I love Strings!!!

Hmmmmmm.....strings again :) Then it must be an easy task for you. Well.....you are given with a string $\bf S$ of length not more than 100,000 characters (only 'a'-'z' and 'A'-'Z'). Then follows $\bf q$ (q < 1000) queries where each query contains a string $\bf T$ of maximum length 1,000 (also contains only 'a'-'z' and 'A'-'Z'). You should determine whether or not $\bf T$ is a substring of $\bf S$.

Input

First line contains an integer \mathbf{k} (k < 10) telling the number of test cases to follow. Each test case begins with \mathbf{S} . It is followed by \mathbf{q} . After this line there are \mathbf{q} lines each of which has a string \mathbf{T} as defined before.

Output

For each query print 'y' if it is a substring of S or 'n' otherwise followed by a new line. See the sample output below.

Sample Input

2
abcdefghABCDEFGH
2
abc
abc
abAB
xyz
1
xyz

Sample Output

У n У

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Modified from Uva 10679 Wow! CityU OJ reached #400 problem ID!!