Maps-STL ☆

22/44 challenges solved

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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 string and data_type is of type int.
```

- Size:

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

- Insert:

```
m.insert(make_pair("hello",9)); //Here the pair is inserted into the map where the key is "hello" and t
```

- Erasing an element:

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

- Finding an element:

```
map<string,int>::iterator itr=m.find(val); //Gives the iterator to the element val if it is found othe
Ex: map<string,int>::iterator itr=m.find("Maps"); //If Maps is not present as the key value then itr==
```

- Accessing the value stored in the key:

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

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.

Sample Input

```
7
1 Jesse 20
1 Jess 12
1 Jess 18
3 Jess
3 Jesse
2 Jess
3 Jess
```

Sample Output

```
30
20
0
```

C++

```
#include <iostream>
#include<map>
#include<string>
#include<cstring>

using namespace std;

int main()
{
    int n,k,op;
    map <string,int> v;
    cin >> n;
    string str;

    for(int i=0;i<n;i++)
    {
        cin >> op;
        if(op == 1)
        {
            cin >> str >> k;

            auto itr = v.find(str);

            if(itr != v.end())
            {
                itr->second = itr->second + k;
            }
            else
            {
                v.insert(make_pair(str,k));
```

Line: 1 Col: 1

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