Problem 10: ASCII Potions

Statement

In the potions class, professor Horace Slughorn gave the students a task to make a compilation of mixtures based on 26 different magic potions, the potions are labeled from A to Z (potion A,B...Z), Smart Hermione was the only student that came up with the right list of potions with a certain compilation.

Given a character **x**, Your job is to help Hermione come up with the compilations list for each potion.

Note: You can mix a potion only with the potions that comes before it in the alphabetical order.

Input

The character of the potion.

Output

The compilation list, where each line represents a potion .

Example

Input	Output
A	A
B	BBB BAB BBB
C	CCCCC CBBBC CBABC CBBBC CCCCC