249. Matrix

time limit per test: 0.5 sec.
memory limit per test: 65536 KB
input: standard
output: standard

It is necessary to arrange numbers from 0 to 2^(N+M)-1 in the matrix with 2^N rows and 2^M columns. Moreover, numbers occupying two adjacent cells must differ only in single bit in binary notation. Cells are adjacent if they have common side. Matrix is cyclic, i.e. for each row the leftmost and rightmost matrix cells are considered to be adjacent (the topmost and the bottommost matrix cells are also adjacent).

Input
The first line of input contains two integers N and M (0<N,M; N+M<=20).

Output
Output file must contain the required matrix in a form of 2^N lines of 2^M integers each.

Sample test(s)

Input

1 1

Output

0 2
1 3

Author:	Antony Popovich
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→ Last submissions

Submission	Time	Verdict
57612191	Jul/24/2019 00:53	Accepted
57610766	Jul/23/2019 23:39	Wrong answer on test 6
57610727	Jul/23/2019 23:37	Wrong answer on test 6
57608705	Jul/23/2019 22:20	Wrong answer on test 6
57608575	Jul/23/2019 22:15	Wrong answer on test 6
57606156	Jul/23/2019 21:00	Wrong answer on test 6
57606063	Jul/23/2019 20:57	Wrong answer on test 6
57605929	Jul/23/2019 20:53	Wrong answer on test 6
57602233	Jul/23/2019 19:18	Wrong answer on test 3
57602154	Jul/23/2019 19:16	Wrong answer on test 1