Restrict Palindromes

For a string S, we define $f(S)$ as the number of **distinct palindromic**[†] **substrings**[‡] of S.

For example, $f(abaa) = 4$ because we can find the palindrome substrings a, b, aa and aba.

Call a string S good if $f(S) \leq 5$, i.e. it has at most 5 distinct palindrome substrings.

You are given an integer N. Construct any good string of length N using only lowercase Latin characters. It can be proven that at least one good string exists. You are allowed to print any good string.

[†] A string is called palindromic if it reads the same forwards and backwards.

[‡] A substring is a string that can be obtained by deleting some (possibly zero) characters from the beginning and some (possibly zero) characters from the end.

Input Format

- The first line of input will contain a single integer T, denoting the number of test cases.
- The first and only line of input contains a single integer N.

Output Format

For each test case, output a string S of length N, using only lowercase Latin characters, with $f(S) \leq 5$.

Constraints

- $1 \leq T \leq 100$
- $1 \leq N \leq 100$

Sample 1:

Input	Output
2 2 4	aa abaa

Explanation:

Test Case 1 : aa has 2 distinct palindrome substrings, a and aa.

Test Case 2 : $f(abaa) = 4$ as mentioned in the statement.