PSH: Balanced Parenthesis

Complete the code below to generate a list of balanced parenthetical expressions using n sets of parenthesis.

Input Format

Input consists of a single integer *n*.

Constraints

 $0 \le n \le 12$

Output Format

All balanced parenthetical expressions using exactly *n* sets of parenthesis.

Sample Input 0

2

Sample Output 0

(()) ()()