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17BCE7055

```
package bfsdfs;
import java.util.*;


public class nQueen {
 static int c = 0;
 public static boolean isConsistent(int[] arr, int n) {
  for (int i = 0; i < n; i++) {
   if (arr[i] == arr[n]) return false; // same column
   if ((arr[i] - arr[n]) == (n - i)) return false; // same major diagonal
   if ((arr[n] - arr[i]) == (n - i)) return false; // same minor diagonal
  }
  return true;
 }


 public static void printQueens(int[] arr) {
  int n = arr.length;
  for (int i = 0; i < n; i++) {
   for (int j = 0; j < n; j++) {
    if (arr[i] == j) System.out.print(" Q ");
    else System.out.print(" * ");
   }
   System.out.println();
  }
  c = c + 1;
  System.out.println();
}


public static void bfs(int n) {
 int[] arr = new int[n];
 bfs(arr, 0);
}


public static void bfs(int[] arr, int k) {
 int n = arr.length;
 if (k == n) printQueens(arr);
 else {
  for (int i = 0; i < n; i++) {
   arr[k] = i;
   if (isConsistent(arr, k)) bfs(arr, k + 1);
  }
 }
}

public static void main(String[] args) {
 Scanner sc = new Scanner(System.in);
 int nQueen;
 System.out.println("Input the number of queens, please.");
 nQueen = sc.nextInt();
 bfsdfs.bfs(nQueen);
 System.out.println("No. Of possible solutions:  " + c);
 }
}
```