Problem 2: Harry Potter and the cursed child

Statement

Harry potter and The Cursed Child is going to be premiered in your city and EVERYONE wants to watch it, but the places are so limited.

Your local cinema introduced a virtual queue system to avoid all the chaos, this new system allows users to pre-order tickets at the cinema's website once they go up.

given a number n, print the sequence of n steps in which the queue gets filled starting from the pre-order of the first ticket.

Input

A single integer n, denoting the size of the sequence.

Output

Print the sequence of n steps, using 0s and 1s. Observe that it's base and height are both equal to n.

Input	Output
6	000001 000011 000111 001111 011111 111111
3	001 011 111