

2012 ACU Programming Contest Series

Problem 4: Alphabet

Different ethnic groups have developed local alphabets and this has led to an assortment of various sort orders. A sorting algorithm allowing universal support may be known as Alphabet Collating Universal (ACU). An ACU sort function orders a set of text strings given a specific collating sequence. According to the ACU standard, characters contained in a string to be sorted but not included in the collating sequence should be ignored.

Write a program to sort sets of text strings given an ACU sequence.

Input

The first line consists of a positive integer indicating the number of data sets to process.

Each data set begins with a line containing a positive integer, M , indicating the number of words to be sorted in the data set. The next line consists of the collating sequence to be used for the data set. The next M lines contain one word each; these words are to be ACU sorted. No line will contain any whitespace or be longer than 1000 characters.

Sample input:

```
2
4
0123456789
(325)674-2200
325-674-2000
(213)-458-0123
213-4580000
4
aAbBcCdDeEfFgGhHiIjJkKlLmMnNoOpPqQrRsStTuUvVwWxXyYzZ
Bob
Abe
able
bee
```

Output

Each data set should produce $M+1$ lines of output. The first M lines must contain the M words of the data set in ACU order given the collating sequence specified. Line $M+1$ must contain "--".

Sample output:

```
213-4580000
(213)-458-0123
325-674-2000
(325)674-2200
--
able
Abe
bee
Bob
--
```