Problem D. Maps-STL

OS Linux

Maps are a part of the C++ STL.Maps are associative containers that store elements formed by a combination of a key value and a mapped value, following a specific order.The mainly used member functions of maps are:

- *Map Template:*

```
std::map <key_type, data_type>
```

- *Declaration:*

```
map<string,int>m; //Creates a map m where key_type is of type str
```

- *Size:*

```
int length=m.size(); //Gives the size of the map.
```

- *Insert:*

```
m.insert(make_pair("hello",9)); //Here the pair is inserted into
```

- *Erasing an element:*

```
m.erase(val); //Erases the pair from the map where the key_type i
```

- *Finding an element:*

```
map<string,int>::iterator itr=m.find(val); //Gives the iterator t
Ex: map<string,int>::iterator itr=m.find("Maps"); //If Maps is no
```

- *Accessing the value stored in the key:*

```
To get the value stored of the key "MAPS" we can do m["MAPS"] or
```

To know more about maps click Here.

You are appointed as the assistant to a teacher in a school and she is correcting the answer sheets of the students.Each student can have multiple answer sheets.So the teacher has Q queries:

$1\ X\ Y$:Add the marks Y to the student whose name is X.

$2\ X$: Erase the marks of the students whose name is X.

$3\ X$: Print the marks of the students whose name is X. (If X didn't get any marks print 0.)

Input Format

The first line of the input contains Q where Q is the number of queries. The next Q lines contain 1 query each.The first integer, $type$ of each query is the type of the query.If query is of type 1, it consists of one string and an integer X and Y where X is the name of the student and Y is the marks of the student.If query is of type 2 or 3,it consists of a single string X where X is the name of the student.

Constraints

$1 \leq Q \leq 10^5$

$1 \leq type \leq 3$

$1 \leq |X| \leq 6$

$1 \leq Y \leq 10^3$

Output Format

For queries of type 3 print the marks of the given student.

Input	Output
7 1 Jesse 20 1 Jess 12 1 Jess 18 3 Jess 3 Jesse 2 Jess 3 Jess	30 20 0