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## Collection of numbers

P50709\_en

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Write a program to keep a collection of integer numbers, perhaps with repetitions, while performing the following operations:

- 'S'  $x$  : Stores a copy of the given number  $x$ .
- 'A' : Asks for the greatest number.
- 'R' : Removes the greatest number (one of them, if it is repeated).
- 'I'  $x$  : Increases the greatest number (one of them, if it is repeated) in  $x$  units.
- 'D'  $x$  : Decreases the greatest number (one of them, if it is repeated) in  $x$  units.

### Input

Input consists of several operations.

### Output

For every query, the current greatest number. Print also an error line for each operation (except storing) when the collection is empty.

#### Sample input

```
A
S 10    A
S -7    A
S 20    A
I 3     A
D 15    A
R       A
S 30    A
D 37    R    A
R       A
R       I 1
A
R
D 3
S 4     A
```

#### Sample output

```
error!
10
10
20
23
10
8
30
-7
-7
error!
error!
error!
error!
4
```

### Problem information

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