

Program:

```
#include <iostream>
#include <cstdlib>
using namespace std;

int N;

void Solution(int arr[N]) {
    for(int i = 0; i < N; i++) {
        for(int j = 0; j < N; j++) {
            if(arr[i] == j)
                cout<<"Q"<<i+1<<" ";
            else
                cout<<" * ";
        }
        cout<<endl;
    }
}

bool Place(int arr[N], int Qi, int Qj) {
    for(int i = 0; i < Qi ; i++) {
        if(arr[i] == Qj || abs(arr[i] - Qj) == abs(i - Qi)) {
            return false;
        }
    }
    return true;
}

int NQueens(int arr[N], int i) {
    static int count = 0;
    for(int j = 0; j < N; j++) {
        if(Place(arr, i, j)) {
            arr[i] = j;
            if(i == N-1) {
                cout<<endl<<"*****"<<endl;
                cout<<"\nFinal Solution:\n\n";
                Solution(arr);
                cout<<endl<<"*****"<<endl<<endl;
                count++;
            }
        }
    }
}
```

Output:

```
1, 1; 2, 3; 3, 0;
1, 1; 2, 3; 3, 0;
1, 2; 2, 3; 3, 0;
```

```
1, 3; 2, 1; 3, 0;
1, 3; 2, 1; 3, 0;
```

Sorry King, No Solution

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How many Queens troubling the King? 4

```
1, 1; 2, 3; 3, 0; 4, 0;
1, 1; 2, 4; 3, 2; 4, 0;
1, 1; 2, 4; 3, 2; 4, 0;
1, 1; 2, 4; 3, 2; 4, 0;
```

Final Solution:

```
  * Q1  *  *
  *  *  * Q2
Q3  *  *  *
  *  * Q4  *
```

```
1, 2; 2, 4; 3, 1; 4, 3;
1, 2; 2, 4; 3, 1; 4, 3;
1, 2; 2, 4; 3, 1; 4, 3;
```

Final Solution:

```
  *  * Q1  *
Q2  *  *  *
  *  *  * Q3
  * Q4  *  *
```

```
1, 3; 2, 1; 3, 4; 4, 2;
1, 3; 2, 1; 3, 4; 4, 2;
1, 3; 2, 1; 3, 4; 4, 2;
```

1, 4; 2, 1; 3, 3; 4, 2;
1, 4; 2, 1; 3, 3; 4, 2;
1, 4; 2, 2; 3, 3; 4, 2;
1, 4; 2, 2; 3, 3; 4, 2;

Possible Solutions: 2

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