



时间限制: C/C++ 1秒, 其他语言2秒

空间限制: C/C++ 262144K, 其他语言524288K

Special Judge, 64bit IO Format: %lld

### 题目描述

Let  $LCS(s_1, s_2)$  denote the length of the longest common subsequence (not necessary continuity) of string  $s_1$  and string  $s_2$ .

Now give you four integers  $a, b, c, n$ , you need to find three lowercase character strings  $s_1, s_2, s_3$  satisfy that  $|s_1| = |s_2| = |s_3| = n$

and  $LCS(s_1, s_2) = a, LCS(s_2, s_3) = b, LCS(s_1, s_3) = c$ .

### 输入描述:

The first line has four integers  $a, b, c, n$ .

$0 \leq a, b, c \leq n$ .

$1 \leq n \leq 1000$ .

### 输出描述:

If there is no solution, output "NO" (without double quotation marks).

If there exists solutions, you only need to output any one: output three lines, the i-th line has one strings  $s_i$ .

### 示例1

输入

1 2 3 4

输出

aqcc

abpp

abcc

### 示例2

输入

1 2 3 3

输出

NO