Generate Barcode

A barcode consists of black and white vertical bars in various arrangement. For simplicity, we use a string of "0" and "1" to identify a barcode such that "0" represents a black line while "1" represents a white line. For example, 0100011 represents the barcode in the right

There is a particular kind of barcode which is call interleaved 2 of 5 (ITF) which means that each data in a barcode consists of 5 bars and exactly 2 of them must be white, which also means that exactly 3 of them is black. For example, 01001 is a valid ITF code.

Given two non-zero integer A and B, write a program that print all possible valid interleaved A of B barcode.

Input

- The first line consists of two integer A and B. (0 <= A <= B <= 20)

Output

There are exactly $\binom{B}{A}$ lines, each line is a distinct binary string of length B which shows a valid interleaved A of B barcode. You can output the barcode in any order as long as each line is distinct and the number of lines is exactly $\binom{B}{A}$.

ตัวอย่าง

ข้อมูลนำเข้า	ข้อมูลส่งออก
2 5	00011 00101 01001 10001 00110 01010 10010 01100 10100 11000
1 3	001 100 010
2 4	1100 1010 1001 0101 0110 0011
0 2	00