# Support Queries II

? Ask Doubt

Time-Limit: 1 sec  Score: 0.00/100  Difficulty :

Memory: 256 MB  Accepted Submissions: 100  Relevant For: AZ-201

## Description

Design a Data Structure which can support the following queries:

Initially, the structure is empty. You have given an integer *K*.

The structure is arranged in the order from greater elements to smaller elements. So when we say top *K* elements, we mean the top K largest elements.

**1 *x***: Add *x* in structure.

**2 *x***: Remove *x* from the structure if present in the structure. If *x* doesn't present in the structure, do nothing. If there are multiple occurrences of *x*, delete only one occurrence of *x*.

**3 ?**: Print the sum of the top *K* elements. If the structure contains less than *K* elements, then print the sum of all elements present in the structure. If the structure is empty, then print 0.

## Input Format

The first line of input contains *Q* and *K* - the number of queries.
Next, *Q* lines contain queries of the format specified in the statement.

## Output Format

For queries of type 3, print the answer in a new line.

## Constraints

$1 \le Q, K \le 10^5$
$0 \le x \le 10^9$

## Sample Input 1

Copy

```
17 3
1 5
1 2
1 3
1 6
3 ?
2 3
3 ?
2 2
3 ?
```

C++14[GCC]

Submit

```
1
```