Problem E. Strings

Input file:	**standard input**
Output file:	**standard output**
Time limit:	2 seconds
Memory limit:	256 megabytes

Observ, as one of Eonics products, is a platform that provides job vacancies for IT freelancers and intermediates. One of the features of Observ was the special search in the vacancies list. This feature allows the user to search for job positions using different query words. If the user writes a keyword like "java", he will get a list of vacancies that include java as a skill appears and if he writes "-java", he will get a list of vacancies that don't need java as a requirement. Also, the feature should optimise the query in a way if one of the following cases happened:

- Including "java" and "-java" in the same query will cancel each other.

- Including "java" and "java" later, only the first counts.

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Carlo and **Jan Mark** were both in the Observ team, so during the sprint planning, Carlo challenged **Jan Mark** in a tennis table match and the loser has to work on that feature. One hour later and after being defeated 3 times in a row by **Carlo**, **Jan Mark** felt so bad so he couldn't be able to concentrate on the work. So he asked you to help him develop the optimisation part of the feature, so he can focus on planning a strategy to beat **Carlo** next time.

Input

Each test contains multiple test cases. The first line contains the number of test cases t ($1 \leq t \leq 1000$). The description of the test cases is as follows:

Each test case contains a query string composed of a maximum of 200 words, each one of them has a maximum length of 10 characters, and they may be preceded by "-".

Output

For each test case, print s the result string of the optimised query string without word redundancy and keep the initial order of query fields.

Example

standard input	standard output
2 java docker dev-ops java -java -docker jenior -senior medior -jenior	dev-ops -senior medior