

# Contacts

We are going to make our own contacts application. You are given the number of operations to perform,  $N$ . In any contacts application, two basic operations are *add* and *find*. The input will be one of the following:

1. *add name*
2. *find partial*

For the *find* operation, you will have to print the number of contacts who have a name starting with that *partial* name.

## Input Format

The first line contains the integer  $N$ , the number of operations to be performed. The next  $N$  lines contains one of the two operations defined above.

## Constraints

$$1 \leq N \leq 10^5$$
$$1 \leq Length(name) \leq 21$$
$$1 \leq Length(partial) \leq 21$$

The entire input consists of lowercase characters only.

## Output Format

For each operation of type *find partial*, print the number of contacts starting with the string *partial*.

## Sample Input

```
4
add hack
add hackerrank
find hac
find hak
```

## Sample Output

```
2
0
```

## Explanation

The names *hack* and *hackerrank* both start with the string *hac*. We have no name starting with the string *hak*.