Problem F
Number
Time Limit: 1 second

You are given an n-digit number X.

For $1 \le k \le n$, let X_k be the largest number with exactly k digits from X after deleting some digits in it.

You task is to determine the l^{th} digit of X_k for $1 \le l \le k$.

All digits of a number are indexed from left to right.

Input

The first line contains an n-digit number X ($1 \le n \le 10^5$).

The second line contains an integer m, the number of queries ($m \le 10^5$).

Each of the following m lines contains two positive integer numbers k and l, separated by a space.

Output

Display in a single line m digits (without spaces). The i^{th} digit is the result of the i^{th} query.

Sample Input	Sample Output
123456789 4 5 3 1 1 7 3 8 3	7954