

Yet another strings problem !!

Frequent Substring Counting

Given a string S and integer N , your task is to compute the substring of length N that is repeated most in the string.

If two substrings of length N have the same occurrence count in S , return the smallest lexicographically.

Input

The first line contains the number of test cases T . $T \leq 10$.

The following T lines hold the test cases, each line consisting of integer N followed by string S . N and S are space separated. $N \leq 100$, $|S| \leq 100000$.

Output

Print T lines, each containing the substring of length N that is most frequent. If two substrings have the same occurrence count, print the smallest lexicographically.

Example

Input:

2

2 efababefef

1 aabebbb

Output:

ef

b