

# Problem D. Ilya and Queries

**Time limit** 2000 ms  
**Mem limit** 262144 kB

Ilya the Lion wants to help all his friends with passing exams. They need to solve the following problem to pass the IT exam.

You've got string  $s = s_1s_2...s_n$  ( $n$  is the length of the string), consisting only of characters "." and "#" and  $m$  queries. Each query is described by a pair of integers  $l_i, r_i$  ( $1 \leq l_i < r_i \leq n$ ). The answer to the query  $l_i, r_i$  is the number of such integers  $i$  ( $l_i \leq i < r_i$ ), that  $s_i = s_{i+1}$ .

Ilya the Lion wants to help his friends but is there anyone to help him? Help Ilya, solve the problem.

**Input**

The first line contains string  $s$  of length  $n$  ( $2 \leq n \leq 10^5$ ). It is guaranteed that the given string only consists of characters "." and "#".

The next line contains integer  $m$  ( $1 \leq m \leq 10^5$ ) — the number of queries. Each of the next  $m$  lines contains the description of the corresponding query. The  $i$ -th line contains integers  $l_i, r_i$  ( $1 \leq l_i < r_i \leq n$ ).

**Output**

Print  $m$  integers — the answers to the queries in the order in which they are given in the input.

**Sample 1**

Input	Output
..... 4 3 4 2 3 1 6 2 6	1 1 5 4

**Sample 2**

Input	Output
<pre>#.### 5 1 3 5 6 1 5 3 6 3 4</pre>	<pre>1 1 2 2 0</pre>