# 22. Generate Parentheses

## SOLUTION IN JAVA

class Solution {

public List<String> generateParenthesis(int n) {

List<String> ans = new ArrayList<>();

dfs(n, n, new StringBuilder(), ans);

return ans;

}

private void dfs(int l, int r, final StringBuilder sb, List<String> ans) {

if (l == 0 && r == 0) {

ans.add(sb.toString());

return;

}

if (l > 0) {

sb.append("(");

dfs(l - 1, r, sb, ans);

sb.deleteCharAt(sb.length() - 1);

}

if (l < r) {

sb.append(")");

dfs(l, r - 1, sb, ans);

sb.deleteCharAt(sb.length() - 1);

}

}

}