Maps-STL

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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 the value associated
with it is 9.
```

- *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 otherwise returns m.end() .
Ex: map<string,int>::iterator itr=m.find("Maps"); //If Maps is not present as the key value then itr==m.end().
```

- *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 function and then by
itr->second we can access the value.
```

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
```

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Current Buffer (saved locally, editable) C++14

```
1 #include <iostream>
```

```cpp
#include <map>
#include <cassert>
typedef long long int int64;

int main()
{
    std::map<std::string, int> Map;
    int Q; std::cin>>Q;

    while(Q--)
    {
        std::string name;
        int mark;
        int query;

        std::cin >> query >> name ;
        assert((query>=1) && (query<=3));

        switch(query)
        {
            case 1: std::cin >> mark;
                    Map[name] += mark;
                    break;

            case 2: Map.erase(name);
                    break;

            case 3: std::cout << Map[name]<<std::endl;
                    break;
        }
    }
    return 0;
}

```

Line: 35 Col: 1

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- ✔ Test Case #7
- ✔ Test Case #8
- ✔ Test Case #9
- ✔ Test Case #10
- ✔ Test Case #11
- ✔ Test Case #12
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