Problem F. Cutting Strings

You are given a string s and an integer k. You can remove at most k non-intersecting substrings from s. Your task is to find the alphabetically (i.e., dictionary order) largest resulting string.

For example, with string **abcdcada** and k=2, you can choose the substrings **[abc]d[ca]da** and remove them to get **dda**.

Input

Each input will begin with a line with a single integer c ($1 \leq c \leq 2*10^5$), which is the number of cases you must solve.

Each of the next c lines will contain an integer k and a string s

($1 \leq k \leq |s| \leq 10^5$, $s \in [a-z]*$), separated by a space.

The total length of all strings in the input will be at most 10^6.

Output

Output the largest string, alphabetically, that you can get by removing k or fewer non-intersecting substrings from s.

Sample Input	Sample Output
4 2 abcdcada 1 ababb 2 ababb 1 dadbdcdbdad	dda bb bbb ddcdbdad