Nqueen problem :

#include <iostream>

using namespace std;

bool isSafe(int \*\*arr, int x, int y, int n) {

for (int row = 0; row < x; row++) {

if (arr[row][y] == 1) return false;

}

int row = x;

int col = y;

while (row >= 0 && col >= 0) {

if (arr[row][col] == 1)

return false;

row--;

col--;

}

row = x;

col = y;

while (row >= 0 && col < n) {

if (arr[row][col] == 1)

return false;

row--;

col++;

}

return true;

}

bool nQueen(int \*\*arr, int x, int n) {

if (x >= n)

return true;

for (int col = 0; col < n; col++) {

if (isSafe(arr, x, col, n)) {

arr[x][col] = 1;

if (nQueen(arr, x + 1, n))

return true;

arr[x][col] = 0;

}

}

return false;

}

int main() {

int n;

cout<<"Enter number of queen : ";

cin >> n;

int \*\*arr = new int \*[n];

for (int i = 0; i < n; i++) {

arr[i] = new int[n];

for (int j = 0; j < n; j++) {

arr[i][j] = 0;

}

}

if (nQueen(arr, 0, n)) {

for (int i = 0; i < n; i++) {

for (int j = 0; j < n; j++) {

cout << arr[i][j] << " ";

}

cout << endl;

}

}

}

Output:

Enter number of queen : 8

1 0 0 0 0 0 0 0

0 0 0 0 1 0 0 0

0 0 0 0 0 0 0 1

0 0 0 0 0 1 0 0

0 0 1 0 0 0 0 0

0 0 0 0 0 0 1 0

0 1 0 0 0 0 0 0

0 0 0 1 0 0 0 0

Enter number of queen : 4

0 1 0 0

0 0 0 1

1 0 0 0

0 0 1 0