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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 1

```
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 1

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

### Problem information

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Generation: 2026-01-25T11:03:46.074Z

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