B Beaking Spackwards

Time limit: 1s

The 42nd meeting of the Fortnightly Palindrome Convention is coming up, and for this special occasion, they want to spend a session admiring a special kind of palindrome-esque words. These words are not necessarily a palindrome by themselves, but they should contain an exact, predetermined number of palindrome substrings. As preparation for the session, your task is to generate these palindrome-esque words.

Obviously, the decoration at this convention consists of balloons that spell out palindromes. Free License by Vecteezy.com

As an example, consider the second sample input. The output `abacaba` contains exactly 12 palindrome substrings: the seven individual letters, two times `aba` (at the start and at the end), `aca`, `bacab`, and `abacaba`.

Input

The input consists of:

- One line with an integer s ($1 \leq s \leq 10^9$), the number of required palindrome substrings.

Output

Output a string that contains exactly s palindrome substrings. This string should have length between 1 and 10^5 characters (inclusive) and only consists of English lowercase letters (`a`–`z`).

If there are multiple valid solutions, you may output any one of them.

Sample Input 1	Sample Output 1
`6`	`abab`

Sample Input 2	Sample Output 2
`12`	`abacaba`