When we have 8 queens, there are 92 solutions.

When we have 10 queens, there are 724 solutions.

When we have 12 queens, there are 14200 solutions.

Process finished with exit code 0
```