Corgi Houses

file: corgi.cpp

Charles really likes corgis. Can you tell? Well anyway, Charles followed his four step plan so he is rich. With all his money he bought *n* houses, and now he wants to adopt many corgis and put them in his houses.

Each day for *d* days, Charles either:
1. Brings *c* corgis to house *i* (one-based),
2. Or he wants to know how many corgis currently live in houses with indices between *l* and *r*, inclusive.

Input

Number of houses (*n*) and number of days (*d*). *d* lines follow. Each is either *1 i c* or *2 l r*. Initially there are no corgis in any house (oof).

A negative *c* value means that Charles moves *c* corgis out of the *i*th house. But don't worry because they are in a very comfortable place with lots of bacon. Also, if the *c* value is just zero that means that Charles goes to the *i*th house to pet the corgis.

Constraints: $1 \le n \le 10^6$, $1 \le d \le 10^5$, $|c| < 1000$, $1 \le i, l \le r \le n$.

Output

For type-two queries print what is the answer on its own line.

Sample In	Sample Out
3 6 1 1 867 1 2 530 1 3 9 2 2 3 2 1 2 2 1 3	539 1397 1406