Alumni   X61143_en

At UPF there is a document with the names of all students that finished their studies, but an employee opened the wrong document in the UPF servers and accidentally deployed the Alumni virus.

The virus reads all student names and merges them into a single string that maintains the order of each name. For instance, Alumni can read *alice* and *bob* and generate a document with a single string *alibobce*. Both *alice* and *bob* are subsequences of this string, but another name such as *bond* is not. Multiple names can share letters in the generated string, e.g. Alumni can merge *boben* and *bobby* as *bobebny*.

UPF needs your help to write a program that determines whether or not a student name is part of a string *d* and reports "YES" or "NO" accordingly.

Input

The input starts with the number of test cases $T \leq 100$. For each test case, there is an intenger $Q \leq 100$ that represents the number of queries to answer. The following line is the output non-empty string *d* of Alumni virus with less than 10^6 characters. The next *Q* lines are strings that correspond to possible non-empty student names, and their length could be as large as $min(\texttt{d}, 1000)$. Your program should say if each student name exists in *d*. All input strings have lowercase letters.

Output

For each test case, output *Q* lines corresponding to each query: "YES" if the queried name exist, "NO" otherwise. Print and end of line character after each test case.

Sample input

```
2
3
alibobce
alice
bob
bond
3
bobebny
boben
bone
bobby
```

Sample output

```
YES
YES
NO

YES
NO
YES
```

Problem information

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