

SUM OF SUBSETS:

PROGRAM:

```
#include<iostream>
using namespace std;
int grid[10][10];

void print(int n) {
    for (int i = 0; i <= n-1; i++) {
        for (int j = 0; j <= n-1; j++) {

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

        }
        cout << endl;
    }
    cout << endl;
    cout << endl;
}

bool isSafe(int col, int row, int n) {

    for (int i = 0; i < row; i++) {
        if (grid[i][col]) {
            return false;
        }
    }

    for (int i = row, j = col; i >= 0 && j >= 0; i--, j--) {
        if (grid[i][j]) {
            return false;
        }
    }

    for (int i = row, j = col; i >= 0 && j < n; j++, i--) {
        if (grid[i][j]) {
            return false;
        }
    }

    return true;
}

bool solve (int n, int row) {
    if (n == row) {
        print(n);
        return true;
    }
}
```

```

    }

    bool res = false;
    for (int i = 0; i <= n-1; i++) {
        if (isSafe(i, row, n)) {
            grid[row][i] = 1;

            res = solve(n, row+1) || res;

            grid[row][i] = 0;
        }
    }
    return res;
}

int main()
{
    ios_base::sync_with_stdio(false);
    cin.tie(NULL);
    int n;
    cout << "Enter the number of queen" << endl;
    cin >> n;
    for (int i = 0; i < n; i++) {
        for (int j = 0; j < n; j++) {
            grid[i][j] = 0;
        }
    }
    bool res = solve(n, 0);
    if(res == false) {
        cout << -1 << endl;
    } else {
        cout << endl;
    }
    return 0;
}

```

OUTPUT:

```
User@PRATHIKSHA /c/ada lab
$ cd "/c/ada lab/" && g++ n-queens.cpp -o n-queens && "/c/ada lab/"n-queens
Enter the number of queen
4
0 1 0 0
0 0 0 1
1 0 0 0
0 0 1 0

0 0 1 0
1 0 0 0
0 0 0 1
0 1 0 0
```