

Generate all possible configurations of queens on board and print a configuration that satisfies the given constraints.

```
while there are untried configurations
{
    generate the next configuration
    if queens don't attack in this configuration then
    {
        print this configuration;
    }
}
```

### **Backtracking Algorithm**

The idea is to place queens one by one in different columns, starting from the leftmost column. When we place a queen in a column, we check for clashes with already placed queens. In the current column, if we find a row for which there is no clash, we mark this row and column as part of the solution. If we do not find such a row due to clashes then we backtrack and return false.

```
1) Start in the leftmost column
2) If all queens are placed
    return true
3) Try all rows in the current column.
    Do following for every tried row.
    a) If the queen can be placed safely in this row
        then mark this [row, column] as part of the
        solution and recursively check if placing
        queen here leads to a solution.
    b) If placing the queen in [row, column] leads to
        a solution then return true.
    c) If placing queen doesn't lead to a solution then
        unmark this [row, column] (Backtrack) and go to
        step (a) to try other rows.
3) If all rows have been tried and nothing worked,
```

```
return false to trigger backtracking.
```